Maternal Antenatal Care Access and Attendance: A Qualitative Study of Midwives' and Pregnant Women's Experiences in Kilifi, Kenya

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ABSTRACT

Title: Maternal antenatal care access and behaviours: a qualitative study of midwives and pregnant women's experiences in Kilifi, Kenya

Background: Antenatal care (ANC) protects against maternal morbidity and mortality. Maternal mortality remains unacceptably high in sub-Saharan African communities, which is strongly linked to low antenatal clinic attendance. Despite substantial evidence linking ANC with improved maternal and newborn health outcomes, inadequate access and other barriers to service use continue to be challenges in low- and middle-income countries. Although many factors hindering ANC attendance have been reported, the resulting evidence base has not been effectively disseminated or translated into strategies that reduce maternal mortality.

Study aim: This research explored the experiences of ANC access and attendance from the perspectives of midwives and pregnant women to understand their temporal decision-making around help-seeking during the antenatal period.

Research method: A qualitative descriptive research approach was used to explore ANC access and attendance from midwives' and women's perspectives. Individual semi-structured interviews were used to capture midwives and pregnant women's experiences in accessing ANC. Data for this study were collected from a purposeful sample comprising 10 midwives providing care in the ANC unit, and 20 mothers receiving routine ANC or admitted in the acute care setting in Kilifi County hospitals. The data was collected through semi-structured interviews between May and September 2021. The interviews were transcribed verbatim and analysed to identify themes using content analysis. A minimal inference approach was used to guide the formation of key themes, which drew on the generic model of patient care developed by Betty Neuman.

Results: The key findings from this study showed that women wanted to utilize ANC, but there were many barriers that deterred them from ANC access and attendance. Three main themes emerged: individual factors and perceptions; sociocultural and economic influences; and system and structural factors related to ANC access and attendance. The results suggested that ANC remains underused in Kenya and is associated with maternal deaths. Three distinct contributing factors reported by midwives were related to workload pressure: i) the number of patients that needed to be seen per day; ii) the referral of difficult cases to the clinic from other health services; and iii) the management of women's complaints about waiting times. Participating midwives also expressed concern that women attended ANC late and only when in need. Participants' narratives suggested that strategies such as improving male involvement and community education may help to improve ANC attendance.

Conclusions: Decision-making during pregnancy is a critical factor in shaping pregnant women's autonomy and temporality but is challenged by complex factors. In this study, both midwives and mothers revealed a number of temporal considerations that either delayed, hindered or resulted in less-than-optimal ANC attendance. These findings present a valuable framework for further research, offering insights that can inform midwives in devising effective strategies to address barriers related to ANC access and attendance. Addressing factors that hinder ANC attendance has the potential to significantly positively impact maternal mortality rates in this context.

Key words: Antenatal care; Pregnancy; Midwives, Women, Experiences, Views, Access, Attendance, Health facility.

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ABBREVIATIONS

ANC:	Antenatal care
FMS:	Free maternity health services
HIV:	Human immunodeficiency virus
MDGs:	Millennium Development Goals
MMR:	Maternal mortality rate
MOH:	Ministry of Health
NHIF	National Hospital Insurance Fund
RM:	Registered midwife
SDGs:	Sustainable Development Goals
STIs:	Sexually transmitted infections
UN:	United Nations
UNICEF:	United Nations Children's Fund
WHO:	World Health Organization

GLOSSARY OF TERMS

Antenatal care (ANC)	ANC refers to the pregnancy-related care provided by skilled healthcare professionals to address psychological and medical needs for early detection of some complications for both mother and baby in a medical facility or at home.
Early ANC	ANC initiated within the first 12 weeks of pregnancy.
Gravidity	Number of pregnancies a woman has had, whether or not the pregnancy resulted in a live birth.
Healthcare professionals	Skilled healthcare professionals (nurse/midwives) providing antenatal care to pregnant women.
Health-seeking	Any activity undertaken by a person believing themself to be healthy for preventing disease or detecting it at an asymptomatic stage.
Help-seeking	Recognition of illness with symptoms and response to a challenge of personal ability to resolve a health issue or problem.
Maternal death	Death of a woman while pregnant or within 42 days of termination of pregnancy, irrespective of the duration or site of the pregnancy, from any cause related to or aggravated by the pregnancy or its management but not from accidental or incidental causes.
Maternal mortality rate	The number of maternal deaths within 42 days of pregnancy termination due to complications of pregnancy, childbirth and the puerperium divided by total live births in 1 year multiplied by 100,000.
Midwife	A registered midwife or nurse skilled and trained in comprehensive maternal and infant care providing support from prenatal through postpartum.
Neonatal death	Death of a live-born infant from birth to <28 days of life. The neonatal mortality rate is expressed as the number of neonatal deaths per 1000 live births.
Parity	The number of live-born children born to a woman.

Temporality	Temporality is a *subjective* progression through moments, whereas timeliness attempts to *objectively* measure correct time, the day for a scheduled appointment.

CHAPTER 1: INTRODUCTION

The chapter establishes the context underlying this study. It presents the rationale, key problem statements and a brief overview of the research question that was addressed in this study.

1.1 Overview

In 2020, there were approximately 287,000 maternal deaths worldwide, resulting in a maternal mortality ratio (MMR) of 223 maternal deaths per 100,000 live births (World Health Organization [WHO], 2023). This translates to nearly 800 maternal deaths occurring each day, with one maternal death every 2 minutes. Sub-Saharan Africa has an exceptionally high MMR; this is estimated at 545 maternal deaths per 100,000 live births and accounts for approximately 70% of all maternal deaths globally. The proportion of deaths among women of reproductive age attributable to maternal causes (i.e. perinatal mortality) in 2020 exceeded 10% in Middle Africa (23.9%), Western Africa (21.9%) and Eastern Africa (15.5%) (WHO, 2023).

Increased access to and use of maternal health services, including antenatal care (ANC), are key interventions to support the reduction of the burden of maternal mortality. Kenya is among the countries that have limited resources because of poverty, and interventions may not be fully implemented to reach poor people. To provide pregnant women with maternal health services, the Kenyan government, through the Ministry of Health (MOH), introduced a free maternal services (FMS) policy in 2013 that aimed to achieve universal healthcare coverage by addressing financial barriers to healthcare access and use (Owiti, Oyugi, & Essink, 2018). In 2017, the programme previously funded by the Kenyan government was transferred to the National Hospital Insurance Fund (NHIF) under the name ‘Linda Mama’, which means to protect mothers; this comprised a package of benefits that included ANC, childbirth and outpatient care for infants up to 9 months of age (Mutungi, 2018). Pregnant women can access these services at government, faith-based organisations, nongovernmental organisations and private facilities (Masaba & Mmusi, 2020). Despite these interventions, the MMR in Kenya remained high in 2020, at 530 deaths per 100,000 live births, compared with 10 deaths per 100,000 live births in the UK (United Nations Children’s Fund [UNICEF], 2020).

Maternal mortality in Kenya remains high despite the government’s efforts to reduce the financial burden of maternal health services. Therefore, this study aimed to explore why women did not access ANC even when the services were provided free of charge, and why those that attend ANC tend to present late when little can be done to avert maternal mortality.

Maternal healthcare is important in decision-making about health- and help-seeking behaviours for pregnant women. ANC is a component of maternal health that is essential for protecting the health of women and their unborn children. Through preventive healthcare during the antenatal period, women can learn about healthy behaviours during pregnancy from skilled healthcare personnel. This will help them to better understand warning signs during pregnancy and childbirth, and ensure they receive social, emotional and psychological support at this critical time (Geltore & Anore, 2021; WHO, 2016). Without the right ANC, being pregnant can be a stressful and in the worst case, tragic, event. Most developing countries, including Kenya, have not been able to reduce this burden of maternal mortality, which remains unacceptably high. The World Health Organization (WHO) established guidelines that recommend eight ANC visits. However, a recent study investigating compliance with ANC revealed that many countries in sub-Saharan Africa have not met this target (Odusina et al., 2021).

Despite a positive reduction of the global maternal mortality rate by 44%, progress in sub–Saharan African countries, especially Kenya, has not been realised, which reflects disparities in access to maternal health services (WHO, 2018). ANC is an essential way to reduce maternal mortality and morbidity, as it allows interventions to be offered early to promote health, well-being and positive outcomes for mothers and their babies. However, many women do not receive ANC sufficiently early in their pregnancy. Although there is substantial evidence linking ANC with improved maternal and new-born health outcomes, inadequate access and barriers to ANC continue to be problematic in low- and middle-income countries (Miltenburg et al., 2018). Kenya has reported high numbers of maternal deaths, which have been linked to suboptimal health-seeking behaviour among pregnant women (Kenya Ministry of Health [MOH], 2017). Evidence confirming the low use of maternal health services has revealed various barriers to service use, including challenges related to transportation, geographical distance, financial constraints, family dynamics and influence, cultural beliefs about the use of traditional birth attendants and herbalists, reliance on advice from the community and religious leaders and competing tasks and responsibilities (including lost wages associated with time off work for appointments and childcare). Mitigation of these barriers to improve the accessibility and use of maternal health services requires an understanding of the experiences of both women who receive these healthcare services and health professionals who provide this care.

The thesis: This study explored the experiences of women regarding ANC access and attendance. Understanding women's temporality is important when studying ANC attendance. Furthermore, women need to have knowledge about the protective role of ANC during

pregnancy. Therefore, it is fundamental to clarify the temporal analysis processes of women that understand ANC attendance can reduce the risk for maternal death. Although ANC may be accessible in Kenya free of charge, there are indirect costs that affect ANC attendance for many women, even when they are willing to attend. Clarifying these indirect costs is essential to develop strategies to help improve ANC uptake.

Research question: To explore the experiences of midwives and pregnant women in terms of their health- and help-seeking behaviours in accessing and attending ANC during pregnancy in Kilifi, Kenya.

To address the research question, which aimed to explore the experiences of midwives and pregnant women in accessing and attending ANC during pregnancy in Kilifi, Kenya, this study adopted the Neuman system model. Although it is primarily used in nursing care, this model offers a holistic approach that can be adapted effectively to midwifery care. The model views the client as an individual experiencing stressor in three distinct areas: interpersonal, intrapersonal and extra-personal. Rather than seeking deep analysis for the purpose of creating a theoretical model, this study justified its approach by eliminating possible inductive methodologies (e.g. grounded theory, phenomenology and ethnography), as described in the Methods chapter.

Midwifery is historically a practical profession but, scientific theory, and research development is at its infancy. Eri et al. (2020) argued for the need for theoretical models in midwifery care that explicitly emphasize the values and attitudes of care. In their mapping of the midwifery theoretical models though they identified six models of care, there were methodological and philosophical variations (Eri et al., 2020). ANC has a protective role against the risk for maternal mortality; therefore, this study focused on women's temporal risk analysis. Eri et al. (2020) found that aversion to risk was not a prominent feature in existing midwifery models of care, as many models emphasised what promoted health rather than addressing risk factors related to childbirth. The complexity of and variations in theoretical models for midwifery pose challenges for reflexive researchers who seek to understand women's temporal decision-making regarding factors that mitigate or increase pregnancy-related risks, particularly ANC attendance. Non-attendance and poor attendance of ANC increase a pregnant woman's risk. Factors that influence pregnant women's decision-making around ANC attendance are likely to be consistent with the interpersonal,

intrapersonal and extra-personal stressors described in the Neuman model, making it a feasible alternative to traditional midwifery theoretical models.

This study used a 'thick descriptive' methodology based on the work of Sandelowski (2000). Content analysis of interview transcripts was conducted to provide a comprehensive summary of events 'in everyday terms' with 'minimal inference'. This approach is considered pertinent to all types of qualitative research (Younas et al., 2023). Specifically, a relational content analysis approach was used to determine the existence and frequency of concepts in the interview data in this study, as described in a previous study (Palmquist, Carley, Dale, & Roberts, 1997). These concepts were categorised using the three stressor categories (interpersonal, intrapersonal and extra-personal) and further developed into themes within each stressor.

In summary, although the Neuman system model of nursing care was originally designed for general nursing, its holistic and adaptable nature means it offers a valuable framework for midwifery care. Midwives can use this model to provide patient-centred, preventive and adaptive care, with consideration of the unique needs and stressors faced by pregnant women during pregnancy and childbirth.

Study aims: This study gathered and interpreted data from individual interviews with midwives and pregnant women that focused on their experiences in relation to ANC access and attendance in Kenya. Therefore, this study offers contemporary data identifying mothers' context-bound choices in accessing ANC in a timely and appropriate manner. Furthermore, the approach used in this study to explore mothers' perceptions of the risks for maternal morbidity and mortality in the Kenyan context was unique as it has not been used in previous studies.

1.2 Preface: Rationale and motivation for undertaking this study.

The choice of the topic for this study was based on various reasons, including the high number of maternal deaths that continue to occur in Kenya, despite many interventions that have been implemented to reduce this mortality. This section uses the researcher's own voice to explain her motivation for undertaking this study.

I support the statement that '*no woman should die while giving life*'. I am a midwife working in Kenya and have witnessed many incidences of women dying during pregnancy and childbirth. I realised that little attention has been given to women's perceptions of risk during pregnancy. I believe if women have knowledge that they are at risk during pregnancy, it could change their behaviour in terms of attendance of ANC and potentially save their lives.

As a midwife, my motivation for the topic of the present study was centred on caring; the needless loss of life among young women all over the world is a tragedy for society. I live in Kenya, which is a middle-income country in sub-Saharan Africa that has high maternal morbidity and mortality. I have worked as a midwife for over 19 years and the burden of maternal mortality has remained persistent in clinical practice over these years, which leaves a gap that will never be filled. Maternal death is both a mystery and a dilemma that every healthcare professional hopes not to witness as it leaves lifelong agony. Many factors are associated with the high number of maternal deaths, and ANC has been advocated globally as a strategy for reducing these deaths using various interventions.

As a researcher, I started by reviewing the prehospital determinants of maternal mortality in low- and middle-income countries. Generally, the findings were similar across various countries and ANC access and attendance was among the many strategies geared towards prevention of negative birth outcomes. ANC was found to be particularly important in preventing maternal and neonatal morbidity and mortality. Many interventions have been implemented in Kenya to reduce maternal mortality, although disparities still exist within the country. Furthermore, research conducted in different countries showed that pregnant women's decisions were individual and complex in nature because women often depended on their husband, family and the community in making decisions about when to seek care (Ganle et al., 2015; Munguambe et al., 2016). This was because pregnancy is generally considered a normal life event and women may not see the need to seek care unless they experience illness, especially if they feel healthy. Finlayson and Downe (2013) confirmed that women sought help from health professionals when they felt unwell. Similarly, a study focused on barriers to, and facilitators of pregnant women's health-seeking behaviour found that women sought ANC to get a maternal and child booklet (ANC book) or for treatment for a health problem (Munguambe et al., 2016).

Each year, 210 million pregnancies occur. With good quality ANC, the majority of adverse maternal and perinatal outcomes can be prevented. Therefore, I believe women should be encouraged to attend routine ANC for preventive measures through the recommended interventions (Tuncalp et al., 2017; WHO, 2016). I desired to explore the relationship between ANC and maternal mortality based on a temporal analysis of the experiences of pregnant women to gain a deeper understanding of their health- and help-seeking behaviours in accessing and attending ANC.

This concept was supported by an initial literature search that revealed maternity care in Kenya was hindered by poor infrastructure, social and cultural beliefs (e.g. use of traditional birth attendants, herbs, religion) and understaffing (Lusambili et al., 2020). Kenya is a diverse nation with a variety of cultural, ethnic and religious groups, each with its own set of customs and beliefs; therefore, I realised the importance of recognising that patriarchal beliefs dominate (Maseno & Kilonzo, 2011). Kenyan women also uphold patriarchal beliefs about their role in society, culture and economic systems, and therefore have limited control over decision-making power in maternal healthcare-seeking behaviour. Furthermore, my own observations were reflected in literature that noted that men in many low- and middle-income countries, including Kenya, do not typically accompany women to antenatal clinics, despite their fundamental role in maternal and child health (Mohammed, Yakubu, & Awal, 2020).

Kenya has a number of maternal health initiatives that include an FMS policy funded by the NHIF under the name 'Linda Mama', which covers ANC, childbirth and outpatient care for infants up to age 9 months (Mutungi, 2018; Owiti et al., 2018). I believe that midwives are an important source of information for pregnant women (Vogels-Broeke, et al., 2022). In many countries, including Kenya, midwives are known to be the source of knowledge and information about pregnancy and birth for women during the antenatal period. Pregnant women, especially first-time mothers, receive information during their ANC visits. However, when they do not attend an antenatal clinic, they may gather information from the experiences of their friends, relatives, traditional birth attendants and various media, which means clinical knowledge may be affected by myths and traditions (Finlayson et al., 2019). Health information during pregnancy for pregnant women entails the timing and adequate number of ANC visits, complication readiness and birth preparedness. However, studies have shown that women get information about ANC from their mothers, mothers-in-law, grandmothers, male partners and the Internet, all of which influences their health-seeking behaviour (Comfort et al., 2022; Dalstrom, 2020).

Therefore, my experience and knowledge distinctively position me to conduct this study, based on my desire to empowering women with knowledge about pregnancy-related risks which can significantly impact their behaviour, especially in access and attendance to ANC. This belief is not only informed by my experience but also by years of practical experience as a midwife. I am committed to using my insights and understanding to contribute meaningfully to maternal healthcare, aiming to make a difference in the lives of pregnant women and enhance their access to antenatal care services, and improve maternal outcomes.

1.3 Statement of the problem/rationale for this study

Despite global attention to maternal health, approximately 800 women die each day worldwide because of pregnancy- and birth-related complications (WHO, 2023). Developing countries account for about 99% of maternal deaths globally, with 66% being in sub-Saharan Africa (Alkema et al., 2016). ANC care during pregnancy is an important safe motherhood initiative and is strongly linked to reduced maternal mortality in developed countries (Campbell & Graham, 2006). Kenya has an estimated MMR of 530 per 100,000 live births (WHO, 2023). A maternal audit identified gaps in risk identification and modification, with half of the maternal deaths audited being women that had not attended ANC and had stillbirths (MOH Kenya, 2017).

Despite WHO guidelines steering government policies aimed at promoting positive antenatal experiences, ANC services remain underused in sub-Saharan African countries, including Kenya (Benova et al., 2018). This phenomenon is often used to explain the modest decline in maternal mortality in these countries. Previous literature identified that the primary factors contributing to this underuse were economic, political, and sociocultural factors, including lack of health facilities, lack of transport, long distances, long waiting times, financial burden and lack of autonomy (Chorongo et al., 2016; Konlan et al., 2020; Simkhada, Teijlingen, Porter, & Simkhada, 2008). However, it has been argued that the availability of health facilities and free services does not always lead to use of these services, especially as barriers to transport and access hinder attendance. However, women's perspectives on what matters to them regarding health problems and why they choose to seek or not to seek healthcare may also have significant direct or indirect effects on pregnancy outcomes (Filippi, 2018).

Most research in this area has concentrated on topics such as disrespect, abuse during childbirth and the perspectives of women in ANC, but few studies have addressed midwives' and mothers' perspectives about ANC access and health-seeking behaviour in relation to ANC (Afulani et al., 2020). Furthermore, the transferability of research findings from sub-Saharan African studies into the Kenyan context may be problematic because: (a) there may be misalignment between current ANC provision and the social and cultural context for some women (Finlayson & Downe, 2013), and (b) the evidence base on which local non-clinical interventions reduce the risk for developing complications that may lead to maternal death remains unclear (Burchett & Mayhew, 2009). Consequently, current strategies promoting ANC in Kenya are likely to be based on tenuous research evidence. There has also been little

attempt to synthesise research findings for the purpose of constructing a supportive framework to overcome barriers for women wanting to attend ANC.

Strategies aiming to improve ANC attendance need to be based on clear identification and deep understanding of contemporary factors influencing women's decisions to attend/not attend ANC. The impact of paternal attitudes and beliefs concerning the value of ANC is also poorly represented in available literature, despite many researchers noting fathers as being a significant determinant of women accessing ANC. Although studies from sub-Saharan Africa have identified many common factors influencing ANC attendance (e.g. transport availability, family wealth, education, young brides), these factors are subject to social change and therefore require periodic review.

Although the Kenyan government has prioritised maternal healthcare, available resources are finite, which emphasises the need to target factors that are most likely to change women's health- and help-seeking behaviours in pregnancy. Therefore, this study sought to identify factors that were modifiable, and recruitment was targeted towards women most likely to respond to information and other incentives to attend ANC. The WHO highlighted the importance of ANC during pregnancy in averting majority of the preventable maternal deaths (WHO, 2016). Conducting a study to explore the experiences and views of midwives and pregnant women regarding health- and help-seeking behaviours in accessing and attending ANC is imperative.

1.4 Significance of the study

This study is important because although previous research investigated general factors associated with the use of ANC, health- and help-seeking behaviours related to ANC access and attendance in developing countries have rarely been examined. This is a crucial topic to explore because ANC plays a critical role in protecting mothers from maternal mortality (Kifle et al., 2017). Research on women's experiences in accessing and attending ANC, which is linked with maternal mortality, has not been fully addressed. Furthermore, health- and help-seeking behaviours have not been investigated in the context of women's temporality to decide to seek ANC. Pregnant women often delay seeking care or do not seek care, especially when they perceive they have no complications/risks or lack understanding of the broader role of ANC beyond treatment (Ochieng & Odhiambo, 2019).

This study will contribute key insights that could help focus the implementation of intervention programmes involving women's temporality and risk perception in health- and help-seeking behaviours. In addition, the researcher recognised the paucity of studies conducted in Kenya

that explored women's experiences in health- and help-seeking behaviours in accessing and attending ANC. The findings of this study will have potential to inform public health policy and ANC programmes elsewhere, especially those that aim to improve health services for pregnant women and their families. Therefore, this research could inform interventions that are appropriate for and tailored to local Kenyan settings to improve pregnancy outcomes by fostering a safer, more supportive environment.

1.5 Aim of the study

The aim of the study was to explore the experiences of midwives and pregnant women in terms of health- and help-seeking behaviours during pregnancy in accessing and attending ANC in Kilifi, Kenya.

1.6 Objectives of the study

1. To explore women's experiences regarding accessing and attending ANC.
2. To explore midwives' experiences of pregnant women accessing and attending ANC.
3. To identify the barriers to health- and help-seeking behaviours of pregnant women in accessing and attending ANC.
4. To explore enablers of health- and help-seeking behaviours of pregnant women in accessing and attending ANC.

1.7 Structure of this thesis

This thesis examined ANC access and attendance at health facilities through listening to experiences of women who had received ANC and midwives who provided this care in a health facility setting. ANC is not fully established and accepted in Kenya as a programme involving health screening, health education and provision of supplements for preventing illnesses. However, there are international and local guidelines that encourage early and regular ANC visits during pregnancy. Although evidence about the importance of ANC in preventing near misses and maternal deaths is widely available, low numbers for ANC initiation and continuity are common in low- and middle-income countries, including Kenya. This thesis is set out in nine chapters, with each chapter outlining the major concepts as described below.

Chapter 1 provides an introduction for this study, and sets out the rationale for undertaking the study, statement of the research problem, aim and objectives, and outlines the structure of the thesis.

Chapter 2 sets the study context by presenting the background for this study. The chapter starts by describing maternal health and identifies the role of ANC in preventing maternal morbidity and mortality. A brief overview of the Kenyan context is provided and the initiatives that have already been put in place to improve ANC access and attendance and reduce maternal mortality are discussed. This is followed by a description of ANC based on the WHO recommendations for the visits required throughout pregnancy. The chapter continues with an exploration of health- and help-seeking behaviours in relation to ANC and how women make decisions on when to seek care.

Chapter 3 presents a diverse body of evidence regarding the methods and theoretical framework that underpin this research, particularly the Neuman model and how it relates to ANC access and attendance. The researcher did not use all concepts from this model but rather used it as a framework to organise factors that influenced ANC attendance in terms of intrapersonal, interpersonal, and extra-personal perspectives to draw inferences from the research findings.

Chapter 4 presents a review of previous literature on ANC access and attendance and the reasons why women choose to seek or not seek care. This is divided into three sections based on the Neuman model, which uses three categories of factors: intrapersonal, interpersonal, and extra-personal. The aim of this literature review was to determine what was already known in relation to the study topic and identify gaps in the available literature. This was to give context to the present study and clarify how it will fit with extant literature and eventually lead to the formation of new knowledge. The first part comprises a literature review on the extra-personal factors that influence women to seek/not seek ANC. The second part explains interpersonal factors and the third part involves a review of intrapersonal factors. The chapter concludes by explaining how these factors are related and noting that ANC access and attendance is complex, because it is not an individual decision but is based on patriarchal societal norms.

Chapter 5 discusses the methodology used in this study, beginning with the research paradigm. This is followed by an explanation of the various qualitative research methods that were explored for this study. The guiding philosophies of feminism and social constructionism are discussed, and the chosen descriptive qualitative approach and details of the advantages of this method are explained. This is followed by a description of reflexivity. The chapter then sets out the details of the methods applied in this study. This includes a

description of the study setting, sampling, recruitment and selection process for participants, inclusion and exclusion criteria, data collection procedure and data analysis. The final part of this chapter focuses on the ethical considerations in conducting this research study.

Chapters 6 and 7 present the research findings, including details of the study participants and their demographic information. This is followed by a discussion of the central themes and related subthemes drawn from the analysis of the data collected from the participants.

Chapter 8 provides a discussion of the research findings in the context of extant literature, the limitations of this study and recommendations. It focuses on the results of the study using the concepts from the Neuman model to explain the research and its application in maternal healthcare services use. It also presents the strengths and limitations of this study and recommendations for further research.

Chapter 9 presents the conclusions of this study, along with the implications of the research findings for practice and policy in maternal healthcare in Kenya.

Summary

This chapter provided a broad introduction to this study. This included the reason for undertaking the study, statement of the research problem, aim and objectives and an outline of the structure of the thesis. This chapter serves as the foundation for the study, and explores the critical issue of ANC use, particularly in the context of high maternal mortality rates globally, which poses a significant challenge for low- and middle-income countries such as Kenya. By addressing the gaps in existing knowledge and emphasising the importance of studying ANC this chapter established the groundwork for the subsequent discussions. The next chapter sets out the background of this study and comprehensively discusses the structure of the healthcare system in Kenya, which further contextualises this research in the country's healthcare system.

CHAPTER 2: BACKGROUND

2.1 Overview

ANC protects against maternal mortality.

Maternal mortality remains unacceptably high in sub-Saharan African communities, with this phenomenon strongly linked to low ANC attendance. Maternal and neonatal mortality are major global concerns for both developed and developing countries. However, the majority of maternal deaths occur in low- and middle-income countries, despite the WHO's emphasis on the importance of ANC during pregnancy (WHO, 2018). Although various interventions have been introduced over the last few decades, many countries, including Kenya, continue to experience high numbers of maternal deaths. ANC is an essential approach used globally in primary healthcare and is directly associated with improved birth outcomes (Kuhnt & Vollmer, 2017).

Available literature suggests that overall, maternal mortality has declined (WHO, 2019), and it is argued that ANC has a key role to play in the quest to further reduce maternal mortality. Use of maternal health services for antenatal, intrapartum and postpartum care is an important approach that can improve maternal and newborn health (Aliyu & Dahiru, 2017; Haruna, Dandeebo, & Galaa, 2019). However, the majority of women attend at least one ANC visit during pregnancy and only a few attends the recommended minimum of four visits, which has been attributed to inadequate access and various other factors related to the individual, their family and the wider community (Simkhada et al., 2008).

Despite global recommendations on early initiation of seeking maternal health services, delay in initiating ANC is common for many women; the majority of women start ANC in the second or third trimester, which may result in a rise in maternal and neonatal morbidity and mortality (Finlayson, Tuncalp, & Gulmezoglu, 2019). This has been attributed to a range of factors (e.g. intrapersonal, interpersonal, and extra-personal factors) that may serve to shape pregnant women's temporality in decisions to access or not access ANC. Although factors hindering ANC attendance have been widely reported, effective and disseminated interventions to address these factors are lacking. In addition, these factors may differ in populations across sub-Saharan Africa based on the geographical location, sociodemographic characteristics, political stability and other factors.

The journey of pregnancy and childbirth is a period of transition and a life event that brings joy and excitement for the woman and her family. Furthermore, as a 'rite of passage' for reproduction of the next generation, pregnancy is a complex phenomenon, particularly for those who are still undergoing physical changes to adulthood. However, this transition is also one full of uncertainty and heightened vulnerability for the survival of the mother and foetus, although it is mostly uneventful for many (Okedo-Alex et al., 2019; White Ribbon Alliance, 2011).

Although many women experience healthy pregnancies that are uneventful with the recommended care, it is common for women to experience problems in pregnancy; occasionally such problems result in the loss of the mother or baby, which affects the family, community, and wider society (WHO, 2016). ANC is the most important care provided during the continuum of pregnancy as it helps identify and treat any problems and facilitates referral to specialist care in a timely manner to ensure improved outcomes. From the researcher's perspective as a midwife, pregnancy in itself makes a woman vulnerable. Some women may experience a feeling of uncertainty that means they seek care, whereas others may feel healthy and believe it is a normal life event and only seek care if a life-threatening event occurs. However, this can end with near miss before delivery where midwives can do little or nothing can ensure the safety of the mother and baby (Liyew et al., 2017).

Definitions

Maternal deaths are referred to as deaths from pregnancy-related complications that occur during the course of pregnancy, labour and childbirth and up to the 42nd day after birth (WHO, 2015). Globally, about 300,000 maternal deaths, 2.7 million neonatal deaths and 2.6 million stillbirths are reported annually as a result of pregnancy- and childbirth-related complications (Alkema et al., 2016; WHO & UNICEF, 2019). Every day, over 800 women die from pregnancy-related causes across the world; a majority of these deaths are reported to be preventable (WHO, 2019)

Epidemiology of maternal mortality

In low- and middle-income countries, maternal mortality was estimated at 86% in 2017; two-thirds of these maternal deaths were from sub-Saharan Africa and one-fifth were from Southern Asia (WHO, 2019). The MMR in low- and middle-income countries remains higher than the Sustainable Development Goal (SDG) target of fewer than 70 deaths per 100,000 live births by 2030. The high MMR noted above may be attributable to inequalities in access

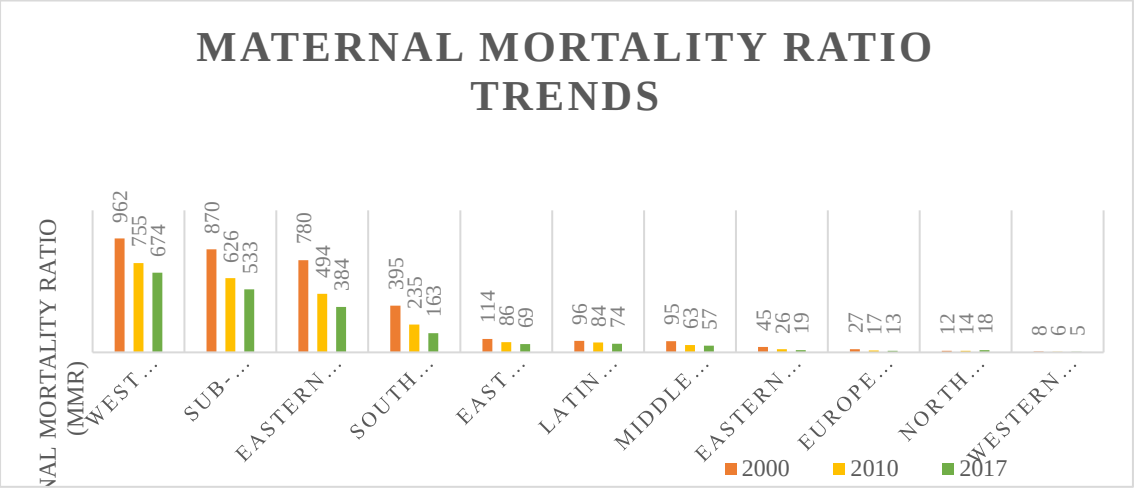
to quality maternal healthcare services and the gap between the rich and the poor in these regions.

In sub-Saharan Africa, the MMR is estimated at 542 per 100,000 live births compared with the global average of 216 per 100,000 live births. West and Central Africa had the highest MMR in 2017 (674 per 100,000 live births) compared with the Eastern and South African regions that had an estimated 384 deaths per 100,000 live births in the same period. Three countries (South Sudan, Chad and Sierra Leone) had an MMR higher than 1000 per 100,000 live births (WHO, 2019). The lifetime risk for maternal death in these countries was estimated at one in 37 compared with just one in 7800 in Australia and New Zealand (WHO, 2019b).

These statistics establish that despite access to ANC, sub-Saharan African countries have not achieved significant reductions in maternal mortality. Countries that succeed in increasing women's attendance at antenatal services identified a positive association between this phenomenon and reduced maternal mortality (Berhan & Berhan, 2014; Villar et al., 2001). This discrepancy could be attributed to weak health systems, high fertility, insecurity following political instability during crises in some countries and interruptions to quality health services that hinder ANC access and attendance (Ronsmans et al., 2006; Wilunda et al., 2017).

In Kenya, the MMR is currently estimated at 342 per 100,0000 live births, which reflects a reduction from 353 per 100,000 in 2015 (WHO, 2019b). This high number of maternal deaths has been linked to suboptimal health-seeking behaviour among pregnant women (MOH Kenya, 2013). The Millennium Development Goal (MDG) 5 set a target of reduction in maternal mortality by three-quarters for the period from 1990 to 2015 (United Nations [UN], 2015). However, Kenya did not achieve this MDG because of the high maternal mortality, which fell short of the MDG target of 147 per 100,000 live births by 2015. In 2016, SDG 3 was set, which aimed to reduce the global maternal death rate to <70 per 100,000 live births by 2030 (UN, 2020). This means Kenya needs to reduce its high MMR, which is mostly attributable to limited access to and low use of skilled maternal healthcare services, with only 58% of pregnant women attending the recommended four ANC visits (Kenya Demographic and Health Survey [KDHS], 2015). The trends for 2000-2017 are shown in the figure 2.1 below.

Figure 2.0:1: Trends in Maternal mortality: 2000 to 2017



Source: World Health Organization, UNICEF, United Nations Population Fund and The World Bank, *Trends in Maternal Mortality: 2000 to 2017 WHO*, Geneva, 2019.

Notes: Maternal mortality ratio (MMR) is the ratio of maternal deaths per 100,000 live births.

2.2 Protective effect of ANC

Maternal mortality has been shown to be preventable through the use of timely and appropriate ANC, which provides evidence-based interventions to decrease poor maternal and neonatal outcomes. This has been supported by a decline in maternal mortality reported in developed countries. The reduction of maternal mortality in the UK began with the use of self-audit confidential enquiries in 1952 (Chamberlain, 2006). Developing context-specific evidence-based interventions to avert maternal deaths requires the ability to count every death and understand the direct and indirect causes. Audit feedback mechanisms such as the national Maternal and Perinatal Death Surveillance and Response are a way of conducting a root cause analysis to determine the causes of maternal deaths and recommend solutions. To complement this approach, a confidential enquiry about maternal death was instituted, which was based on learning experiences from such enquiries in the UK and the Republic of South Africa, which started in 1952 and 1998, respectively (Moodley et al., 2014). Furthermore, most developed countries have now implemented evidence-based guidelines that are widely used by key stakeholders, which has resulted in maternal mortality becoming a rare occurrence when compared with low- and middle-income countries (UN, 2018; WHO & UNICEF, 2015). For example, maternal death is reported to occur in just one in 7800 live births in Australia and New Zealand (WHO, 2019).

The Safe Motherhood Initiative was started by the WHO in 1987 to reduce the prevalence of maternal mortality worldwide and achieved a slow decline in maternal deaths. Analyses conducted 30 years later found a 44% reduction in maternal deaths between 1990 and 2015 (Alkema et al., 2016; WHO & UNICEF, 2015). Factors working against these initiatives in sub-Saharan Africa include problems in access, service provision and service use, which vary widely because of inequalities within and across different regions. Universal provision of and access to care for pregnant women is central to improving maternal health and achieving the SDGs (Filippi et al., 2018; Koblinsky et al., 2016; Langer et al., 2015).

In developing countries, ANC is largely inadequate for preventing maternal mortality. Globally, although 87% of pregnant women access ANC once, less than three in five women (59%) complete the recommended minimum of four or more visits (UNICEF, 2019). Between 1990 and 2013, estimated global and regional coverage of early ANC visits reported coverage was less than 25% in developing countries compared with above 80% in developed countries (Moller, Petzold, Chou, & Say, 2017). However, only half of women globally were reported to receive the recommended care during pregnancy (Benova et al., 2018; UNICEF, 2018). In sub-Saharan Africa, about 13% of pregnant women did not use ANC, and 53% achieved the recommended four or more visits (Adedokun & Yaya, 2020). In Malawi, an impact study on focused ANC policy concluded that it was associated with underuse of services and that the currently recommended eight visits may not be viable in low resource settings (McHenga, Burger, & von Fintel, 2019).

The use of skilled maternal health services for antenatal, intrapartum, and postnatal care is a potential approach to eliminate avoidable maternal and newborn deaths. However, although 96% of women in Kenya were reported to use ANC, only 18% complete the WHO-recommended minimum of four visits (Woldegiorgis et al., 2019). Kenya Demographic and Health Survey (KDHS) 2022 data highlighted the progress made in access to ANC in Kenya. In that survey, nearly all women (98%) reported receiving ANC from a skilled provider for their most recent birth in the 2-year period before the survey. This was a positive indicator, as pregnancy care from skilled health workers, (e.g. doctors, nurses, and midwives) plays a critical role in reducing maternal deaths and related injuries during pregnancy, delivery and the postnatal period. The data also showed that 66% of women had the recommended four or more ANC visits, with access being higher in urban areas compared with in rural areas (74% vs. 62%) (Kenya National Bureau of Statistics [KNBS], 2022). Despite advancements in maternal healthcare and the WHO recommendations, a majority of women in Kenya, Ghana

and Malawi were reported to only attend one ANC visit instead of at least four visits during pregnancy (Pell et al., 2013). Although the current WHO recommendations are for eight contacts with a healthcare provider, coverage of the minimum four visits remains low and inequitable in sub-Saharan Africa (WHO, 2016). Despite progress, there are also pronounced global variations for women attending up to four visits; for example, there is an urban-rural gap of 24% and a rich-poor gap of 40% (Odusina et al., 2021; UNICEF, 2019).

Previous studies identified a number of factors that impeded the uptake of ANC in sub-Saharan Africa (Sumankuuro et al., 2019). This is concerning because the low use of ANC services has been reported to contribute to the risk for pregnancy-associated complications among women in many low- and middle-income countries (Benova et al., 2018). Inadequate access is a barrier that commonly results in low use of maternal services in low- and middle-income countries (Benova et al., 2018). In Kenya, it has been reported that challenges related to access mean pregnant women from rural communities without a reliable income may seek available and affordable alternative maternal services from traditional birth attendants (Cheptum et al., 2017).

2.3 ANC best practice

The 'routine care' provided at ANC is described by the WHO as the care given by healthcare professionals to pregnant women throughout the pregnancy until childbirth. The aim of this care is to detect existing problems or those that develop during pregnancy and can harm the mother or the baby. Several interventions and procedures are conducted, including screening for risk factors and diagnosis, prophylactic treatments, and treatments for any identified problems (Tuncalp et al., 2017). Routine care includes history taking, examination screening and tests, treatments, preventive measures, health education, advice, and counselling. However, there may be country and regional variations in the interventions provided during routine ANC. For example, ANC in sub-Saharan Africa includes a routine check for malaria, but this does not occur in the UK (NHS, 2019).

The content of routine ANC care in sub-Saharan Africa is set out below, but the actual care provided should be context specific (Appendix 7).

a) Nutritional interventions
b) Maternal and foetal assessment
c) Preventive measures
d) Interventions for common physiological symptoms

e) Health system interventions to improve the use and quality of ANC.

Several studies have linked a lack of ANC with high maternal deaths. For example, in low- and middle-income countries, lack of ANC was associated with a greater risk for maternal death (Bauserman et al., 2015). In addition, women who did not attend ANC in Ethiopia had a five times higher risk for maternal death compared with those who attended ANC (Sara, Haji, & Gebretsadik, 2019). Similarly, women in Zambia who had not completed ANC visits experienced delays in referral to a health facility during complications, which resulted in a higher risk for maternal death (Moyo, Makasa, Chola, & Musonda, 2018). In Kenya, maternal deaths reviewed in the confidential enquiry showed that more than 50% had no documentation of ANC attendance or did not attend ANC (Ministry of Health Kenya, 2017). Given the high burden of maternal mortality, progress is needed to increase coverage of more than one ANC visit in these regions. Researchers have suggested that including the views of women in which their fears are explored may lead to higher ANC use in low- and middle-income countries because there is a disconnection in the principles for ANC provision and the cultural context (Finlayson & Downe, 2013).

Health-seeking behaviour in pregnancy is encouraged by the WHO, and all pregnant women are recommended to begin ANC attendance before 12 weeks of gestation and reach a minimum of four visits during pregnancy. However, eight visits are currently recommended, and active interaction between pregnant women and healthcare professionals is emphasised. In sub-Saharan Africa, the majority of women are known to attend ANC at least once during pregnancy (UNICEF, 2019a). A multi-site study conducted across Ghana, Kenya and Malawi found the majority of women attended ANC at least once, but only came for monitoring of the foetus or if they experienced an issue with their pregnancy. However, in Kenya, some also attended ANC because they wanted to get an ANC mother and child booklet to avoid reproaches from nurse-midwives upon admission to a maternity ward for delivery (Pell et al., 2013).

The willingness of pregnant women to start ANC early and continue with these visits is thought to be determined by their understanding of the importance of care. Early ANC is important because of the considerable information needs in pregnancy (Kamali et al., 2018). These ANC encounters also include counselling on family planning, which is continued during the postnatal period and gives a woman adequate time to make decisions with her partner. Low attendance of subsequent ANC visits demonstrates apathy among pregnant women about seeking care despite care being available and provided free of charge (Downe

et al., 2019). Imparting the benefits of ANC to women in sub-Saharan Africa remains challenging. However, providing effective ANC is complex and involves procedures and interactions with women based on a schedule and numerous visits, where women receive a variety of services. Women can be encouraged to attend ANC by sharing information about the recognised benefits and impacts for the well-being of the mother and baby during pregnancy. These visits also offer an opportunity for early detection and management of complications during pregnancy and improves the outcomes of such complications (Tuncalp et al., 2017). Women attending ANC get an opportunity to receive comprehensive information and early detection of/treatment for any complications that occur during pregnancy, many of which may cause maternal deaths; these complications include vaginal bleeding, infections, and hypertensive disorders (Say et al., 2014). Obstetric haemorrhage, hypertensive disorders in pregnancy, non-obstetric complications and pregnancy-related infections are the leading causes of maternal deaths in sub-Saharan Africa (Musarandega et al., 2021).

When ANC services are appropriately used during pregnancy, they can lead to a feeling of well-being, fewer obstetric complications and improved health and survival of both the mother and newborn through recognition, prevention, detection and management of health-related problems in pregnancy. Throughout ANC, physical examination, temperature, blood pressure monitoring, urinalysis and blood analysis are vital in detecting any problems (e.g. pre-eclampsia, anaemia, and infections) (Darmstadt et al., 2005; Kruk et al., 2018; Tuncalp et al., 2017). Improvements in ANC access and attendance can be made when women are involved in and understand ANC. The majority of women of reproductive age in low- and middle-income countries have their first contact with health professionals during pregnancy, and this contact helps to form a relationship with the health system that extends throughout their life.

In developing countries, including Kenya, poor ANC attendance during pregnancy remains a major concern and is associated with increased number of maternal deaths (Tuncalp et al., 2017). The KDHS report for 2014 showed that ANC attendance had improved in some counties to above 90%, although other regions remained below 60% (KNBS et al., 2015). That report also indicated women often encountered one or more barriers (e.g. poor finances, a ‘tyranny of distance’, lack of spousal/partner permission) to seeking care during pregnancy. However, only 20% of pregnant women had their first antenatal clinic visit before 12 weeks

of pregnancy and urban women were more likely to attend ANC than rural women (68% vs. 51%) (KDHS, 2015).

Multiple and complex factors influence ANC attendance, even when these health services are easily accessible and offered at no cost to women. Enablers of ANC access and attendance include education. Women with higher education are thought to be knowledgeable and empowered to make decisions on health- and help-seeking behaviours, and also be able to recognise danger signs (Abbasi & Younas, 2015). Women's knowledge and perceptions of the importance of ANC were found to influence their health-seeking behaviour (Abrahams, Jewkes, & Mvo, 2001). However, despite knowledge of the importance of ANC care, many women face challenges in attending and accessing this care, with common barriers being related to infrastructure, women's education level, healthcare facility availability and community awareness (Alanazy, Rance, & Brown, 2019; Titaley, Hunter, Heywood, & Dibley, 2010).

Contemporary research that explored factors influencing ANC attendance identified a range of social, policy and service provider barriers and enablers to ANC attendance (Finlayson, et al., 2019; WHO, 2016). The literature also identified a wide range of reasons, beliefs and behaviours that influenced women when seeking ANC (Mrisho et al., 2009; Munguambe et al., 2016). However, women's perspectives on what mattered to them regarding health problems and why they chose to seek/not seek healthcare may also have significant direct or indirect effects on their pregnancy outcomes (Filippi et al., 2018). Therefore, insights regarding ANC access and attendance can be better understood by exploring barriers and enablers to ANC access and attendance from women's and healthcare providers' perspectives.

Barriers to ANC access and attendance include availability of resources, especially finances (e.g. user fee-related) and distance to a healthcare facility; for example, the number of women in Afghanistan seeking ANC increased after user fee removal (Steinhardt et al., 2011). In Ghana, women with insurance were more likely to seek ANC compared with those without insurance (Sakeah et al., 2017). Furthermore, many women attending ANC may still face financial constraints even when services are provided free of charge, and they are willing to seek care. Indirect costs (e.g. transport, costs of drugs and loss of a day's earnings when away from work) and a lack of resources for basic survival needs may also result in a failure to access free services (Finlayson & Downe, 2013). Therefore, understanding women's health-

and help-seeking behaviours in attending and accessing ANC through information obtained from semi-structured interviews with pregnant women and healthcare providers is necessary to elicit details of the enablers and barriers.

Researchers have reported that decision making and autonomy of pregnant women regarding seeking healthcare influences access and attendance, especially when the woman has to consult her husband, mother-in-law and community for an opinion and finances (Ganle et al., 2015; Kim et al., 2019; Qureshi et al., 2016). This has made use of ANC even more difficult for single women and adolescents who have to hide their pregnancy because of lack of support from their family and lack of resources (Christiansen, Gibbs, & Chandra-Mouli, 2013; Kim et al., 2019). Other women may have experienced violence/abuse in their life, including during pregnancy; this comprises an important part of history taking during ANC visits. These women may be emotionally affected and may therefore not seek ANC as they tend to withdraw from public life, potentially leading to adverse outcomes for both mother and baby (Alio, Nana, & Salihu, 2009).

The present researcher conducted a systematic review of the literature and established that relevant studies: a) lacked a conceptual framework for factors influencing ANC use from the mother's experience; b) did not provide a comprehensive assessment; c) failed to weight the consideration of factors from the point of view of the mothers; and d) rarely included an understanding of how husbands influenced women's ANC attendance over time. The present researcher contends that a more comprehensive and deeper analysis facilitated by the creation of a conceptual framework will improve understanding factors affecting ANC access and attendance in the Kenyan context. Another important aspect that is not clearly understood is the weighting of different factors in influencing women's ability to access ANC, and which factors are realistically modifiable. The researcher used the Neuman system model as a framework to categorise these factors into intrapersonal, interpersonal, and extra-personal factors. The researcher also contended that there is paucity of research on mothers' risk perception, despite that fact that this may have a significant influence on timely ANC attendance or initiating ANC attendance. Clarifying how women perceive barriers to attendance is important to understand and overcome these barriers. Common factors have been listed by other authors but have not made a difference to practice, which shows that simply reporting these barriers is not enough. It is important to carefully look at each barrier and explain how they are operationalised by women to understand if their attendance behaviour would change if they knew they are at risk.

To modify pregnant women's behaviour in seeking care, it is crucial to shift their thinking and ensure they understand the significance of ANC. However, pregnant women's decision-making regarding ANC is influenced by numerous factors encompassing social, cultural, economic and structural influences. Intersectional feminism, which acknowledges that individuals' identities and experiences are shaped by the intersection of multiple factors (e.g. race, class, gender, sexuality and ability) is particularly relevant in this context (Women UN, 2020). The Kenya constitution of 2013 enshrined the fundamental rights for all, however, women remain socially disadvantaged in sexual and reproductive health rights (Gatwiri & McLaren, 2016; Sanya & Lutomia, 2016). However, the presence of numerous barriers to autonomy and power in ANC decision-making is a major concern, especially as these obstacles disproportionately impact marginalised women. For example, a study conducted in Kenya (Wairoto et al., 2020) found ANC use was associated with maternal education, household wealth, place of delivery, marital status, age at first marriage and birth order. Moreover, several studies have highlighted how cultural norms and gender roles can restrict women's autonomy, thereby posing challenges to their ability to make independent decisions about their healthcare (Lusambili et al., 2020; Ombere, 2021). Recognising the significance of this intersectional perspective is vital, as it underscores that women's experiences and choices related to ANC are shaped by various facets of their identity in addition to their gender. Furthermore, intersectional feminism provides a critical lens to analyse the power dynamics, discrimination and social inequalities that affect women's access to and use of ANC. By recognising these intersecting factors, policymakers, healthcare providers and activists can work towards creating inclusive, accessible and culturally sensitive ANC services, which will empower women across various social identities to make informed decisions about their healthcare.

2.4 WHO ANC guidelines

Current ANC guidelines acknowledge these services as a core component of maternal care provision that offers protection against maternal mortality (WHO, 2016). These guidelines and recommendations for ANC were developed to prevent maternal mortality. The WHO recommended four visits in the first model, which was known as the focused ANC model in 1990s. In this model, the first visit was in the first trimester of pregnancy at 8–12 gestational weeks, the second visit was scheduled at 22–26 weeks, the third at 32 weeks and the fourth at 36–38 weeks. However, evidence showed that more perinatal deaths were associated with few (four) visits compared with eight contacts between women and their healthcare providers

(Vogel et al., 2013). This led to the development of new WHO recommendations in 2016 to complement the existing routine four ANC visits to support the management of pregnancy-related adverse outcomes. The guidelines were revised based on evidence of 'positive pregnancy experience' and recommended eight visits during pregnancy. In each of these eight contacts, pregnant women should be provided with respectful, individualised, and person-centred care in which detailed information is communicated by healthcare providers (WHO, 2016).

The new WHO (2016) guidelines aimed to improve the number of ANC contacts from four to eight throughout pregnancy to enable better care provision and support by health professionals. Evidence has shown that more visits are associated with positive pregnancy outcomes because potential and actual complications can be detected and managed. The new model recommended one contact in the first trimester, two contacts in the second trimester and five contacts in the third trimester for all pregnant women to increase their contact with health professionals; the first contact should occur early in the first 12 weeks of gestation, with subsequent contacts at 20, 26, 30, 34, 36, 38 and 40 weeks (WHO, 2016). In addition to routine assessments, it was recommended that providers address comprehensive issues such as nutrition, prevention and treatment of common physiological problems, counselling and support for women facing intimate partner violence, intermittent preventive treatment for malaria, and identification and management of infections including human immunodeficiency virus (HIV), syphilis and other sexually transmitted infections (STIs) in endemic areas. Blood pressure monitoring, temperature and pulse monitoring, urine testing and blood tests for anaemia were also recommended (Lincetto et al; 2006; WHO, 2016). These guidelines aimed to ensure a healthy pregnancy, a smooth transition through labour and delivery and a positive motherhood experience (WHO, 2016).

The WHO recognised that more frequent and high-quality contacts would increase the uptake of ANC and aid in preventing, detecting, and reducing complications for pregnant women. There is an association between positive pregnancy outcomes and increased ANC use starting at 8–12 gestational weeks (WHO, 2015; WHO, 2016). Therefore, healthcare providers should have good interpersonal skills and provide effective, integrated medical services (interventions and tests), deliver appropriate and timely information, and offer psychosocial and emotional support to all pregnant women in a good functioning facility. The WHO-recommended ANC contact schedule is presented in table 2.1 below.

Table 2.1: WHO recommended ANC contact schedule.

WHO FANC model	2016 WHO ANC model
First trimester	
Visit 1: 8–12 weeks	Contact 1: up to 12 weeks
Second trimester	
Visit 2: 24–26 weeks	Contact 2: 20 weeks Contact 3: 26 weeks
Third trimester	
Visit 3: 32 weeks Visit 4: 36–38 weeks	Contact 4: 30 weeks Contact 5: 34 weeks Contact 6: 36 weeks Contact 7: 38 weeks Contact 8: 40 weeks
Return for delivery at 41 weeks if not given birth.	

Progress towards achieving ANC coverage can be measured by two indicators: 1) the proportion of women who report at least one ANC visit, and 2) the proportion of women who report at least four ANC visits (Lincetto et al., 2006). Inadequate use of ANC visits denies healthcare providers the opportunity to provide quality services. Although the recommendations regarding ANC are known in low- and middle-income countries, the majority of women start ANC visits in the second trimester. For example, in Ethiopia only one-quarter of women had started ANC during their first trimester (Kifle et al., 2017). Similarly, a multicentre study from Kenya noted that women tended to have their first ANC visit in their second or third trimester (Pell et al., 2013). Pregnant women may seek ANC to ensure their well-being and that of the foetus. However, family members and the community may only perceive this care is necessary in the presence of complications (Titaley et al., 2010).

Although, ANC use is associated with the number of women who deliver in a health facility under care from a skilled birth attendant, a multilevel analysis (2005–2015) involving 34 sub-Saharan African countries, including Kenya, found a gap of more than 20% between ANC and skilled birth attendant coverage (Woldegiorgis et al., 2019). Recent studies suggest that

the recommendation for increased good quality care during the antenatal period prevents adverse maternal outcomes and promotes health facility deliveries (Dixit, Khan, Dwivedi, & Gupta, 2017; Kuhnt & Vollmer, 2017).

2.5 Profile of Kenya

This study was conducted in East Africa, specifically Kenya (see Appendix 16). Geographically, Kenya lies across the equator on the East Coast of Africa. Kenya is a multi-ethnic country with the majority of the population being from the Bantu and Nilotic ethnic groups and few Cushitic subgroups. The country's landmass is approximately 225,000 square miles (582,646 km^2), with over 80% of the land being arid and semi-arid and only 20% being arable. Kenya is bordered by South Sudan to the northwest, Ethiopia to the North, Somalia to the East, Uganda to the West, Tanzania to the South and the Indian Ocean to the Southeast, which has a 536 km coastline. Kenya has a diverse geography, climate, and population, encompassing very cold mountains and hot semi-arid deserts. As of 2020, Kenya is the third largest economy in sub-Saharan Africa after Nigeria and South Africa (Standard, 2020).

Kenya is classified as a lower-middle-income country with a population of over 56 million as of 2023, 75% of which reside in rural areas (United Nations Population Fund, 2022). Despite economic growth and an increase in population with over 1 million births per year, almost half of the Kenyan people live in poverty. Although access to skilled birth attendants is available through public, private, faith-based and nongovernmental organisations, most people in rural areas rely on traditional birth attendants and government health services. Kenya's constitution of 2013 devolved the healthcare system to bridge inequities in access to healthcare for all 47 counties (Kenya, 2013). This meant that all 47 counties were responsible for service delivery, with the government taking charge of health policy, regulation, and pre-service training of human resources for health (Tsofa, Molyneux, Gilson, & Goodman, 2017).

2.5.1 Justification for the choice of Kilifi County

Kenya was selected as the study site because of the researcher's Kenyan background, which influenced the decision given the familiarity with the research context and geographical setting (Appendix 17). This choice was important for this study that explored health-seeking behaviour in relation to ANC access and attendance as it provided knowledge of the country, people, language, culture and healthcare organisations, which was important for the future implementation of the study findings.

This study was conducted in Kilifi County, which is one of the 47 counties in Kenya. Kilifi is in the Coastal region and located approximately 426 km from the capital city, Nairobi. Kilifi lies between latitude 2° 20' and 4° 0' South, and between longitude 39° 05' and 40° 14' East. It borders Kwale County to the Southwest, Taita Taveta County to the west, Tana River County to the north, Mombasa County to the south and the Indian Ocean to the east. The county covers an area of 12,609.7 km^2. It has seven administrative sub-counties: Kilifi south, Kilifi north, Ganze, Malindi, Magarini, Kaloleni and Rabai. The most recent population estimate for Kilifi was 1,453,787 people, of which 704,089 were male, 749,673 were female and 25 were intersex (KNBS, 2019). The population of Kilifi is slightly cosmopolitan, with the majority being form the MijiKendas and Swahili/Bajuni tribes and the remainder being non-natives and Europeans. The participating health facilities were public and categorised as level 3 (health centres) and level 4 (sub-county) by the Kenya MOH (2014). The location of interviews for data collection was in the ANC/antenatal wards at Kilifi County Referral Hospital and Malindi Sub-County Hospital. Kilifi is the second county after Mombasa County to be known for tourism and fishing because of its proximity to the Indian Ocean. The two study sites were selected because the researcher had prior working relationships in these hospitals in previous work engagements in Kilifi County. The context of this study was Kilifi County, which is a county that suffers inequalities in resources and economic gains. This may explain the high maternal mortality in Kilifi County (KDHS, 2015).

2.6 Organisation of Kenya's healthcare system

Kenya's healthcare system is structured in a hierarchical manner under the devolved government system (Kenya MOH, 2014) (see Appendix 17). The lowest level is primary healthcare in the community, with higher levels encompassing intermediary and referral services for complicated cases. The structure reflects a tier system with six levels. Level 1 facilities are in the community and only offer preventive and promotive services with no medical personnel. Level 2 comprises dispensaries, which offer outpatient care for primary health services such as ANC, intrapartum and postpartum care for case management, curative and promotive services. Community health volunteers are attached to this level. Level 3 comprises health centres that offer outpatient and inpatient services for maternal health and other minor illnesses and referrals. Levels 4 and 5 offer referral services along with outpatient and inpatient services and perform minor and major surgical procedures (more specialised care is provided at level 5 facilities). Level 6 includes national referral hospitals, which provide specialised care, mentorship, training, and research (Kenya MOH, 2019). Primary

care is provided across community dispensaries, health centres, sub-county teaching and referral facilities and national-level services. Levels 1, 2 and 3 provide primary healthcare services (antenatal, intrapartum, and postnatal care) and basic emergency obstetric and neonatal care, whereas levels 4, 5 and 6 hospitals provide comprehensive emergency obstetric and neonatal care (Bintabara, Ernest, & Mpondo, 2019; Murphy et al., 2019).

In Kenya, the ration of healthcare professionals (i.e. doctors, clinical officers, nurses and midwives) to the population is below the WHO recommended standards. A government report from 2015 indicated there were 13.8 healthcare professionals per 10,000 people, compared with the recommended ratio of 44.5 per 10,000 people (Kenya MOH, 2015). Despite the recommendation by the Kenya Health Sector Strategic and Investment Plan to have at least two nurse-midwives per 10,000 population at dispensary levels and one nurse-midwife for 10 patients at higher level facilities, staff shortages persist. The majority of midwives are women, who comprise of 80% of the workforce. Disparities in nurse-midwife distribution are evident, resulting in higher workloads in some counties and task sharing (Kinuthia et al., 2022; Kenya MOH, 2013). The levels of healthcare in Kenya are shown in figure 5.5 below.

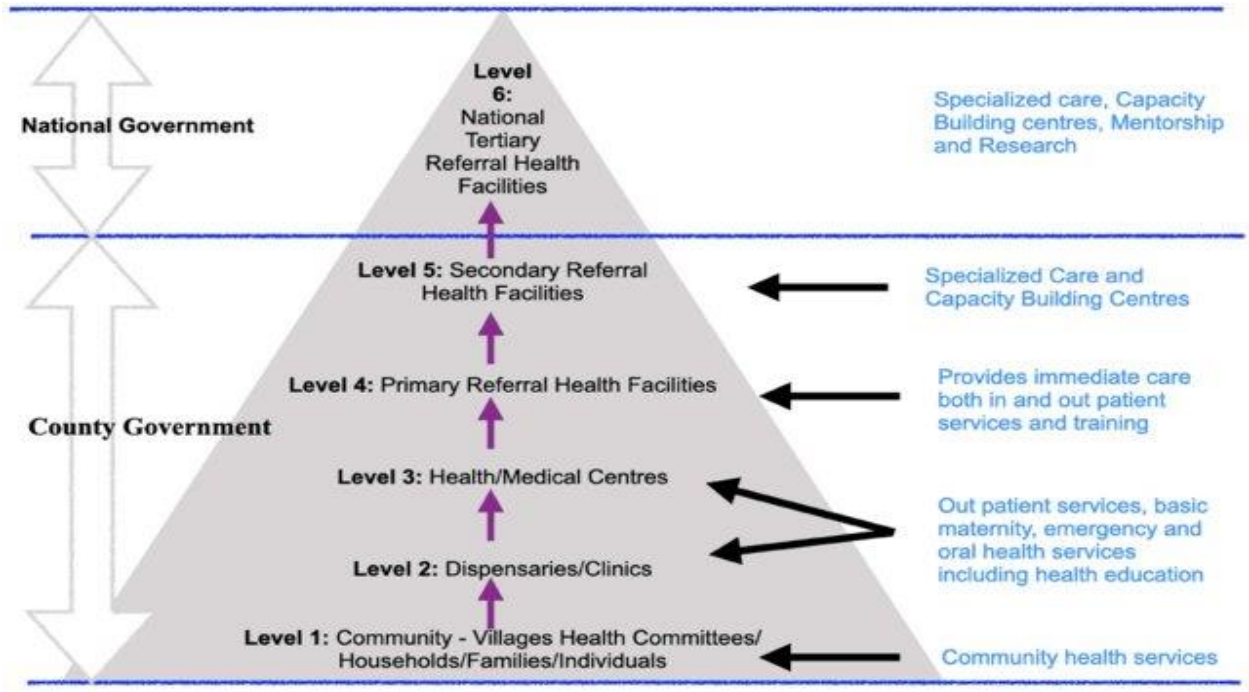


Figure 5.5: Levels of healthcare delivery in Kenya. (Source: Toroitich et al., 2022):

2.6.1 Kenya's maternal health services

Kenya continues to have a high maternal, child and infant health burden and slow decline in morbidity and mortality due to preventable causes. For example, maternal mortality rose by 55% between 2017 and 2020 (WHO, 2023). With the continued rise in the population and increase in maternal morbidity and mortality, universal healthcare access for all should be enhanced. Unfortunately, most Kenyan health services are in urban areas and rural areas continue to have limited resources and access to health services.

The government of Kenya placed maternal health as a priority agenda item because of the high number of maternal and neonatal deaths (6000 maternal deaths and 35,000 stillbirths) occurring per year (KDHS, 2015). Maternal and child health has also remained a priority for the Kenyan MOH, with ANC attendance and use of skilled birth attendants as indicators of maternal health. Interventions to reduce maternal mortality are geared towards women's health-seeking behaviours. These interventions address access to and use of health services with skilled healthcare professionals. However, widespread poverty in Kenya means that some of these interventions have not been fully implemented. To reduce the out-of-pocket charges for pregnant women and relieve their financial burden, which is a major hindrance to ANC access, the Kenya government introduced a free maternal service (FMS) policy in 2013. Maternal health services (FMS) play a key role in antenatal care, with a program known as Linda Mama in Kenya contributing significantly to enhancing accessibility and affordability. Kenya's response to the problem of maternal mortality has been policy-based, with the aim of improving use of and access to services to reduce maternal and perinatal deaths. Various initiatives have been implemented to improve ANC access and attendance. All women are encouraged to attend ANC and deliver in a health facility at no cost through universal health coverage and the FMS initiative (Kenya MOH, 2013). The MOH policy advocates for free quality ANC provision for a positive pregnancy experience to optimise its role in the management of pregnant women and reduce preventable neonatal and maternal morbidity and mortality. The policy was introduced as an initiative to accelerate SDG3 as a national commitment to improving maternal and newborn outcomes. A recent study that evaluated the situation before and after the implementation of the FMS policy reported that the policy had increased ANC visits and health facility deliveries (Lang'at, Mwanri, & Temmerman, 2019). Progress has been realised in maternal and newborn indicators in the implementation of universal health coverage, where access to reproductive healthcare and emergency services was declared a right for all (Okech & Lelegwe, 2016). However, disparities within the

country persist, with some marginalised areas still facing low maternal healthcare use and negative outcomes.

Strategies supporting the use of maternal health services include the 'Beyond Zero' campaign, an initiative of the First Lady, Margaret Kenyatta, which was launched in 2014. This campaign aimed to support the universal health coverage policy and aid the nation's plan for implementing SDG3 in Kenya. The aim was to improve maternal and newborn outcomes by offering services through mobile clinics to complement existing maternal health services such as ANC to '*zero*' the status of maternal and neonatal deaths in the country. These mobile clinics provide access to maternal healthcare services for hard-to-reach areas in Kenya by providing essential health services that leverage and strengthen existing health facility interventions (Beyond Zero Secretariat & Office of the First Lady, 2018). This was supported by evidence from a study that reported barriers to seeking ANC were transport costs and physical access to a health facility because infrastructure was inadequate despite there being no cost for the services provided (Bourbonnais, 2013). However, political and social influences mean this strategy requires continuous evaluation to meet the goal of reducing maternal and neonatal mortality.

ANC protects against maternal mortality and morbidity. However, in Kenya, ANC use remains suboptimal, with a recent study reporting 37% of women non-attendees, 20% initiated ANC in the first trimester and slightly more than half made the required four visits (Ikamari, 2020; Mutai & Otieno, 2021). Factors that d ANC attendance in these studies included household wealth index, level of education, waiting time and distance to the facility.

Another study from Kenya highlighted that half of the participating mothers had not received education on pregnancy-related complications and one-third did not understand the purpose of the tests and treatment given and were afraid to ask their midwife; poorer women were also less likely to have an ultrasound compared with wealthier women (Afulani et al., 2019). Educating women about pregnancy-related complications is important because of the occurrence of near miss cases involving mothers who had not attended ANC. A previous study revealed that almost two-thirds of maternal near misses and less than one-third of maternal deaths experienced an obstetric emergency before arrival at the facility. In addition, ANC use among maternal deaths was lower (84%) than that indicated by demographic data (92%) (KNBS et al., 2015; Owolabi et al., 2020). Inequalities in service provision have also been reported to be pro-rich, with quality of care and attendance of more than four ANC

visits among educated women and those who had media access, whereas poor women were less likely to make more than four visits (Bobo et al., 2021).

Lusambili et al. (2020) noted that maternity care in Kenya was hindered by poor infrastructure, sociocultural beliefs (e.g. use of traditional birth attendants, herbs, religion) and understaffing. Kenya is a diverse nation with a variety of cultural, ethnic and religious groups, each with its own set of customs and beliefs; it is also important to recognise the presence of patriarchal beliefs and the impact of these beliefs in different areas (Maseno & Kilonzo, 2011). Kenyan women tend to uphold patriarchal beliefs pertaining to society, culture and economic systems, and have limited control over decision-making with regard to maternal healthcare-seeking behaviour. In this patriarchal setting, men exert control over their spouses, including decisions related to healthcare and finances. Furthermore, many men in low- and middle-income countries, including Kenya, do not accompany women to antenatal clinics, despite the increased attention to their fundamental role in maternal and child health (Mohammed et al., 2020).

2.7 ANC use and COVID-19 in Kenya

In March 2020, the WHO declared COVID-19 a global pandemic, which impacted countries worldwide, including Kenya (Cucinotta & Vanelli, 2020). The pandemic profoundly impacted maternal health services globally, disrupting ANC use and increasing maternal mortality rates. Studies from Kenya identified significant decreases in ANC use (Landrian et al., 2022) and alarming excess maternal mortality rates of 8.1% during the pandemic (Shikuku, Nyaoke, Nyaga, & Ameh, 2021).

The impact of COVID-19 had serious consequences for ANC use, despite ANC being a critical determinant of maternal and newborn health. A systematic synthesis of evidence by *The Lancet* revealed significant increases in maternal mortality, stillbirths, ruptured ectopic pregnancies and mental health problems among mothers (Chmielewska et al., 2021). This could have been attributable to behavioural changes, including national lockdowns, resource mobilisation directed to the pandemic response and unclear measures for pregnant women, especially vaccination and particularly in poor settings (Pallangyo, Nakate, Maina, & Fleming, 2020; Townsend et al., 2021).

The spread of the pandemic raised concerns about the use of maternal health services globally, which affected pregnant women's healthcare-seeking behaviour and potentially influenced pregnancy, maternal and newborn outcomes (Townsend et al., 2021). Furthermore,

COVID-19 posed a barrier to accessing maternal health services, leading to delays in seeking ANC, which is crucial for detecting and managing complications to prevent morbidity and mortality. The decline in ANC attendance because of the global pandemic highlights the significance of the present study (Cucinotta & Vanelli, 2020). This study sought to address this gap by exploring the perspectives of pregnant women and midwives in Kilifi, Kenya, to understand the complexities of their experiences with ANC during the pandemic. By engaging midwives and pregnant women, this research explored the factors influencing pregnant women's decisions, barriers encountered in accessing ANC and the strategies employed by both pregnant women and midwives to navigate these challenges. This information is important given the critical gap in research concerning the specific effects of the pandemic on pregnant women's decision-making and experiences related to ANC access and attendance, particularly in regions such as Kilifi, Kenya. Data for this study were collected from May to September 2021; this was during the third wave of COVID-19 in Kenya, which began in March 2021. This was a period when strict measures were implemented to reduce the spread of the virus, strengthen the healthcare system and increase vaccination rates. Brand et al. (2021) suggested that these efforts were made to reduce the effects of the pandemic.

2.8 Health- and help-seeking behaviour related to ANC

Pregnancy poses numerous challenges for many women and the decision to attend/not attend ANC can be complicated by uncertainty and indecisiveness. Multiple factors contribute to low ANC attendance, including gaps in service provision and women's perceptions of risk (Pell et al., 2013). Underuse of ANC is also related to economic, political and sociocultural factors, such as lack of transport, distance, long waiting hours, financial burden and lack of autonomy (Chorongo et al., 2016; Konlan et al., 2020; Simkhada et al., 2008). Health-seeking behaviour among pregnant women is based on the belief that pregnancy is a healthy or a risky state, and many women only seek health services in the presence of diseases and complications (Downe, Finlayson, Tuncalp, & Gulmezoglu, 2019). Positive experiences with healthcare professionals have been reported to affect women's perceptions about initiating and continuing with ANC. Furthermore, women value high quality care that is individualised, caring, culturally sensitive, respectful of privacy, supportive and offers relevant information for thriving families (Tuncalp et al., 2017).

Factors related to ANC attendance that were reported in previous studies have been disseminated to stakeholders, but the consistently high MMR suggests that any efforts by

stakeholders had a minimal impact on increasing ANC initiation and attendance. Further research is required to confirm that factors that were identified as influencing ANC attendance over 10 years ago are still relevant today. Further research is also required to widen the scope of investigations. For example, little attention has been paid to mothers' temporal perception of their risks for maternal mortality. Another example is the lack of modelling of factors that influence women's decision to initiate ANC attendance and continue visits consistent with the guidelines on attendance frequency. The overlap of three important groups of factors in women's decision-making remains poorly considered; these factors are: intrapersonal factors (culture, gender, risk assessment), interpersonal factors (spouse, relatives, healthcare workers) and extra-personal factors (infrastructure, economy, governance). Therefore, a different lens is needed to consider these factors, which is why the present study grouped factors affecting ANC use as intrapersonal, interpersonal and extra-personal factors.

Understanding health- and help-seeking behaviours is important for midwives as early detection of problems can result in earlier interventions and better outcomes for women and their babies. The influence of these behaviours has been investigated and various explanatory of cultural models of wellness and illness have been explored as cognitive guides for behaviour (Saint Arnault, 2009). Behaviours linked to timely access of maternal care are complex because to some women, pregnancy is a normal biological event (not an illness) that may be complicated by existing and potential health problems. The concepts 'help-seeking behaviour' and 'health-seeking behaviour' are used interchangeably and described as both illness- and health-related behaviours (Cornally & McCarthy, 2011; Khoso, Yew, & Mutalib, 2018; Thompson et al., 2016). Health-seeking behaviour is described as 'any activity undertaken by a person believing herself to be healthy for preventing disease or detecting it at an asymptomatic stage' (Kasl & Cobb, 1966) or helpful actions taken to correct perceived ill-health (MacKian, 2003; Patil et al; 2016). Health behaviours show a person's routine activities related to their healthy lifestyle (Khoso et al., 2018). Therefore, health-seeking behaviour can be conceptualised as practices performed to prevent or detect illnesses in their asymptomatic stages. The concept of health-seeking is complex and depends on time and context. Primary care services are the gateway to healthcare, but the actual healthcare consultation relies on an individual's decision to seek help. Help-seeking behaviour refers to the recognition of an illness with symptoms where it is seen as a response to a challenge of personal ability to resolve a health issue or problem (Cornally & McCarthy, 2011).

Help-seeking is important in exploring patient delay and prompt action across various health conditions (Cornally & McCarthy, 2011).

ANC may be accessed for routine care (health-seeking) or treatment and emergencies (help-seeking). Identifying local context-based processes of decision making may help in understanding the health- and help-seeking behaviours of individuals (Glanz, Rimer, & Viswanath, 2008). Women's decisions to seek health are often affected by complex determinants. In this study, these were classified using the Neuman system model as intrapersonal, interpersonal, and extra-personal factors. Previous studies classified these factors using the Anderson model as predisposing characteristics, enabling characteristics and need (Andersen, 1995). The decision to seek ANC is essential and determines healthy outcomes for individuals and communities if implemented in a timely manner (Andersen, 1995; Poortaghi et al., 2015). The decision to seek help is determined by many factors, which can be social, economic, cultural, political, or related to existing diseases and issues with interrelated health services (Poortaghi et al., 2015).

A previous study conducted among pregnant women reported that health-seeking behaviour was only observed when women experienced pregnancy complications such as heavy bleeding and headache. Their husbands and mothers-in-law were considered important in decision-making and identified access barriers included lack of transport and finances (Qureshi et al., 2016). Health- and help-seeking behaviours are fundamental aspects of maternal healthcare, meaning the availability of health facilities does not always translate into appropriate decision making in terms of healthcare use among communities. Success depends on people's patterns of health- and help-seeking behaviours (Patil et al., 2016). Help-seeking delays in cases of life-threatening conditions have been reported, where timely interventions could have saved lives; these delays might have been caused by complex factors involved in decision making and risk perception (Poortaghi et al., 2015). Pregnancy poses challenges for many women and the decision about attending/not attending ANC can be affected by uncertainty and indecisiveness. Multiple factors contribute to low ANC attendance, such as gaps in service provision and women's perception of risk (Pell et al., 2013), along with economic, political and sociocultural factors (e.g. lack of transport, distance, long waiting hours, financial burden and lack of autonomy) (Chorongo et al., 2016; Konlan et al., 2020; Simkhada et al., 2008). Therefore, in-depth research is required to capture a comprehensive picture and uncover factors underlying health- and help-seeking behaviours in pregnant

women. Understanding health- and help-seeking behaviours among pregnant women may result in the prediction of future health burden and facilitation of necessary care (Poortaghi et al., 2015).

Health-seeking behaviour among pregnant women is often based on their belief that pregnancy is a healthy or a risky state, and many women only visit health services if they suspect an illness or complications (Downe, Finlayson, et al., 2019). Previous positive experiences with midwives have also been reported to affect women's perceptions about starting and continuing with ANC. Furthermore, women value care when it is individualised, culturally sensitive, respects their privacy, is supportive and offers relevant information for their family's well-being (Tuncalp et al., 2017).

Summary

This chapter provided an overview of maternal mortality and discussed the WHO guidelines on the role of ANC as an essential component in detecting, preventing and treating complications in pregnancy to avert maternal deaths. This overview informed this thesis and supported the analysis and understanding of midwives and pregnant mothers' views and experiences related to ANC access and attendance, particularly during the COVID-19 pandemic.

In the 21st century, most pregnant women in low- and middle-income countries think that pregnancy is a normal state and not an illness. Many women fail to recognise the need to seek ANC and only do so when there is a complication, which can be too late and lead to poor outcomes. This chapter offered an explanation of two key concepts, namely the health- and help-seeking behaviours of women when deciding to seek ANC for either routine care or during illness. Importantly, health-seeking behaviour was reported to be low as the majority of women only sought help when they felt unwell. The WHO has established guidelines on positive pregnancy and the minimum number of ANC visits for early detection and management of complications related to pregnancy and childbirth to support good outcomes. ANC provides a platform for screening the woman and her foetus for actual and potential problems during pregnancy and means treatment can be offered for any recognised complication. The next chapter details the theoretical framework based on the model developed by Betty Newman that was used in this study.

CHAPTER 3: THEORETICAL FRAMEWORK

3.1 Introduction

Justification for using the Neuman system model.

This chapter provides a comprehensive justification for adopting the Neuman system model as the foundational framework for this qualitative study and examining the application of the model to evaluate ANC use. The focus of this research was exploring the experiences of midwives and pregnant women in accessing and attending ANC in Kilifi, Kenya. The selection of the Neuman system model was grounded in its intrinsic ability to offer a robust theoretical structure that comprehensively encompassed both individual and systemic factors, and allowed for a systematic categorisation of the multifaceted elements that shape access to and participation in ANC. Although primarily used in nursing care, this model offers a holistic approach that can be adapted effectively to midwifery care. The model perceives the client as an individual experiencing stressor in three distinct areas: interpersonal, intrapersonal and extra-personal. Midwifery, which is deeply rooted in practicality, is currently grappling with a paucity of scientific theory and research development. Eri et al. (2020) advocated for theoretical models in midwifery care that explicitly emphasised the values and attitudes inherent in providing midwifery care.

ANC is crucial in safeguarding maternal health and mitigating maternal mortality risks. However, as revealed in a recent review by Eri et al. (2020), existing midwifery models of care often prioritise health promotion over addressing risk factors related to childbirth. Consequently, this study focused on women's temporal risk analysis. The complexity and variations in theoretical midwifery models present challenges for reflexive researchers who aim to comprehend women's temporal decision-making about factors that either mitigate or exacerbate pregnancy-related risks, particularly in the context of ANC attendance. Initially, the present researcher considered using established midwifery frameworks to understand the literature, but this was rejected for several compelling reasons. First, models of care are used extensively in midwifery education but there is little consensus regarding the type of model taught and how it is applied; broad inconsistencies exist in the nature and content of midwifery education programmes (Bharj et al., 2016; Hainsworth et al., 2021; Kennedy et al., 2018). Second, the widely endorsed concept of 'continuity of midwifery care' lacks a coherent pedagogical foundation. A recent critique by Gamble (2020) concluded that

curriculum coherence is required, aligning with structural and conceptual elements that focus on the continuity of care 'experience'.

> *Education standards that preference continuity of care experience as the optimal clinical education model with measurable learning outcomes and alignment to a whole of program philosophy and program learning outcomes are required* (Gamble, Sidebotham, Gilkison, Davis, & Sweet, 2020).

Third, establishing the effectiveness of a continuity of care model requires uniformly collected data. For example, in the UK, specific quantity and timeframe guidelines for completing continuity of care model experiences are often absent, thereby impeding comprehensive data analysis (Tierney, Sweet, Houston, & Ebert, 2017). This gap in data collection has resulted in a limited understanding of the experiences of childbearing women engaged in such a system. Fourth, organisational structures may not consistently align with philosophically based midwifery models, and often prioritise efficiency and throughput over holistic care (International Confederation of Midwives, 2014). In developed countries, maternity services are often compartmentalised into antenatal, birthing and postpartum units, leading to 'industrial models of care in which the institution constitutes a more significant social unit than the care of the individual or the family' (Nilsson, Olafsdottir, Lundgren, Berg, & Dellenborg, 2019). Finally, in developing countries generally and sub-Saharan Africa specifically, there is a lack of uniformity among those providing midwifery services, which is characterised by varying levels of skills and knowledge; this hampers the uniform application of a healthcare model across the region (Renfrew et al., 2014).

In this study, the Neuman system model was adopted as the conceptual framework and used to guide the literature review and data analysis. This framework centres on the individual's relationship with and response to stress, which profoundly influence their health- and health-seeking behaviours (Ahmadi & Sadeghi, 2017). The Neuman model was chosen because of its adaptability and holistic nature, despite the availability of alternative commonly used models, such as the health belief model. The health belief model focuses on individual perceptions of health risks and the likelihood of taking health-related action; its focus is limited to individual beliefs and behaviours (Green, Murphy, & Gryboski, 2020). The Neuman model was preferred for the present study because of its comprehensive approach that encompasses both individual and systemic factors, meaning it is well-suited for understanding the multifaceted dynamics of midwifery care. In addition, this model addresses

the physiological aspects of care and considers the broader environmental and interpersonal factors that influence prenatal care experiences, which aligned with this study's goal of exploring the experiences of midwives and pregnant women in accessing and attending ANC in Kilifi, Kenya.

The selection of the Neuman model for this study warranted a comparative discussion of various other alternative health belief and behaviour change models that were considered. Models such as Roy's adaptation model, Orem's self-care deficit theory, Levine's conservation model, and Peplau's interpersonal relations model each have unique attributes and areas of emphasis. However, they were not chosen for this study because they have specific limitations compared with the Neuman model. For example, Roy's adaptation model centres on individual adaptation but does not comprehensively encompass the broader systemic factors influencing midwifery care. Similarly, Orem's self-care deficit theory primarily focuses on an individual's self-care abilities, which potentially overlooks the broader healthcare context. Although valuable for understanding physiological aspects, Levine's conservation model may not adequately address the multifaceted environmental and interpersonal factors at play in midwifery care. Finally, despite being valuable for examining nurse-patient relationships, Peplau's interpersonal relationships model may not offer the same systemic perspective as the Neuman model.

The data analysis in this study involved content analysis, which is a flexible methodology for qualitative data analysis. It uses a range of logical methods to produce results in a study setting and can be used in an inductive or deductive way (Satu Elo et al., 2014; White & Marsh, 2006). The content analysis in this study relied on the patterning of communication in the information collected from midwives and pregnant women on the enablers and barriers to accessing and attending ANC. The Neuman model was chosen as the most suitable framework for this study because of its adaptability, holistic approach, consideration of both individual and systemic factors in healthcare and the specific focus on stress and its profound influence on health- and health-seeking behaviours. This model is well-aligned with the complex dynamics of midwifery care, making it ideal for comprehensively exploring the experiences of midwives and pregnant women seeking ANC in Kilifi, Kenya. This strategic selection allowed a thorough examination of the various factors that impacted ANC, ranging from individual perceptions to broader environmental and systemic determinants shaping this crucial aspect of maternal healthcare.

3.2 Application of the Neuman system model to ANC

The hallmark of Neuman's theoretical work was to construct a model of care beyond the medical model (Boxley-Harges et al., 2017). The Neuman system model was inspired by its author's midwifery experiences and she sought to construct a model of care that went beyond the traditional medical model and emphasised holistic well-being. The model encompasses three systems within which individuals experience stressors: intrapersonal (temporal), interpersonal (involving two or more people), and extra-personal (related to the environment) (Alligood, 2013). These stressors are key factors that influence an individual's health-seeking behaviour.

The Neuman system model was developed in 1970 and grounded in general systems theory. It offers a holistic perspective in which the client is regarded as an open system dynamically interacting with both other individuals and the environment (Ahmadi & Sadeghi, 2017). In this model, the term 'client' encompasses individuals as well as their families, groups or communities, and emphasises their wholeness, wellness, perceptions and motivational factors within a flexible energy system framework that interacts with the environment. The client system comprises a core structure protected by lines of resistance, and the stability of an individual is safeguarded by a unique, flexible line of defence. Neuman's model incorporates five variables (physiological, psychological, developmental, sociocultural, and spiritual) that synergistically interact to influence the client's well-being. These variables include the body's structure and function, mental processes interacting with the environment, age-related processes and activities and spiritual beliefs and influences (Neuman & Fawcett, 2011). The Neuman system model is shown in figure 3.1 below.

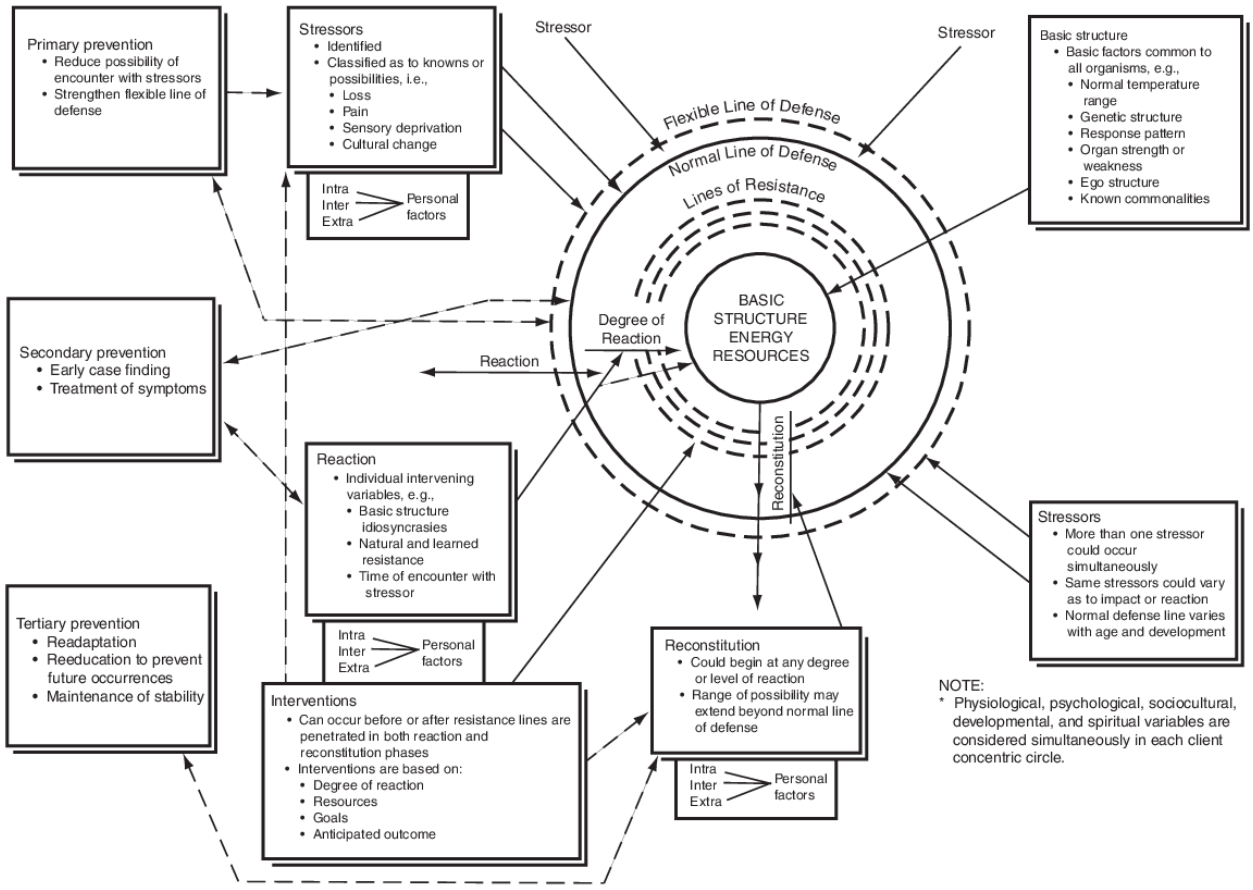


Figure 3.1: The Neuman system model (Source: Neuman & Fawcett, 1989).

The Neuman model adapted the concepts of levels of prevention from Caplan's 1964 conceptual model, which covers three levels: primary, secondary, and tertiary. Primary prevention focuses on safeguarding the client against stressors before they encounter them, which is consistent with the concept of early ANC as a means to promote wellness and prevent avoidable morbidity and mortality for women and newborns (Lawson, 2021). This view supports the present study's overarching goal of investigating the factors influencing women's decisions to seek or forgo ANC, acknowledging the presence of intricate intrapersonal, interpersonal, and extra-personal elements that may act as barriers to health-seeking behaviour.

The Neuman system model is a versatile framework capable of generating middle-range theories and facilitating the development of more structured practice models (Montano, 2021). This study delved into women's spatial risk assessment as a motivating factor for

seeking ANC. The adaptability and comprehensive nature of the Neuman system model made it an ideal choice for examining the multifaceted dynamics of maternal healthcare access and use in the context of Kilifi, Kenya. This model allowed a nuanced exploration of the factors influencing care-seeking behaviours, from individual perceptions to broader environmental and systemic determinants. The model's utility extends beyond research and practice, and it was recently characterised as a comprehensive framework applicable to various facets of healthcare and relevant to diverse contexts. In addition, the theoretical foundation is not limited to a single discipline; it can guide experimental and quasi-experimental studies, thereby fostering interdisciplinary collaboration in healthcare practice. Montano (2021) described the usefulness of this model as set out below.

> A *holistic framework for practice, research, education, and administration. The NSM* (Neuman system model) *can be used as a framework for case studies of various clients as well as build upon previous systems' theory and research relating to illness and mortality prevention strategies. This theoretical framework can be used to guide both experimental and quasi-experimental studies and was designed with a holistic picture of the client in mind. Therefore, results of research guided by this theory have the potential to transcend disciplinary boundaries, making it an ideal framework to use in interprofessional collaborative practice* (Montano, 2021, p. 49).

The Neuman model has explicit assumptions that guided this study. It provides a holistic perspective on clients, encompassing their well-being, environment, and the role of midwifery care, and emphasises the significance of primary prevention. Secondary and tertiary prevention levels come into play when the client's health is compromised, involving early diagnosis and appropriate treatment to strengthen their internal lines of resistance, ultimately aiming for a return to wellness, as per Neuman's framework. While the model primarily centres on the client's environment and their response to stressors, certain individual characteristics, such as personal or cultural preferences, financial status, and educational level, are not explicitly identified within the model. However, these factors become implicit assumptions when investigating the determinants of ANC attendance, particularly in the context of enablers and barriers.

The Neuman model offers a comprehensive understanding of clients in relation to their health, environment, and the role of midwives in maintaining stability, using prevention as an intervention strategy for promotion and reconstitution (Neuman & Fawcett, 2011b). This

decision-making process is most effective when stressors are manageable and do not significantly impact the mother's mental health or well-being (Montano, 2021). Neuman's emphasis on the client's mental state, which is influenced by interactions with the internal and external environments and social roles, highlights the model's relevance. In this model, individuals encounter stressors within three distinct systems: intrapersonal, interpersonal, and extra-personal. Effective assessment of these stressors is crucial for planning successful interventions. Furthermore, the Neuman model highlights the importance of family support for the client, which aligned with Neuman's role as a family therapist. This aspect becomes particularly relevant in understanding the role of family influence on ANC uptake in sub-Saharan Africa, thereby emphasising the model's applicability in comprehending the complexities of ANC access and attendance in this unique context.

The application of Neumann's model to the antenatal period is clear, as pregnancy is not an illness, but rather a phase on the continuum from wellness to increasing illness and potential death. Neuman noted that wellness exists on a continuum, ranging from optimal wellness with maximum energy to complete energy depletion, leading to death.

> *Health on a continuum is the degree of client wellness that exists at any point in time, ranging from an optimal wellness condition, with available energy at its maximum, to death, which represents total energy depletion*' (Neuman, 1990: 129).

However, the concept of pregnancy as an illness and its relevance in the Neuman system model can be clarified by examining how the model defines health, stressors, and client well-being. Within this framework, the client's stability is influenced when stressors disrupt their flexible line of defence, prompting the activation of resistance lines within their interpersonal relationships. The client's perception of wellness significantly shapes their health-seeking behaviour, which is a particularly crucial aspect during pregnancy as it is marked by physiological, hormonal, and emotional changes. Pregnant women face a multitude of challenges, and the Neuman system model offers a comprehensive framework for categorising the various factors affecting ANC access and attendance, including often-overlooked aspects such as intimate partner violence (Hatcher et al., 2019). In the context of ANC, which views pregnancy as a critical period for health promotion and the prevention of maternal mortality rather than an illness, the model provides a valuable tool for understanding the intricate interplay between stressors and well-being.

As this thesis is concerned with the promotion of health using ANC attendance and its role in mitigating the risk for maternal mortality, the Neuman model provided an appropriate framework. Numerous researchers have applied the Neuman model to study mothers' health and addressing the stressors that influence their health-seeking behaviour (Bullock, 1993; Kim et al., 2020). Moreover, the model has often served as a theoretical foundation and has also been effectively applied in clinical practice to guide healthcare providers in identifying stressors that jeopardise the client's lines of defence (Angosta, Ceria-Ulep, & Tse, 2014). This holistic approach aligns seamlessly with the overarching goal of this study, which was understanding and mitigating risks related to ANC attendance. Therefore, the Neuman model was considered a robust tool for conducting a comprehensive literature review and data analysis in this study.

Conclusion

In this chapter, use of the Neuman system model was justified as the foundational framework for this qualitative study. Alternative midwifery models face challenges related to curriculum coherence, data collection and organisational structures, making the chosen model a superior choice. The flexibility of the Neuman model in generating middle-range theories and its interdisciplinary applicability were highlighted, emphasising its relevance in understanding the complex interplay between stressors and well-being during pregnancy. Pregnancy, which is viewed as a phase on the continuum from wellness to potential illness, presents a unique set of stressors, and the Neuman system model provides a holistic framework for categorising various factors affecting ANC access and attendance. The next chapter presents a review of relevant literature.

CHAPTER 4: LITERATURE REVIEW

4.1 Introduction

This chapter justifies the choice of the literature review, summarises the quality of the identified research and presents core findings from selected studies. This process was salient to the review question and identified gaps in current knowledge regarding women's voices in terms of the intrapersonal processes that occur when temporally evaluating the need to attend ANC. This literature review aimed to identify factors affecting women's decisions regarding ANC access and attendance and clarify why women chose not to seek care or delayed seeking care. It is also necessary to understand pregnant women's temporality to create a coherent framework or model upon which midwives can steer their practice.

Why is understanding women's *temporality* important in studying ANC attendance?

ANC plays a pivotal role in ensuring the well-being of expectant mothers and their unborn children. Timely ANC attendance is often a critical factor in reducing the MMR and improving overall maternal and foetal health outcomes. The WHO established guidelines for ANC visit schedules, with the aim of providing a framework for optimal care (Tunçalp et al., 2017). However, a woman's decision about whether and when to attend ANC is influenced by more than just a predetermined timetable. This section explores the concept of temporality in ANC attendance to shed light on why understanding the temporal aspects of this decision-making process is vital.

ANC attendance is a complex, subjective decision-making process that is influenced by multiple factors. Timely ANC attendance is not solely based on following a schedule dictated by the WHO (Tunçalp et al., 2017). Pregnant women make ANC attendance-related decisions based on their perceptions of risk to their own lives and the lives of their unborn children (Alemu et al., 2022). This temporal calculation represents a human decision phase and reflects the dynamic nature of maternal healthcare decision-making (Dewau et al., 2021; Floris, Irion, & Courvoisier, 2017). To better understand the importance of temporality, it is crucial to distinguish this concept from timeliness. Timeliness in ANC attendance refers to adhering to a predetermined schedule set by healthcare guidelines (Okedo et al., 2019). In contrast, temporality represents a subjective progression through moments in time, reflecting the dynamic nature of women's decision-making (Bogotá & Djebbara, 2023). Timeliness focuses on objectively measuring the correct time and day for scheduled visits, whereas temporality

acknowledges that ANC attendance decisions are influenced by factors such as risk perception, urgency and personal circumstances (Alemu et al., 2022).

Structural barriers, such as limited access to healthcare facilities, are well-documented challenges to ANC access and attendance, and temporality helps in identifying additional barriers. For example, a lack of knowledge about factors contributing to maternal mortality in sub-Saharan Africa can lead to delayed attendance (Okedo et al., 2019). Furthermore, discussions with influential individuals, such as family members or community elders, can either discourage or encourage ANC access and attendance (Ali et al., 2018). In addition, the pregnant mother's concerns about disrespectful and abusive care from healthcare professionals can impact temporality (Mgata & Maluka, 2019). Despite the critical role that temporality plays in ANC access and attendance, it remains underexplored in existing literature. Many studies have focused on structural barriers and facilitators but overlooked the nuanced temporal aspects of decision-making (Downe, Finlayson, et al., 2019; Mason et al., 2015; Simkhada et al., 2008). A previous study (Floris et al., 2017) noted that recognising temporality was a limitation in their work, which emphasised its importance in understanding the research question.

Understanding the concept of temporality in ANC attendance is vital for improving maternal and foetal health outcomes. It acknowledges the dynamic, subjective nature of women's decision-making processes and sheds light on the complexities surrounding why some women may delay or forgo ANC visits. By recognising the importance of temporality, researchers and healthcare professionals can develop more effective strategies to improve ANC attendance, ultimately contributing to better maternal and child health outcomes in sub-Saharan Africa and similar regions. Understanding temporality is not just a theoretical consideration but is a crucial step towards ensuring that pregnant women receive the care they need, precisely when they need it.

4.2 Literature review method

A scoping review was chosen for the present research after reviewing a typology of reviews presented by Grant and Booth (2009), who stated that the aim of a review was 'to identify nature and extent of research evidence (usually including ongoing research)'. Scoping reviews are a means of gathering information related to a topic of interest about which little is known to identify or confirm key concepts and identify gaps in extant research. Expert opinion suggests that gaps in knowledge exist in the development of reliable evidence-based strategies

to increase ANC attendance in sub-Saharan Africa (Hijazi, Alyahya, Sindiani, Saqan, & Okour, 2018).

Scoping reviews do not have a universal definition or procedure, as the approach is considered somewhat novel (Arksey & O'Malley, 2005; Pham et al., 2014). However, the use of scoping reviews has increased in healthcare research as a way of describing existing evidence (Davis, Drey, & Gould, 2009). This scoping review followed the five-stage scoping review framework described by Arksey and O'Malley (2005). The five steps are: (1) identify the research question(s), (2) identify relevant studies, (3) select studies, (4) chart the data and (5) collate and summarise the data (Arksey & O'Malley, 2005).

Scoping aim: To identify and describe midwives' and pregnant women's understanding of the factors influencing ANC access and attendance and their decision to use ANC.

Scoping objective: To identify factors influencing women's decisions about attending/not attending ANC or deferring attendance from both healthcare professionals' and pregnant women's perspectives. A temporal analysis of women's decisions in this regard can be used to inform ANC providers about how women prioritise their health- and help-seeking behaviours.

STAGE 1: Identifying the review question.

The first step in the process of conducting a scoping literature review was to determine the research question to be addressed in this study. The specific research question developed for this review was: What factors do sub-Saharan African women believe are most influential in determining the timing of their first and subsequent ANC visits?

The systematic review aimed to achieve the following objectives.

1. Identify barriers and enablers to attending ANC.
2. Explore women's beliefs about the protective effects of ANC (morbidity and mortality).
3. Identify factors that influenced women's decisions about help- and health-seeking in pregnancy.

Literature review process

STAGE 2: Identifying relevant studies.

Search terms and strategies

The search approach included keywords used in combination with the Boolean operators 'AND', 'OR' and 'NOT' to ensure that the process is replicable. In addition, wildcard features ('?') were used in cases of words that can be spelled differently. The operating search terms were: pregnant* or pregnancy* or maternal*; antenatal* or prenatal*; attendance* or retention; and SSA* or developing countries*. Quantitative, qualitative and mixed-methods studies were considered if they were written in English, conducted in sub-Saharan Africa, published in peer-reviewed journals, and contained relevant factors promoting or hindering attendance to ANC. The synthesis of the evidence was performed using a narrative synthesis approach to explore relationships between the included studies. The search words are in table 4.1 below.

Table 4.1: Search words

Keywords	**Alternative words**
Pregnant	Pregnancy OR prenatal
Antenatal	Prenatal care
Factors	OR factors OR causes OR influences OR "reasons or determinants" OR predictors
sub-Saharan Africa	OR "low and middle-income countries" OR "Developing countries" OR Africa

Data sources

Five bibliographic databases (CINAHL, Medline, PubMed, ERIC, the Cochrane library and PsycINFO) (Bramer et al., 2017) were systematically searched for relevant peer-reviewed studies published between 2008 and 2020 that covered factors influencing ANC attendance. These databases are primary sources for majority of the evidence for access and attendance to healthcare services and were preferred because of their application (Wright, Golder, & Lewis-Light, 2015).

The searches for relevant studies were conducted in March and December 2020. Data were extracted using a piloted extraction form and the findings synthesised into women's temporalities related to intrapersonal, extra-personal and interpersonal stressors. Hand searching/citation tracking was used along with a primary search using Google Scholar to identify relevant articles during the review period to widen the search strategy.
Generally, a search of evidence from multiple databases (e.g. MEDLINE, Web of Science Core Collection and Google Scholar) is recommended for optimal and efficient coverage of the study subject, because some databases such as CINAHL and PsycINFO add a unique reference to the review (Bramer et al., 2017; Cooper, Booth, Varley-Campbell, Britten, & Garside, 2018). These databases were selected because they contained literature that may be relevant to ANC uptake and factors associated with ANC access and attendance. All literature sources were exported from each of the database searches into a reference and bibliographic management list using a software management system. A university librarian provided guidance and confirmation of the search method adopted for this study.

STAGE 3: Selecting articles.

Inclusion and exclusion criteria

The inclusion criteria were articles: (1) written in English language, (2) published in peer-reviewed journals, (3) with an approved ethics statement and (4) that focused on factors that promoted or impeded ANC access and attendance. Studies that explored the views/perceptions and experiences of pregnant women on ANC access and attendance and experiences from the perspectives of healthcare professionals providing this care were included. Studies that were not published in the English language were excluded.
The criteria for including studies in the review followed the **PICOS** format.

1. **Population:** Pregnancy or pregnant.
2. **Intervention:** Antenatal or prenatal care.
3. **Comparison:** ANC attendance.
4. **Outcomes:** Reduced maternal morbidity and mortality.
5. **Study designs:** Randomised control trials, pre- and post-test designs, non-randomised controlled studies, quantitative, qualitative, and mixed methods design.

STAGE 4: Charting the data.

To answer the research question, Microsoft Excel was used to chart data in a standardised manner against specific elements: authors, publication year, study country, study design, sample characteristics, aim of the study and findings related to factors related to ANC access and attendance (Table 2).

Screening process

In total, 2541 articles were identified. These studies were then systematically screened to determine if they fit with the literature review question. First, the titles and abstracts of all potentially relevant articles were screened to determine if they met the inclusion criteria. After removing duplicates, 2101 articles remained for title and abstract screening. This screening excluded 1590 articles that reported interventions used during ANC and antenatal programmes for maternal conditions during pregnancy. Of the remaining 511 articles, a careful review of the abstracts resulted in 367 articles being removed because they did not meet the inclusion criteria. This left 144 articles that met the inclusion criteria for this study, of which 39 were included in the qualitative synthesis. The selection process is shown in the PRISMA flow chart of the search and screening process for selected studies in Figure 4.1 below. This process involved two main reviewers my supervisors Tom Laws (TL) and myself Rose Maina (RM), with a third reviewer my local supervisor Sheila Shaibu (SS) to resolve any disagreements.

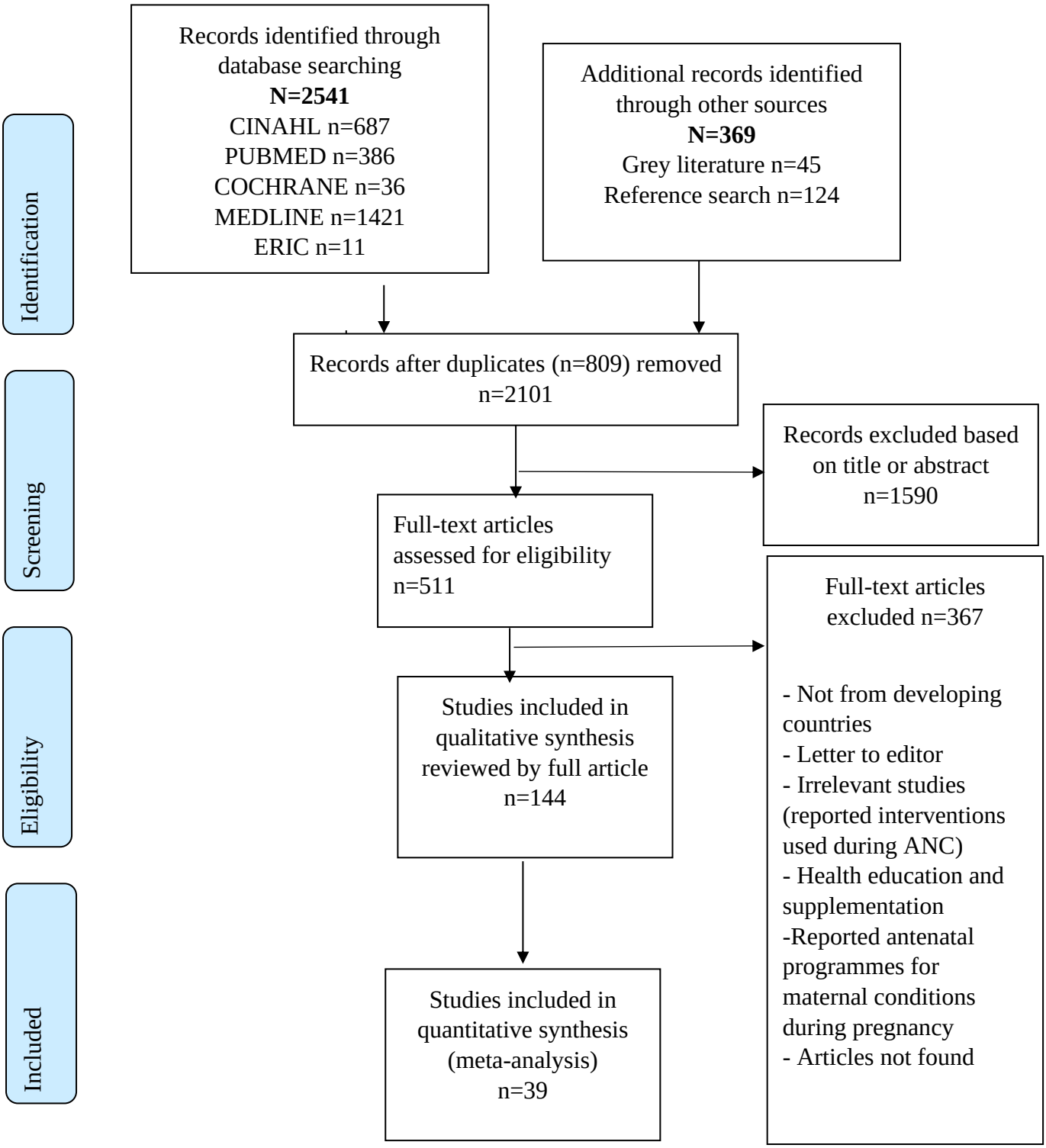


Figure 4:1: PRISMA flow diagram of scoping review literature search process

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STAGE 5: Summarising and reporting the results.

The information obtained by Microsoft Excel data charting was used to summarise the total number of studies, authors, year of publication, geographical origin of articles, type of study (e.g. qualitative), aim or objective of the studies and major findings. Data were organised by data charting to allow the organisation of themes. The development of these themes was based on the low inference simple qualitative descriptive approach described by Sandelowski (2000).

Results

Thirty-nine studies assessed factors influencing ANC attendance (Table 2). Analysis of these factors showed there were 31 items across these 39 studies that outlined factors that promoted or hindered ANC access and attendance. Furthermore, few studies published before 2008 met the inclusion criteria for this review, which suggested that this is a burgeoning area of research. The most commonly cited factors (n=19 studies) than hindered ANC access and attendance were transport and distance to the health facility, followed by economic status (n=18 studies) and poverty and lack of education (n=16 studies), which led to a lack of autonomy and little power to make decisions on ANC attendance. Social and gender factors were also highlighted, with many studies citing patriarchal and matriarchal societal norms that mainly placed women in an underprivileged position for decision making and meant they lacked independence, especially in cases of low education and poverty. There was a paucity of studies citing risk perception (n=4 studies) as influencing behaviour change in relation to ANC attendance, and the few available studies showed disparities in risk perception between healthcare professionals and pregnant women.

Eleven of the 39 studies that assessed factored related to ANC access/attendance used quantitative methods, 17 were qualitative, six used a mixed-methods approach and five were literature reviews. In all 11 quantitative studies, questionnaires were used to gather data. In the qualitative studies, data were collected via face-to-face interviews (n=7) or focus groups (n=10). The mixed-methods studies used a combination of interviews and questionnaires. The examined literature reviews spanned 2008–2020. The location of each study was categorised by sub-Saharan African countries. Of the 39 studies that gave information on factors influencing ANC attendance, six studies were conducted across sub-Saharan Africa; three were from low- and middle-income countries; five were from Ethiopia; Kenya, Tanzania and

Ghana had four studies each; South Africa, Zambia and Uganda had three studies each; two studies were from Malawi and Nigeria; one study was from Zimbabwe; and one was from Mozambique and Senegal.

As described in a previous study (Arksey & O'Malley, 2005), the findings were charted in a standardised manner (Table 4.2). The data were summarised in a systematic process using a researcher-developed tool that included the study author(s), country of origin, study aim, factors promoting or impending ANC attendance, study design and summary of the key findings.

Table 4.2: Details of reviewed studies

Authors (year)	Country	Aim/objectives	Title	Methods	Sample	Findings
Aliyu, A. A., & Dahiru, T. (2017)	Nigeria	Analysis of women aged 15–49 years who had a live birth in the 5 years before the survey	Predictors of delayed antenatal care (ANC) visits in Nigeria	Quantitative, secondary analysis of data	20,467 women	Women initiated ANC during the first trimester (27%), second trimester (67%) and third trimester (12%). Maternal education, level of media exposure, region and place of residence predicted ANC initiation. Having health insurance was a significant predictor of third-trimester ANC initiation relative to the first trimester only.
Dako-Gyeke, P., Aikins, M., Aryeetey, R., Mccough, L., & Adongo, P. B. (2013)	Ghana	To examine beliefs, knowledge and perceptions about pregnancy and delivery and care-seeking behaviour among pregnant women in urban Accra, Ghana	The influence of socio-cultural interpretations of pregnancy threats on health-seeking behaviour among pregnant women in Ghana	Qualitative, focus group discussions	55 women	Women perceived threats that increased their anxiety and drove them to seek multiple sources of care. Care included the ANC, traditional birth attendants, herbalists and spiritual care, which were perceived as complementing each other.
Downe, S. F., Tunçalp, K., Gülmezoglu,		To explore women's and healthcare workers' views and experiences of ANC	Provision and uptake of routine antenatal services: a	Systematic review		Women used ANC if they felt safe, could afford it and had a positive experience. They also valued assessment through investigations and the health information received during the visit. They felt

Authors (year)	Country	Aim/objectives	Title	Methods	Sample	Findings
Ö., & Metin, A. (2019)			qualitative evidence synthesis. Cochrane database			pregnancy was a normal state and were financially dependent on their spouses. Midwives need training to offer good care, and more staff and resources are required. Barriers were poor infrastructure, proximity to the facility, indirect transport costs and availability, cost of ANC, need for privacy, long waiting times and flexibility of appointments.
Ebonwu, Mumbauer, Uys, Wainberg, & Medina-Marino, (2018)	South Africa	To investigate and compare determinates for delayed first presentation to ANC services	Determinants of late antenatal care presentation in rural and peri-urban communities in South Africa	Cross-sectional study	807 pregnant women	Rural women were more likely to present late for their first ANC and were associated with being married, employed, aged <20 years, primigravida and unwanted pregnancy.
Field, S., Onah, M., van Heyningen, T., & Honikman, S. (2018)	South Africa	To determine associations between mental illness, demographic, psychosocial and economic factors with	Domestic and intimate partner violence among pregnant women in a low resource setting in South	Mixed methods study	376 women	In total, 15% of women reported IPV and this was likely to be experienced by women who were in stable but unmarried relationships, had food insecurity, were unemployed, experienced previous abuse, had an unwanted pregnancy and had mental health problems.

Authors (year)	Country	Aim/objectives	Title	Methods	Sample	Findings
		experience of intimate partner violence (IPV) among pregnant women in a low resource setting in Cape Town	Africa: a facility-based, mixed methods study			
Gashaw, B. T., Magnus, J. H., & Schei, B. (2019)	Ethiopia	To determine the association between IPV and late entry into ANC	Intimate partner violence and late entry into antenatal care	Qualitative	270 women	More than 50% of women-initiated ANC late in the second trimester (>16 weeks). Multiparous women and previous experience of emotional or physical abuse were associated with late ANC. Late ANC was also associated with any recent experience of IPV among women.
Gebresilassie, B., Belete, T., Tilahun, W., Berhane, B., & Gebresilassie, S. (2019)	Ethiopia	To assess the magnitude of timely initiation of ANC and factors associated with the timing of ANC attendance in Axum	Timing of first antenatal care attendance and associated factors among pregnant women in public health institutions	Cross-sectional study mixed with a qualitative approach	386 pregnant women	Timely attendance of ANC was reported by 27.5% of women. Unintended pregnancy, maternal knowledge, educational status, perceived timing of ANC, problems in current pregnancy and advice from significant others were significantly associated with timely booking of ANC.

Authors (year)	Country	Aim/objectives	Title	Methods	Sample	Findings
Greenspan, J. A., Chebet, J. J., Mpembeni, R., Mosha, I., Mpunga, M., Winch, P. J., ... McMahon, S. A. (2019)	Tanzania	To assess the dimension of the three delays model of maternal care-seeking	Men's roles in care seeking for maternal and newborn health: a qualitative study applying the three delays model to male involvement in Morogoro Region	Qualitative, individual interviews	27 men	Men viewed themselves as decision-makers and providers for the family and facilitated ANC access and attendance. They reported barriers to attendance as lack of knowledge, lack of male involvement in policies and the need to work and generate income for their family.
Iliyasu, Z., Galadanci, H. S., Abdurrahim, A., Jibo, A., Salihu, H. M., & Aliyu, M. H. (2019)	Nigeria	To assess community-level obstetric risk perception, danger sign recognition and their predictors in Kano, northern Nigeria	Correlates of obstetric risk perception and recognition of danger signs in Kano, Northern Nigeria	Cross-sectional study	400 women	Sex, ethnicity, occupation and parity predicted good obstetric risk perception. Participants' ethnicity and obstetric risk perception (good vs. poor) predicted danger sign recognition.

Authors (year)	Country	Aim/objectives	Title	Methods	Sample	Findings
Jacobs, C., Michelo, C., & Moshabela, M. (2018)	Zambia	To explain why one ANC visit with a skilled provider was more common than four ANC visits among women in the remote and poorest districts of Zambia	Why do rural women in the most remote and poorest areas of Zambia predominantly attend only one antenatal care visit with a skilled provider?	Qualitative case study	84 women	Women delayed initiating ANC because they waited for older women to confirm their pregnancy. The reason for ANC attendance was to check the health status of the baby. Barriers to subsequent visits were finances and the non-availability of services near their residence. For women with a nomadic lifestyle, both ANC initiation and subsequent visits were impossible.
Jinga, N., Mongwenyana, C., Moolla, A., Malete, G., & Onoya, D. (2019)	South Africa	To examine insights from healthcare providers into women's reasons for starting ANC later than the recommended 20 weeks of gestation and explore the impact of late ANC presentations on overall healthcare	Reasons for late presentation from antenatal healthcare providers' perspective	Qualitative cross-sectional study	10 Health care providers	Healthcare providers knew that during the first trimester, women kept their pregnancy a secret for fear of miscarriage and preferred traditional care. Barriers to timely initiation were work (related to getting an income), cost of transport and denial of care if they reported late at the clinic.

Authors (year)	Country	Aim/objectives	Title	Methods	Sample	Findings
		providers' work experiences and responses in their interactions with patients				
Kidman, R. (2016)	Sub-Saharan Africa	Standardised data from demographic and health surveys in 34 countries were used to test the hypothesis that young women (aged 20–24 years) who married as children were at increased risk for past-year physical or sexual IPV compared with women who married as adults	Child marriage and intimate partner violence: a comparative study of 34 countries	Quantitative and qualitative analyses	59,157 women	IPV was higher in women who were married as children, and 34% of participants were married at age 15–17 years. Teenage marriage was associated with previous year physical/sexual abuse in nine countries, mostly in sub-Saharan Africa. This may require further investigation to identify protective policies and norms.
Kifle, D., Azale, T., Gelaw, Y. A.,	Ethiopia	Assessed the maternal healthcare-seeking behaviour and	Maternal health care service seeking	Triangulated community-based cross-	561 women	Over 70% of women sought ANC. Factors associated with seeking ANC included knowledge

Authors (year)	Country	Aim/objectives	Title	Methods	Sample	Findings
& Melsew, Y. A. (2017)		associated factors of reproductive-age women in rural villages of Haramaya district, East Ethiopia	behaviours and associated factors among women	sectional study		of pregnancy complications, educational status and religion.
Kim, K. H., Choi, J. W., Oh, J., Moon, J., You, S., & Woo, Y. (2019)	Senegal	To analyse barriers affecting the use of ANC among Senegalese mothers	What are the barriers to antenatal care utilization in Rufisque District, Senegal?	Mixed methods	113 women	Women's acceptance of early ANC initiation was associated with stigma related to miscarriage and social stigma for unmarried women who had to hide their pregnancy. The husband was the final decision maker and social supporter of ANC use.
Kisuule, I., Kaye, D. K., Najjuka, F., Ssematimba, S. K., Arinda, A., Nakitende, G., & Otim, L. (2013)	Uganda	To determine the gestational age at which pregnant women made their first ANC visit and clarify reasons for late attendance	Timing and reasons for coming late for the first antenatal care visit by pregnant women at Mulago hospital, Kampala Uganda	Quantitative	400 women	Women did not know the timing of ANC. Barriers to attendance included lack of money for transport, lack of awareness about free ANC services, feeling well with current pregnancy and seeing no reason to attend despite some knowing the right time of gestation to start ANC.

Authors (year)	Country	Aim/objectives	Title	Methods	Sample	Findings
Konje, E. T., Magoma, M. T. N., Hatfield, J., Kuhn, S., Sauve, R. S., & Dewey, D. M. (2018)	Tanzania	A population-based study that examined the use and availability of ANC services, and explore the challenges faced by women who visited ANC clinics and barriers to ANC use	Missed opportunities in antenatal care for improving the health of pregnant women and newborns in Geita district, Northwest Tanzania	Sequential explanatory mixed method	1719 women	Women had attended ANC at least once (87%) but less than 4% had initiated ANC during the first trimester, and about 14% had not initiated in the third trimester. Barriers reported were lack of male involvement, perceived poor quality of care, sociocultural beliefs, fear of HIV testing, poverty and distance from the facility.
Kotoh & Boah (2019)	Ghana	To determine the gestational age of pregnancy at first ANC attendance and explore factors that influenced ANC initiation	"No visible signs of pregnancy, no sickness, no antenatal care": Initiation of antenatal care in a rural Ghana	Cross-sectional study	431women	Women with formal education had higher odds of initiating ANC in the first trimester compared with those with no education. Multiparas were more likely to access ANC early compared with primiparas. Reasons for late initiation were feeling healthy, inadequate knowledge of the value/benefits of early ANC attendance, stigma, unplanned pregnancy, indirect cost of travel and traditional rites and practices.

Authors (year)	Country	Aim/objectives	Title	Methods	Sample	Findings
Kyei-Nimakoh, Carolan-Olah, & McCann, (2017)	Sub-Saharan Africa	To synthesise literature on barriers to obstetric care at health institutions in sub-Saharan Africa	Access barriers to obstetric care at health facilities in sub-Saharan Africa-a systematic review	Systematic review	160 studies	Barriers identified for women were limited income, lack and cost of transport, cost, lack of knowledge, issues related to stigma and women's self-esteem, lack of birth preparedness and cultural beliefs/ignorance. Supply-side barriers were distance from the facility, long waiting times, poor staff knowledge and skills, poor referral and poor interpersonal relationships.
Maluka, S. O., Joseph, C., Fitzgerald, S., Salim, R., & Kamuzora, P. (2020)	Tanzania	To understand factors that led to delay in seeking ANC services among pregnant women in Tanzania	Why do pregnant women in the Iringa region in Tanzania start antenatal care late?	Qualitative, focus group	40 women	Women reported reasons for late ANC attendance were a lack of knowledge of the importance of early ANC visits, previous uneventful birth experiences, fear of shame and stigma, traditional gender roles and cultural beliefs about pregnancy. The main factors that inhibited early ANC attendance were spouse accompaniment policy, incivility of health personnel and staff shortages.
Mason, L. D., Stephanie; Ter Kuile, Feiko; Ouma, Peter; Phillips-	Kenya	To ascertain why women did not fully use health facility ANC and delivery services	Barriers and facilitators to antenatal and delivery care in	Qualitative focus group discussions	Eight focus group discussions (8–10	Women had a positive perception of ANC attendance as important for the assessment of the baby, investigations and receiving medications. Barriers to attendance were incivility of staff, long waiting times, unpredictable labour, transport,

Authors (year)	Country	Aim/objectives	Title	Methods	Sample	Findings
Howard, Penny; Were, Florence; Laserson, Kayla; Desai, Meghna. (2015)			western Kenya: a qualitative study		women each)	husbands' preference, HIV testing and cost. Cost was a reason for visiting a traditional birth attendant because of the flexible payment. ANC needed to be available, affordable and patient-centred.
McClintock, H. F., Trego, M. L., & Wang, E. M. (2019)	Cameroon, Congo, Côte d'Ivoire, Namibia Rwanda, Sierra Leone, Togo, Zambia	To assess lifetime physical, emotional, and sexual violence (ever vs. never)	Controlling behaviour and lifetime physical, sexual, and emotional violence in sub-Saharan Africa	Qualitative survey	37,115 women	Women experienced one or more forms of IPV (physical, sexual or emotional). Women who reported controlling behaviour from their partner were more likely to experience lifetime IPV.

Authors (year)	Country	Aim/objectives	Title	Methods	Sample	Findings
Metheny, N., & Stephenson, R. (2017)	Low- and middle-income countries	To synthesise quantitative research on IPV and uptake of ANC in low-resource settings	Intimate partner violence and uptake of antenatal care: A scoping review of low- and middle-income country	Scoping review, quantitative	16 papers	Women who had experienced IPV and were from low-resource settings were less likely to use ANC.
Mikaelsdotter, C. (2019)	Kenya	To examine barriers, affecting women's decision to seek care during pregnancy, childbirth and the postnatal period in rural Kenya	Barriers affecting women's decision to seek care during pregnancy, childbirth and postnatal period in rural Kenya	Qualitative, in-depth interviews and focus groups	25 women	Lack of knowledge of the importance of maternal care, busy schedule with activities, gender norms and distance from the facility were reasons for delays in ANC attendance. Delay in receiving quality care was attributed to unprofessional and inadequate staff, and lack of equipment and supplies.

Authors (year)	Country	Aim/objectives	Title	Methods	Sample	Findings
Mkandawire, E., & Hendriks, S. L. (2018)	Malawi	To explore how men's involvement was conceptualised in rural Central Malawi, highlighting the key factors influencing men's involvement in maternal and child health	A qualitative analysis of men's involvement in maternal and child health as a policy intervention in rural Central Malawi	Qualitative research methods using a critical policy framework, individual and focus group interviews	70 men	Participants reported male involvement enablers were being recognised, incentives and having male champions. Barriers were sociocultural beliefs, stigma and opportunity costs.
Muloongo, H. S., Doreen; Zulu, Joseph Mumba; Hazemba, Alice Ngoma; Mweemba, Oliver. (2019)	Zambia	To explore the perspectives of male participation in ANC	Men's perspectives on male participation in antenatal care with their pregnant wives: a case of a military hospital	Qualitative case study	16 men	Participants perceived men's roles as limited to providing food and supplies, and physical and emotional support. Midwives were mostly female and therefore ANC was considered a female affair. The reason for attendance was the desire to have a healthy baby and women who were accompanied by their husbands were given priority in ANC. Lack of awareness on the importance of male participation in ANC impacted husbands' understanding of access and use of services.

Authors (year)	Country	Aim/objectives	Title	Methods	Sample	Findings
			in Lusaka, Zambia			
Muluneh, M. D., Stulz, V., Francis, L., & Agho, K. (2020)		To systematically review studies that examined the prevalence of gender-based violence that included IPV and non-IPV among women in sub-Saharan Africa	Gender-based violence against women in sub-Saharan Africa: a systematic review and meta-analysis of cross-sectional studies	Systematic review	58 studies	Over 30% of women had experienced IPV in the previous year. The highest prevalence rate of 74% was from emotional, physical and sexual violence. Women from western and Eastern Africa had higher levels (55%) of emotional violence.
Munguambe, K., Boene, H., Vidler, M., Bique, C., Sawchuck, D., Firoz, T., . . . Menéndez, C. (2016)	Mozambique	To understand women's healthcare-seeking practices during pregnancy, taking into account underlying social, cultural and structural barriers to accessing timely, appropriate care	Barriers and facilitators to health care seeking behaviours in pregnancy in rural communities of southern Mozambique	Qualitative	196 women	Women attended ANC to get the antenatal record for fear of reprimand during labour. Women came for ANC to seek help in case of discomfort, such as headaches, flu-like symptoms, body pain and backache. However, men considered lower abdominal pain as the only symptom requiring care and discouraged women from early pregnancy disclosure. Barriers to ANC attendance were male unfamiliarity with danger signs, males discouraging women from early pregnancy disclosure, complex and untimely decision-making processes, fear of

Authors (year)	Country	Aim/objectives	Title	Methods	Sample	Findings
						mistreatment by healthcare providers, lack of transport and financial constraints.
Ochako, R., & Gichuhi, W. (2016)	Kenya	To describe the characteristics of women who reported wanted, unwanted and mistimed pregnancies from their last birth at the time of the survey	Pregnancy wantedness, frequency and timing of antenatal care visit among women of childbearing age in Kenya	Mixed methods	8444 women	Women with wanted pregnancies were more likely to receive ANC than those with unwanted pregnancies, but more likely to initiate ANC late and have less than four ANC visits. Women with mistimed pregnancies were associated with a low frequency of ANC visits and late initiation of the first visit. There was an association between pregnancy wantedness and frequency of ANC visits and timing of the first ANC visit.
Okedo-Alex, I. N., Akamike, I. C., Ezeanosike, O. B., & Uneke, C. J. (2019).	Sub-Saharan Africa	To identify the determinants of ANC use in sub-Saharan Africa	Determinants of antenatal care utilisation in sub-Saharan Africa: a systematic review	Systematic review		Women were more likely to initiate ANC during the first trimester if they had knowledge about timing and danger signs, exposure to mass media and positive attitudes towards ANC attendance. Barriers to attendance were unplanned pregnancy, previous pregnancy complications, poor autonomy, lack of husband's support, long distance to a health facility, lack of health insurance and high cost of services.

Authors (year)	Country	Aim/objectives	Title	Methods	Sample	Findings
Pell, C., Meñaca, A., Were, F., Afrah, N. A., Chatio, S., Manda-Taylor, L., . . . Kalilani, L. (2013)	Ghana, Kenya and Malawi	To explore factors that influenced ANC attendance across four sub-Saharan African sites in three countries (Ghana, Kenya and Malawi) with varying levels of ANC attendance	Factors affecting antenatal care attendance: results from qualitative studies in Ghana, Kenya and Malawi			Women attended ANC at least once. However, their descriptions of ANC were often vague in terms of care (e.g., checking the foetal position and obtaining an ANC card to avoid reprimands from health workers motivated women to attend ANC, especially in Kenya). Reproductive concerns and pregnancy uncertainties during the first trimester influenced ANC initiation. Other factors that influenced attendance included pregnancy disclosure and healthcare workers' interactions, particularly messages on the timing of ANC and subsequent visits.
Sacks, E., Vail, D., Austin-Evelyn, K., Greeson, D., Atuyambe, L. M., Macwan'gi, M., . . . Grépin, K. A. (2016)	Zambia and Uganda	To examine the factors influencing modes of transport and travel time for obstetric care	Factors influencing modes of transport and travel time for obstetric care: a mixed methods study in Zambia and Uganda	Mixed methods	1633 women	Focus group discussions confirmed that transport was a major challenge because of affordability, accessibility and adequacy of transport options. These factors were believed to influence women's decision not to seek care in a health facility.

Authors (year)	Country	Aim/objectives	Title	Methods	Sample	Findings
Sigalla, G. N., Rasch, V., Gammeltoft, T., Meyrowitsch, D. W., Rogathi, J., Manongi, R., & Mushi, D. (2017)	Tanzania	To determine the effect of social support on IPV during pregnancy among women attending ANC	Social support and intimate partner violence during pregnancy among women attending antenatal care in Moshi Municipality, Northern Tanzania	Prospective cohort study, cross-sectional design	1116 women	One-third of the women had experienced IPV during pregnancy, which was related to finances. Those who had the support of their family had decreased odds of IPV.
Simkhada, B., Teijlingen, E. R. v., Porter, M., & Simkhada, P. (2008)	Developin countries	Identify and analyse the main factors affecting the use of ANC in developing countries	Factors affecting the utilization of antenatal care in developing countries: systematic review of the literature	Systematic review	28 papers	Midwives believed that mothers-in-law were illiterate and sometimes had a positive influence (e.g. when encouraging women to seek ANC), but mostly negative. The mother-in-law's lack of support was attributed to pregnant women's expectation of fulfilling household duties, perceptions that ANC was not beneficial based on their own past experiences, scarcity of resources under their control and power relationships between

Authors (year)	Country	Aim/objectives	Title	Methods	Sample	Findings
						mothers- and daughters-in-law. Other factors were, individual knowledge, and social class of the mother-in-law.
Tekelab, T., Chojenta, C., Smith, R., & Loxton, D. (2019)	Ethiopia	To systematically and quantitatively summarise factors affecting the use of ANC in Ethiopia.	Factors affecting utilization of antenatal care in Ethiopia: A systematic review and meta-analysis	Quantitative and qualitative	15 studies	The prevalence of ANC attendance was above 60% and associated with urban residence, women's education, husband's education, planned pregnancy, exposure to mass media, family income and accessibility of the service.
Tenkorang, E. Y., Sedziafa, A. P., & Owusu, A. Y. (2017)	Ghana	To examine whether the type and severity of IPV influenced victims' help-seeking behaviours	Does the type and severity of violence affect the help-seeking behaviours of victims of intimate partner violence in Nigeria?	Quantitative survey	6013 women	In total, 65% of women did not seek help after experiencing IPV. However, women sought more help from informal sources (31.3%) than formal sources (1.9%). The type and severity of IPV were significant predictors of women's help-seeking behaviours. Women who experienced severe physical and emotional violence were more likely to seek help from formal and informal sources. Sexual violence was not a predictor of women's help-seeking behaviour.

Authors (year)	Country	Aim/objectives	Title	Methods	Sample	Findings
Tinago, C. B., Ingram, L. A., Frongillo, E. A., Simmons, D., Blake, C. E., & Engelsmann, B. (2019)	Zimbabwe	To understand and describe the social environment related to pregnancy and planning for pregnancy	Understanding the social environmental influences on pregnancy and planning for pregnancy for young women in Harare, Zimbabwe	Qualitative	24 women	Women's social environment related to pregnancy and planning for pregnancy was deeply rooted in cultural practices and centred on: importance of pregnancy to the role of a woman in the community and fulfilment of marriage; pregnancy silence to prevent adverse pregnancy outcomes and adolescent and out of wedlock pregnancies; patriarchal pregnancy culture; and community support during pregnancy.
Wilson, M., Patterson, K., Nkalubo, J., Lwasa, S., Namanya, D., Twesigomwe, S., & Anyango, J. (2019)	Uganda	To explore the practicality of ANC recommendations for women and the factors that facilitate or hinder adherence and shape the overall utility of care	Assessing the determinants of antenatal care adherence for Indigenous and non-Indigenous women in southwestern Uganda	Qualitative, focus group discussions	38 women	Women's lack of finances and material resources, a lack of a shared understanding and perceived value of care, gender and position-based power dynamics, and previous experiences with ANC were barriers. These factors were complex and involved individuals, communities and health facilities. Male involvement was either positive or negative based on previous existing spousal support.

Authors (year)	Country	Aim/objectives	Title	Methods	Sample	Findings
Woldegiorgis, M. A., Hiller, J., Mekonnen, W., Meyer, D., & Bhowmik, J. (2019)	Sub-Saharan Africa	To determine individual- and country-level determinants of use of key maternal health services in sub-Saharan Africa	Determinants of antenatal care and skilled birth attendance in sub-Saharan Africa: A multilevel analysis	Quantitative survey	245178 women	Use of the recommended four or more ANC visits was low with no differences among women and countries. Being in a middle-income country increased the individual-level association between ANC and skilled birth attendants. Maternal health services were less likely to be offered to the less privileged women with lower education levels.
Yaya, S., Bishwajit, G., Ekholuenetale, M., Shah, V., Kadio, B., & Udenigwe, O. (2017)	Ethiopia	To assess the sociodemographic and economic factors associated with ANC use	Timing and adequate attendance of antenatal care visits among women in Ethiopia	Cross-sectional	7080 women	Women in rural areas were more likely to attend ANC early compared with urban areas; 15% reported early attendance, 60% had adequate ANC visits and 75% received HIV tests during ANC visits. Women in urban areas with secondary education were more likely to initiate early ANC visits and rural women with the highest wealth quantiles had increased odds of using all three ANC indicators.

Collating, summarising, and reporting the results.

The fifth stage of the review also involved collating descriptions of decisions about help-seeking into themes. The Neuman model was used as a framework for these themes.

Out of the thirty-nine studies the most commonly cited papers were on transport and distance (n=19) to the health facility as a hindrance to women's access and attendance to antenatal care.

The second most common factor was lack of finances (n=18), poverty and lack of education (n=16); contributing to a lack of female autonomy and power to make decisions on antenatal attendance.

The social and gender factors were manifested as patriarchal and matriarchal societal norms, which mainly put women in an underprivileged position when it comes to decision-making and lack of independence.

There was a paucity of studies citing the risk perception (n=4) in influencing behaviour change in antenatal attendance and more, and so the few papers showed disparities in risk perception between the healthcare providers and the women.

The themes emerging from the studies were set into a schema. The Neuman model was an appropriate schema for this study because of the focus on women's experiences in making decisions around attending ANC and aim to clarify facilitators and barriers to their help-seeking (reactive) and health-seeking (proactive) behaviours.

The themes from this literature review are structured as follows….

- Intrapersonal factors (temporality; reflection, decision making)
- Interpersonal factors (between self and other)
- Extra-personal factors (between self and social and physical environment)

Adopted from (Neuman & Fawcett, 2011)

These themes recognise that temporal analysis may be served by three categories of information that influence women in seeking ANC. The Neuman model was used to categorise barriers and enablers used in women's temporal calculations/processing.

For example:

- Intrapersonal factor: A sense of personal autonomy
- Interpersonal factors: Discussion/debate with mother-in-law or husband
- Extra-personal factors: Transportation, fee for service, system issue

This review process, combined with the data collected from women and midwives, supported the development of a coherent model reflecting women's temporality. The Neuman model sets out categories that comprise areas of stressors (physical, social and emotional) for pregnant women. Using these categories, themes were developed based on the literature review findings.

ANC attendance is crucial for safe motherhood, yet many factors contribute to non-attendance. A number of studies sought to identify factors contributing to ANC non-attendance. Drawing on contemporary literature, the WHO recognised key factors hindering ANC use as: i) personal cost of services, ii) sociocultural norms, iii) transport availability, iv) distance and travel time to the facility, v) availability of services and vi) perceived quality of services offered (WHO, 2016). Although researchers have attempted to identify other factors or groups of factors that hinder access to ANC, few sought to create a model for the interactions been factors or weigh the importance of these factors. Furthermore, few researchers sought to combine these factors based on women's narratives concerning how they balanced their decision about attending ANC with their perception of risk to themselves; specifically, the risk for death in childbirth. The following scenarios based on research findings illustrate this point.

Women know their risk for maternal mortality and the protective effect of ANC attendance but are stopped from exercising this choice by social barriers (e.g. husband's refusal to let them attend, lack of support from matriarchs). The main issue here is female autonomy (Ameyaw et al., 2016; Ganle et al., 2015). Women know their risk for maternal mortality and the protective effect of ANC attendance but are stopped from exercising this choice by structural factors (e.g. lack of transport). The main issue here is female socioeconomic status (Simkhada et al., 2008; Wilson et al., 2019). Women do not know their risk for maternal mortality and do not see the importance of ANC to their own health. Motivation to attend may be lacking because of poor consumption of public health messages. Contributing factors may include a lack of education for

females (linked to rurality or poverty). The main issue here is social equity in access to health (Aliyu & Dahiru, 2017; Downe et al., 2019).

Women who understand that their lives may be lost or saved by ANC need to have their temporal analysis overtly recognised in research. The value of temporal analysis is to identify the evidence and evaluate the literature on ANC and factors that influence nonattendance and categorise them by explaining the weighting of these factors and determining changes over time looking at the recommendations available and the effect on care. What pregnant women need are midwives who possess a coherent conceptual framework on which to base strategies intended to enhance women's willingness and ability to attend ANC. This conceptual framework should: i) identify key factors influencing attendance, ii) weight the importance of factors impeding and enabling attendance, iii) explain any important relationships between factors and iv) provide an explanatory social construct underpinning the sustainability of these factors. For example, a cross-sectional study on determinants of ANC attendance among women in Jordan (Hijazi et al., 2018) established that women's experiences of ANC as a key metric for reporting the quality of care were more likely to lead to increased use of ANC using a framework. A framework adopted from a previous study (Bruce, 1990) highlighted several elements required to measure quality comprising of interpersonal relationships between healthcare professionals and women, education, a follow-up to enhance continuity of care and appropriate organisation of services (Hijazi et al., 2018).

The efficacy and efficiency of midwifery practice may be enhanced by the development of an assessment tool, validated by a conceptual framework. The assessment tool could incorporate knowledge of factors impeding and enabling ANC attendance with a weight attributed to each factor. The assessment tool scoring would provide a measure of objectivity on which to justify the allocation of resources to women most at risk for ANC non-attendance. Furthermore, the individual items in the assessment could assist in tailoring interventions that support the willingness and ability to attend ANC. Such a model has worked in the US, and indicators in the Pregnancy Risk Assessment Monitoring System data are usually a presentation of the pregnancy and postpartum experiences of women in the US (Shulman, D'Angelo, Harrison, Smith, & Warner, 2018). Validation of the model begins with scoping current knowledge and a critical analysis of the quality of the evidence.

Ideally, the factors detracting from ANC attendance should be included in a tool that assesses women's ability and willingness to attend ANC. These factors also need to be weighted in some way to produce a score that triggers focused involvement of midwives to ensure ANC attendance is initiated and maximised. A realistic approach would include the differentiation of factors that are more easily modified in the short term from those that require long-term investment. For example, women's education has been reported to influence ANC attendance and decision making, with the uptake of ANC being higher among women with more education than those with no education (Aliyu & Dahiru, 2017; Simkhada et al., 2008). Improved education is a long-term solution to poor uptake of ANC, but it can be used in a screening tool to identify those at risk for non-attendance.

4.3 Factors influencing ANC access and attendance.

4.3.1 Extra-personal factors

4.3.1.1 Transport and distance to the facility

Transportation is a major social issue for sub-Saharan Africa. Transportation barriers to accessing healthcare are common in low-resource settings as transportation is often limited or unavailable (Mgata & Maluka, 2019; Munguambe et al., 2016; Sacks et al., 2016), meaning transportation is a major barrier to women's ANC access (Gabrysch & Campbell, 2009; Hirai et al., 2020; Moyer & Mustafa, 2013; Qureshi et al., 2016; Titaley, Dibley, & Roberts, 2010). Challenges associated with transport become worse at night and during the rainy season (Kitui, Lewis, & Davey, 2013; Sacks et al., 2016). Furthermore, many health services are only provided in central locations, and transportation from surrounding remote areas is often irregular, expensive or non-existent. In some areas, national progress has brought about changes and more facilities are now available under the FMS policy, although transportation remains an issue for many women. Many studies have highlighted that pregnant women face challenges in terms of unavailability or limited transport, high cost of transport and long distances to health facilities (Ochieng & Odhiambo, 2019). Some women have to walk long distances to access healthcare facilities because they lack finances to pay for transport. In addition, geographical factors such as rocky terrain pose barriers to infrastructure development and increase travel time and transport costs (Gitobu, Gichangi, & Mwanda, 2018). Issues with poor roads are often compounded by numerous diversions needed to navigate forests and rivers that increase the travel distance/time

and associated transport costs (Kea, Tulloch, Datiko, Theobald, & Kok, 2018; Okedo-Alex et al., 2019; Yasuoka et al., 2018).

A systematic review by Kyei-Nimakoh et al., (2015) confirmed that transport was a barrier to attending ANC, with major reasons cited as the non-availability of transport or direct/indirect transport costs. Transport issues (e.g. cost, long distances, poor quality terrain) were exacerbated by difficulties reaching main roads and a lack of ambulances (Munguambe et al., 2016). These major barriers may have negative consequences for pregnant women. Women's decisions about attending ANC were reported to be strongly influenced by the distances they had to traverse to reach facilities, which resulted in late access to and low use of ANC (Jacobs, Michelo, & Moshabela, 2018; Pell et al., 2013). Many studies noted that the distance to a health facility was compounded by challenging geographical terrain, rainy seasons, poor roads, and cost of transport (if available), which meant that the location and distribution of healthcare facilities could cause major delays for women in accessing care (Gabrysch et al., 2011; Sarker et al., 2016; Tayler-Smith et al., 2013). Other studies noted that a distance of more than 5 km to a facility was a barrier to ANC attendance (Brown et al., 2008), along with no available ambulance transportation to the facility (Sageer et al., 2019). Lack of transportation and long distances that required long travel time hindered access to healthcare (Cham, Sundby, & Vangen, 2005; Sacks et al., 2016), along with lack of public transport, poor road conditions and the high costs of transport in Kenya (Kabia et al., 2019). Women also complained that lack of transport and financial problems hindered them from seeking care (Qureshi et al., 2016) even with the availability of free services (Oyugi et al., 2018). Therefore, transport issues are inextricably related to socioeconomic factors.

4.3.1.2 Poverty and education

Poverty is a common problem across the world. There is a strong association between low education levels and poverty in both developed and developing countries, and education is known to help prevent people from falling into poverty (Arsani, Ario, & Ramadhan, 2020; Bertolini, 2019). Being educated was strongly associated with the chances of employment and earning an income, with these associations stronger among those with higher levels of education (Bertolini, 2019). Furthermore, developmental problems are common in children born into poverty, making it difficult to for them to achieve educational qualifications and progress into

paid employment. These children are also at high-risk for school dropout (Engle & Black, 2008; Schoon, Jones, Cheng, & Maughan, 2012). Given the association between poverty and education, those living in poverty may be illiterate or have no formal education, thereby making it difficult for them have a career (Child Fund, 2018). Poverty has also been associated with school dropout and early marriage and pregnancy among young girls (Birchall, 2018).

A large proportion of the population in sub-Saharan Africa live in poverty. More than 700 million people, or 10% of the world' population, still live in extreme poverty and are struggling to fulfil basic needs such as health and education. The majority of people who live on less than 1.90 USD dollar a day live in sub-Saharan Africa (United Nations, 2019); in 2015, 10% of the world's population (734 million people) lived on less than 1.90 USD per day. However, that was an improvement from nearly 36% (1.9 billion people) living in such poverty in 1990 (World Bank, 2018). The percentage of people living on below 1.90 USD a day in sub-Saharan Africa declined from 54.3% in 1990 to 41.0% in 2013 (World Bank, 2016). A report that tracked achievement of universal health coverage indicated that about 400 million people lacked access to essential health services and the costs for these services in low- and middle-income countries pushed 6% of people into extreme poverty (WHO & World Bank, 2015).
Rural areas are disproportionately categorised as poor, and the majority of the population often live in these areas where further disparities exist within regions. There are two main classifications of poverty: absolute poverty where people cannot afford the basic needs (defined as living below $1.90 a day by the World Bank, 2018), and relative poverty where people have basic necessities but are a percentage below the median income level and standards for their country (Ravallion & Chen, 2019). The proportion of Kenyans living on less than 1.90 USD per day declined from 43.6% in 2005/06 to 35.6% in 2015 (World Bank, 2018). The Kenya Integrated Household Budget Survey (2015/16) data showed that almost two-thirds of the population lived in rural areas and only 13% had insurance cover for medical services; those areas had lower attendance of maternal health services compared with urban areas (KNBS, 2018).

The use of health services in sub-Saharan Africa is associated with poverty, with poor women showing non-attendance or limited ANC visits (Peters et al., 2008). Furthermore, a large proportion of young mothers live in poverty. Factors contributing to this phenomenon are related

to social issues such as poor education, lack of employment and coming from a family with a low level of income (Kim et al., 2019). The role of fathers in many families is also limited by poverty, which means they may not be able to educate their children (Threlfall, Seay, & Kohl, 2013). Education level was positively linked to health-seeking behaviour in an East African study, with higher use of ANC among literate women compared with illiterate women, and those with higher education being more likely to use ANC than other women (Raru et al., 2022).

Poverty is a major negative social determinant that limits people's access to health services and is increasingly associated with maternal mortality (Filippi, Chou, Ronsmans, Graham, & Say, 2016; Say et al., 2014). There are limited opportunities for women to move out of poverty and many who have low socioeconomic status and poverty-stricken backgrounds do not to attend ANC because they are not able to make the decision to seek care (Abbasi & Younas, 2015; Deo et al., 2015). Poverty is also known to negatively impact ANC use because poor women are unable to meet indirect costs associated with ANC, which is a key contributor to nonattendance (Konje et al., 2018; Okedo-Alex et al., 2019). Financial instability related to indirect costs was reported to hinder ANC especially for women who were dependent on their husbands (Mikaelsdotter, 2019; Munguambe et al., 2016). Higher socioeconomic status of women and families is strongly associated with ANC use. A systematic review by Okedo-Alex et al. (2019) revealed that socioeconomic status was an enabling factor for ANC uptake and rich women-initiated ANC early and had more visits compared with poor women. Several other studies showed that poverty, which was influenced by the cost of services, household income and employment status, was associated with ANC non-attendance (Kyei-Nimakoh, et al., 2017; Mason et al., 2015; Simkhada et al., 2008). Other studies associated underuse of ANC with poverty, low wealth index and lack of resources (Adewuyi et al., 2018; Titaley et al., 2010; Wilson et al., 2019).

High wealth in terms of household socioeconomic status was positively associated with the use of ANC. Women from richer households were strongly associated with ANC use compared with their counterparts from poorer households (Alyahya et al., 2019; Kea et al., 2018). Women living in poverty may also not be able to afford health insurance to enable them to access healthcare. Health insurance has a key role in access to healthcare as women who had insurance coverage were three times more likely to seek care compared with uninsured women and women from

poorer households were also less likely to be insured than wealthier women (Mati, Adegoke, Michael-Asalu, & Salihu, 2018). Low socioeconomic status and lack of insurance meant women were unlikely to attend the minimum of four ANC visits (Sakeah et al., 2017).

4.3.2 Interpersonal factors

4.3.2.1 Gender factors in ANC

Gender and culture are closely related, and cultural beliefs determine the roles men and women play in relation to maternal health. Many countries are patriarchal societies where women's place in society is defined and men dominate in terms of power (Downe et al., 2019). Gender issues have been reported in sub-Saharan Africa, including male dominance and gender-based violence among women because of the long-term existence of a patriarchal culture that is prevalent across Africa. This culture means patriarchal norms are deeply rooted and the gender division of labour favours men, which leads to women failing to achieve work-life balance (Adisa et al., 2019).

Problematic social scripts based on gender consider gender as a modifiable factor if addressed early in children's lives (Lamm, Gernhardt, & Rubeling, 2019). Education is important and understanding gender parity improves women's political positions and rights, which lead to inequalities when these rights are neglected and suppressed (Dutt, 2020). Pregnancy makes women more vulnerable, which combined with a lack of decision-making power, affects their health-seeking behaviour related to ANC as they are dependent on their partners. A Nigerian study showed men were the final decision-makers regarding when and where women could seek ANC because women did not have the power to make such decisions (Yaya et al., 2019). In Ethiopia, men also had a central role in decision making about pregnancy (Tinago et al., 2019). Another study reported that the husband was the decision-maker for women's access to maternal healthcare (Ganle et al., 2015). Similarly, women in Nepal had limited autonomy in decision-making because their mother-in-law had control over the household resources, which often prevented women accessing ANC (Sekine & Carter, 2019).

Women's financial dependence on their spouse was highlighted in a study from Mozambique where gender roles are dictated under a patriarchal social structure (Munguambe et al., 2016). Another study reported women had to ask for money to attend ANC and problems occurred if there was not enough money for the family (Downe et al., 2019). The women perceived that men

were the primary breadwinners, and women, in turn, had the knowledge and skills to manage the pregnancy. Furthermore, gender inequalities often meant that gender norms for the division of labour resulted in heavy workloads for pregnant women, which hindered access to maternal healthcare (Yaya et al., 2019). In Pakistan, restrictions on women's mobility affected their access to ANC (Asim et al., 2021). A South Asian study noted that the mother-in-law was influential in terms of ANC uptake, with this influence mostly being negative; a woman's husband and mother-in-law also determined if she could access resources to attend ANC (Mumtaz & Salway, 2007; Simkhada et al., 2010).

Decision-making during pregnancy is complex. Social and economic factors play major roles, although women tend to have minimal control. In various low- and middle-income countries, men are the main source of income for a family, meaning they are the providers and decision-makers for the family, including regarding women's access to healthcare (Greenspan et al., 2019). Therefore, it is important to involve men in ANC as they are the ones who control finances and make decisions regarding matters of birth preparedness (Cheptum et al., 2019). A previous study that explored the acceptability of ANC for both men and women reported that men had inadequate knowledge of services and few men attended ANC (Yende et al., 2017). Previous studies showed that the husband mostly determined whether a woman sought ANC during a pregnancy, and a greater degree of autonomy for women enabled ANC access and attendance (Hill et al., 2015; Konlan et al., 2020; Ogbo et al., 2019).

Traditional gender roles and cultural beliefs about pregnancy as well as health system factors continue to influence the timing of ANC attendance. In Tanzania and Malawi, this was reported to hinder ANC use because men-controlled decision making and had to approve ANC attendance, and women had restricted ability to make decisions about ANC initiation. Joint decision-making for women and their husband may be facilitated by healthcare professionals in the short term (Gibore et al., 2019). Involving men in ANC requires an exploration of men's involvement in the context of existing cultural norms. Okedo-Alex et al. (2019) asserted that joint decision-making with husbands increased the likelihood of women attending at least four ANC visits. In patriarchal societies, women's place in society is defined, with men dominating power. Pregnancy means women are vulnerable; a lack of decision-making power affects their health-seeking behaviour in accessing ANC as this depends on their partner (Tinago et al., 2019).

In sub-Saharan Africa, gender norms contradict male involvement in ANC, which is considered a female matter (Ongeso & Okoth, 2018). Men who accompanied women to ANC faced ridicule and were perceived to be dominated by women (Gibore, Bali, & Kibusi, 2019). Male ANC attendance was considered dishonourable because it was traditionally defined as women's work and therefore stigmatised (Maluka, Joseph, Fitzgerald, Salim, & Kamuzora, 2020; Mkandawire & Hendriks, 2018). In South Africa, men were culturally excluded and waited for women in cars and complained that they did not know about the available services. Male involvement in ANC is affected by factors such as men's low knowledge about reproductive health issues and cultural restrictions that discourage their involvement (Ofosua, 2019). However, development of strategies to reduce maternal mortality through male involvement in ANC may result in more positive attitudes and increased support for women (Atiibugri, 2017).

Intimate partner violence is another key issue that is widespread throughout sub-Saharan Africa, with an overall past-year prevalence of 36%; associated risk factors are poverty, low education and highly traditional gender role beliefs (McCloskey et al., 2016). A previous study (Seth et al., 2010) noted there was an association between intimate partner violence, STIs and an entry to HIV infection, which is a major health burden in Africa. The consequences associated with violence during pregnancy include miscarriage, stillbirth, low infant birth weight and obstetric complications (Hahn et al., 2018). An increased risk for pregnancy termination and induced abortions among women who experienced physical and sexual violence from their partners was reported in studies from Cameroon and Kenya (Alio et al., 2011; Emenike, Lawoko, & Dalal, 2008). This was also found to be related to unsafe non-professional abortions with increasing maternal morbidity and mortality among the poor populace (Alio et al., 2011). A higher likelihood of abuse during pregnancy was reported among women who became pregnant against the wishes of their husbands in a study from urban Zimbabwe (Shamu et al., 2013). That study highlighted that the rate of physical and sexual abuse during pregnancy was among the highest (46%) ever reported globally. ANC attendance can also be influenced by violence against women during pregnancy, thereby leading to undesirable health outcomes. Intimate partner violence has been reported as a barrier to ANC use. Domestic violence during pregnancy leads to delays in seeking ANC, which is associated with inadequate ANC use in low-income countries (Field et al., 2018).

Poor behaviour of healthcare professionals, such as shouting at women, was also reported to hinder ANC attendance and discourage men from accompanying their wives (Maluka et al., 2020). Policies that stated women should be accompanied by husbands to the clinic were another barrier to ANC use (Mgata & Maluka, 2019). Furthermore, women perceived female healthcare professionals to have a mutual affinity for pregnancy and childbirth and preferred them during ANC as they felt embarrassed when examined by male providers (Downe et al., 2019). In Zambia, ANC was considered a woman's matter, so most healthcare professionals involved were female; however, priority was given to attending couples and shared decision-making was encouraged (Muloongo et al., 2019). Women have also stated that they declined to attend follow-up visits because services were not available (Jacobs et al., 2018). Frustration was also reported by healthcare professionals as they lacked resources, the infrastructure was poor and the low number of staff meant they had to turn away pregnant women when they reached the daily limit; women also had to wait for long time before being attended (Jinga et al., 2019). In Kenya, poor infrastructure, poor staffing, long waiting times and overcrowding led to low ANC attendance (Onono et al., 2019). Low use of maternal services was also reported to be related to poor care quality, no provider in the facility and the facility not being open (Okonofua et al., 2017).

4.3.2.2 Sociocultural issues

Increasing evidence suggests not all women use ANC, even when this care is accessible and affordable; this holds true for marginalised population groups, irrespective of high- or low-income settings. Other factors, including sociocultural identifiers, can also contribute to low attendance. Healthcare professionals and their clients/patients are also strongly influenced by culture. In numerous studies from a range of settings, women reported that staff were hostile towards them and lacked respectful behaviour (Downe et al., 2019). Staff acknowledged that these behaviours could occur when frustration mounted over late appearances for appointments and lack of compliance with instructions (Downe et al., 2019). However, women also reported unprofessional attitudes whereby staff preferred to chat among themselves, which kept mothers waiting unnecessarily (Mason et al., 2015). Long clinic delays had the effect of preventing return visits, which was a pronounced issue in Kenya (Ojwang, Ogutu, & Matu, 2010). The Kenya MOH declared a commitment to address this issue (Mason et al., 2015).

4.3.2.3 Midwives' attitudes towards women

Healthcare professionals play a key role in encouraging ANC attendance. A systematic review suggested that women's perceptions of healthcare professionals' behaviour determined their use of ANC services, with disrespect, abuse and hostile behaviour reported in various countries (Downe et al., 2019). Women have expressed the need for continuity of care from ANC through childbirth, which could enhance their positive experiences with care (Bohren et al., 2017). Furthermore, healthcare professionals reported that women were afraid of them and did not ask questions during visits because of previous mistreatment (Downe et al., 2019). However, women's perspectives on what mattered to them regarding health problems and why they chose not to seek healthcare may have significant direct or indirect effects on pregnancy outcomes (Filippi et al., 2018). Ackers, Webster, Mugahi and Namiiro (2018) found that in Uganda, an alarming level of verbal abuse and poor communication during ANC hindered women from attending ANC. Those results suggested that a culture of disrespect was common in Ugandan health facilities. Furthermore, in Tanzania, women reported poor experiences during prenatal care including instances of disrespect and abuse (Miltenburg et al., 2018).

It is therefore important that in the provision of safe motherhood care, women are treated with respect to help address the persistent issues of gender inequality and violence. Such abuse is often rooted in the predominant power dynamics and gender inequalities between pregnant women and healthcare professionals, which are viewed as a consequence of structural violence (Miltenburg et al., 2018). Women who had the courage to challenge the traditional feminine stereotypes of chastity and serenity were often treated badly by providers (Betron, McClair, Currie, & Banerjee, 2018). In contrast, pregnant women had good perceptions and attitudes towards traditional birth attendants who were believed to be culturally sensitive, meaning they tended to only seek care from health professionals during complications (Peprah et al., 2018). That study further revealed that young pregnant women and those with erratic ANC attendance were insulted and rebuked by healthcare professionals who had disrespect and poor attitudes (Peprah et al., 2018).

In Kenya, Mason et al. (2015) reported that many women did not start ANC early and had few visits. Identified hindrances were nurses' attitudes and long waiting times, which made women avoid return visits. Key complaints were lack of care, rudeness, or harsh attitudes from nurse-

midwives. In another study, Afulani et al. (2019) argued that in Kenya, women's perceptions of poor individualised care hindered ANC attendance and led to failure to detect complications early. High-risk women with high parity and those starting clinic attendance in the third trimester were less likely to obtain basic ANC and reported poorer experiences than women with earlier attendance. An increase in providers' perceptions and awareness of clients' rights following an intervention in a study from Kenya resulted in behaviour change among health professionals, which improved provision of respectful ANC care (Ndwiga et al., 2017).

In Kenya, studies on ANC access and attendance from midwives' perspectives are limited, and most available studies focused on intrapartum experiences. Few regional studies have explored midwives' perspectives of factors affecting ANC access and attendance, especially in Kenya. Moreover, studies investigating childbirth experiences from the perspectives of both mothers and midwives have found that disrespect and abuse during childbirth significantly influenced the health-seeking behaviour of pregnant women (Lusambili et al., 2020; Oluoch-Aridi et al., 2018). Other studies from Kenya emphasised the importance of investigating pregnant mothers' experiences, perceptions and perspectives related to factors affecting ANC access and attendance (Mulinge, Yusuf, & Aimakhu, 2017; Ochieng & Odhiambo, 2019; Riang'a, Nangulu, & Broerse, 2018).

4.3.2.4 Women's attitudes towards midwives

In low- and middle-income countries, ANC uptake is hindered by diverse medical, spiritual and supernatural beliefs, and many women prefer traditional healers for pregnancy-related problems. For example, pregnant women in Ghana were traditionally cared for by traditional birth attendants who used herbs and depended on spiritual care (Aziato & Omenyo, 2018). Traditional birth attendants in Kenya were found to provide ANC (two visits) to women in areas where the formal health system was inaccessible or unacceptable (Reeve et al., 2016). A previous systematic review reported that healthcare professionals perceived respect for traditional beliefs as positively influencing ANC use (Downe et al., 2019).

In sub-Saharan Africa, gender norms contradict male involvement in ANC as it is a 'female affair' (Ongeso & Okoth, 2018). Cultural beliefs that suggest maternal health roles are normally a woman's affair have also been reported in Kenya, where a male midwife must be accompanied by a female midwife when attending pregnant women (Nyaloti, 2018). Women's and their

partners' perceptions of this practice were perceived to hinder the use of health services in some areas (Nyaloti, 2018). Furthermore, cultural and traditional beliefs in Kenya hindered use of maternal health services because pregnancy was not considered a disease and 'real women' did not seek medical attention during pregnancy (Chorongo et al., 2016). Religious beliefs were also reported as influential, with Muslims being less likely to attend ANC compared with Catholics, which was attributed to their beliefs. In Kenya, women's use of ANC services was reported to be hindered by traditional and religious beliefs and a feeling of embarrassment over their pregnancy (Mikaelsdotter, 2019).

Sociocultural beliefs about pregnancy are culturally constructed and often rooted in taboos and social explanations; therefore, women's perceptions of pregnancy influence their healthcare-seeking behaviour in relation to ANC. Poor ANC attendance was associated with those who perceived pregnancy negatively (Atekyereza & Mubiru, 2014).

In Ethiopia, cultural beliefs about silence in pregnancy because of fear of being bewitched and resultant abortion hindered timely ANC access and attendance (Kea et al., 2018; Tinago et al., 2019). Women in Senegal concealed their pregnancies because of fear of miscarriage and social stigma, which delayed ANC initiation; this was attributed to cultural norms placing the responsibility for a miscarriage on pregnant women (Kim et al., 2019). Even when women recognised, they were pregnant, superstitions and beliefs about early disclosure often prevented them from seeking ANC (Finlayson & Downe, 2013; Munguambe et al., 2016). The influence of culture and traditions can determine healthcare practices and should be acknowledged because of the corresponding influence on the use of ANC among pregnant women (Tinago et al., 2019). Social and cultural beliefs advocate for moral decency, and getting pregnant at an early age is perceived as a violation of this norm. Therefore, adolescents may be uncomfortable and ashamed in the antenatal clinic when they meet older women and may shy away from ANC attendance (Bwalya, Sitali, Baboo, & Zulu, 2018a).

A systematic review from sub-Saharan Africa found problems related to cultural beliefs and restrictions were a barrier to accessing maternal healthcare (Kyei-Nimakoh et al., 2017). Dako-Gyeke et al. (2013) stated that existing care from herbalists and traditional birth attendants and spiritual care was understood to be related to perceived threats of pregnancy that affected ANC use in Ghana. In Zanzibar, some women were aware of danger signs in pregnancy but did not

seek ANC because the cultural beliefs held by their community made them believe it was witchcraft, so they only went to traditional healers (Bakar et al., 2019). In Senegal, husbands had the final say with respect to support and use of ANC, which was based on patriarchal cultural norms (Kim et al., 2019). Similarly, seeking ANC in Mozambique was a complex process that was determined by the decision-makers, and pregnant women had minimal influence on when and where they could seek care (Munguambe et al., 2016). Participants in that study also revealed that they used traditional medicines to prevent adverse pregnancy outcomes (Munguambe et al., 2016). In Kenya, some traditional birth attendants in less accessible areas were able to refer women to a health facility (Reeve et al., 2016).

4.3.2.5 Intimate Partner Violence/Domestic violence

Globally, intimate partner violence is common among women younger than 18 years, which is linked with low use of ANC among young women (Kidman, 2016). Women have reported incidences of violence from partners during pregnancy that may not be revealed during routine ANC (Ntaganira et al., 2008). In sub-Saharan Africa, intimate partner violence was reported to be accompanied by controlling behaviour from the partner (McClintock, Trego, & Wang, 2021). Women who experienced intimate partner violence tended to only seek help from health facilities when they perceive a risk for injury or when brutally affected (Tenkorang, Owusu, & Kundhi, 2018; Tenkorang, Sedziafa, & Owusu, 2017). In Ghana, a study by Sedziafa, Tenkorang and Owusu (2018) indicated that intimate partner violence experienced by women could be in the form of emotional, physical, or sexual violence. A South African study reported that 15% of pregnant women in low-income settings experienced intimate partner violence; participants in that study perceived domestic violence as ‘normal’ behaviour (Field et al., 2018). Domestic violence during pregnancy leads to delay in seeking ANC and is associated with inadequate ANC use in low-income countries (Field et al., 2018). In Mozambique, women who experienced intimate partner violence received inadequate ANC compared with non-abused women, and they started ANC after the first trimester because of fear of being exposed and lack of permission from their partners (Tura & Licoze, 2019). Similarly, any form of intimate partner violence experienced by pregnant women in Togo led to lower ANC attendance compared with women without such experience (Ragetlie et al., 2020).

4.3.3 Intrapersonal factors

4.3.3.1 Pregnancy is a normal healthy state.

In low- and middle-income countries, women generally believe that pregnancy is a normal physiological state and not an illness. A recent systematic review (Downe et al., 2019) noted that the majority of women reported they delayed seeking ANC because they felt healthy and had previous experiences with pregnancies; therefore, they believed ANC was not necessary. Women that did seek care indicated this was to obtain a maternal and child ANC booklet or when they experienced sickness/complications (Munguambe et al., 2016; Qureshi et al., 2016). There are deeply held cultural beliefs in many sub-Saharan African communities that dictate matters related to pregnancy and childbirth (Titaley et al., 2010). Among the complex reasons for late ANC attendance, some women reported not being aware of their pregnancy because of non-definitive symptoms and late diagnosis, resulting in delays in accessing ANC (Downe et al., 2019).

A cross-sectional study focused on determinants of ANC attendance among women in Jordan used a framework adapted from Bruce (1990) to establish that women's experiences of ANC as a key metric for reporting the quality of care was more likely to lead to increased use of ANC. In this framework; evaluating the quality of ANC had five main elements: interpersonal relationships between healthcare professionals and clients; technical management; information exchange; continuity and follow-up; and an appropriate constellation of services (Hijazi et al., 2018). However, this framework has a gap in terms of information that relates to the temporal aspect of a client's behaviour in decision making about when to seek care.

4.3.3.2 Maternal age

Several studies have discussed the relationship between maternal age and ANC use. Young age and unwanted pregnancies were associated with late or no ANC attendance, even when services were accessible and provided free (Gebremeskel, Dibaba, & Admassu, 2015; Simkhada et al., 2008; Yego et al., 2013). Adolescents are usually vulnerable, and external support and influence during pregnancy are essential (Hackett et al., 2019). However, the available antenatal clinics may not favour the needs of adolescents, which contributes to difficulties in ANC access and use for this group. However, the WHO recommends increasing the use of antenatal, childbirth and postnatal services among adolescents (WHO, 2016).

Adolescents in Zambia reported they experienced discrimination from healthcare professionals, long waiting times and unfriendly attitudes from older women (Bwalya et al., 2018a). A study involving three countries (Ghana, Kenya and Malawi) reported that many adolescents and unmarried young women failed to recognise their pregnancy early and when they did, often hid their pregnancy and delayed seeking ANC because they feared social humiliation such as rejection, expulsion from school and community stigmatisation (November & Sandall, 2018; Pell et al., 2013). In South Africa, more than 60% of pregnant adolescents were reported to have started ANC after 12 weeks (Worku & Woldesenbet, 2016). Manyeh et al. (2020) conducted a comparative study and indicated that the odds of early ANC attendance by first-time mothers increased with age; those over 20 years were more likely to initiate ANC attendance in the first trimester compared with younger women.

ANC use is low among single adolescent women who have to hide their pregnancy from the public because of stigma, accompanied by a lack of support and poverty (Christiansen et al., 2013; Kim et al., 2019). Child marriage also exposes women to high risk during pregnancy and is believed to hinder women's access to maternal health services; this causes avoidable morbidity and mortality (Yaya, Odusina, & Bishwajit, 2019). Health-seeking behaviour among women from child marriages was reported to be low and they were less likely to use maternal health services than women who married later (Yaya, Odusina, et al., 2019). Social and cultural norms advocate for moral decency, and getting pregnant at an early age is perceived as a violation of these norms. These community beliefs mean adolescents are uncomfortable and ashamed in clinics when they meet older women and may shy away from ANC attendance, leading to underuse of ANC among adolescents (Bwalya, Sitali, Baboo, & Zulu, 2018b). Another study reported multiparous women delayed ANC initiation compared with primiparous women (Yaya et al., 2017). In addition, higher parity was negatively associated with inadequate ANC attendance (Simkhada et al., 2008).

4.3.3.3 Women's autonomy in decision-making

Women's autonomy is known to influence their decision-making. Many women lack autonomy in decision-making about access to healthcare. A previous study noted that the values and opinions of the pregnant woman's husband, mother-in-law and community members influenced

decisions about seeking care (Ganle et al., 2015). Women's empowerment in decision-making can influence ANC attendance; for example, women with autonomy and decision-making power in Ghana were more likely to seek healthcare services compared with those without such power (Ameyaw et al., 2016). A systematic study by Simkhada et al. (2008) concluded that more qualitative studies were needed to explore women's autonomy and gender roles in making decisions. In Nigeria, the level of participation in household decision-making as a measure of women's autonomy was a significant predictor of increased ANC initiation, whereas in Niger, women who received advice from their husbands were more likely to attend ANC (Aliyu & Dahiru, 2017; Begum et al., 2018). In Nigeria and Ethiopia, late ANC initiation was associated with women who did not participate in the decision-making process, and women were more likely to initiate ANC during the second semester than the first trimester (Aliyu & Dahiru, 2017; Kifle et al., 2017). This was particularly evident in young (<16 years) and first-time mothers, with young women being negatively associated with ANC initiation and less likely to initiate ANC in the first trimester compared with older women (Manyeh et al., 2020).

4.3.3.4 Risk perception

An important factor in determining health promotion and illness prevention behaviour is an understanding of the individual's perception of risk. This study intended to evaluate women's perception of their risk for maternal mortality and the use of ANC to manage or reduce that risk. Risk perception among human beings has long been documented, but what that risk does in terms of making them engage in certain behaviours is determined by the meaning attached to it and the person's anticipation about the likelihood of an event. Many theories include risk perception as an important component of health behaviour, including care during pregnancy and childbirth, with this perception differing for individual women. A previous metanalysis suggested that there was a consistent relationship between risk analysis and behaviour change and indicated that shaping health beliefs and behaviours was a fundamental role played by risk perceptions (Brewer et al., 2007).

Risk perception, or how an individual interprets and perceives danger susceptibility, is a significant factor for health behaviour concepts, and is fundamental for health behaviour decisions to minimise the probability of poor outcomes (Ferrer & Klein, 2015). Risk perception also refers to a person's feeling about the probability of an undesirable outcome, which is

subjective and comes from cognitive and emotional dimensions (Paek & Hove, 2017). These two dimensions are commonly used to refer to risk perception, with the cognitive dimension encompassing the level of knowledge and the emotional dimension the individual's feeling about the risk. Both dimensions are temporal activities in relation to the sense of mortality. Individuals with experience and knowledge about a threat will have a higher risk perception based on the frequency of exposure to that threat (e.g. a family history) or if it is seen to be uncontrollable, although risk perception is sometimes based on a 'gut feeling' of susceptibility (Ferrer & Klein, 2015; Paek & Hove, 2017).

Risk perception in pregnancy has more often been associated with objectivity and power by healthcare professionals than by pregnant women. The assumption by healthcare professionals of pregnancy as an essentially clinically risky state that needs ANC is not the case for pregnant women, who tend to keep their pregnancy a secret for fear of the 'evil eye' causing poor outcomes (Finlayson & Downe, 2013). Health-seeking behaviour involves individual judgement on balancing the risk against the consequences and the value of the care provided. During pregnancy and childbirth, women may encounter risks that predispose them to maternal and newborn deaths. However, the perception of risk may be complex and determined by biological, cultural and social factors (Chadwick & Foster, 2014). Childbirth can be risky and pregnant women are known to be immunologically and physiologically vulnerable because of the adaptation changes in pregnancy; inadequate ANC is important risk factor for maternal mortality (Yego et al., 2014). However, many pregnant women feel healthy and believe pregnancy is a normal life event, with some only seeking care when a life-threatening event occurs; such women may not be aware of a probability of risk. This relates to women's beliefs about the benefits of ANC, which depend on whether they believe pregnancy is healthy or risky state and their prior experiences with care (Downe et al., 2019). This is attributable to complex beliefs about the biological and natural meanings related to pregnancy and childbirth, which is culturally reported as a normal process yet requires preventive strategies and education via ANC.

A previous study suggested there were significant variances in the perception of risk during pregnancy between women and healthcare professionals (Lee, Holden, Webb, & Ayers, 2019). In that study, risk perception related to the mother was reported lowest by healthcare professionals compared with pregnant women, but there were no differences regarding risk

involving the newborn. Similarly, risk perception differed between women and professionals, with women potentially exploiting many ways to determine risk and not necessarily involving a health facility (Lee, Ayers, & Holden, 2014). Women's perception of risk during pregnancy influences their access to ANC. Older women tend to perceive greater danger than younger women, such as fear of dying during pregnancy and complications for both them and the foetus (Bayrampour, Heaman, Duncan, & Tough, 2012). A previous meta-analysis (Sheeran, Harris, & Epton, 2014) revealed that heightening people's appraisal of risk influenced their behavioural outcomes. That study suggested the role of risk perception in predictive health behaviour changes and greater effects on results were observed when perceived severity was also amplified. Recent research indicated that poor obstetric risk perception was common, although men had poorer perception of obstetric risk than women (Iliyasu et al., 2019).

Health-seeking behaviour related to ANC during pregnancy and childbirth is based on evidence-based approaches geared towards identification, reduction, and management of risk (WHO, 2016). The care given to pregnant women by healthcare professionals is based on how they perceive risk, which is determined by the age, gender and economic status of the individual woman. However, the rational interpretation of risk is influenced by the experiences and viewpoints of individuals. The obstetric philosophy of care for women using a biomedical perspective and nurses' focus on pregnancy as a normal life process determines how risk is communicated to women (Lennon, 2016).

Health-seeking behaviour can be influenced by pregnant women's perception of risk, and a psychometric tool can be used to measure risk perception. An early study hypothesised risk perception would be lower in women with uncomplicated pregnancy (Heaman & Gupton, 2009). Women's understanding of risk perception is a significant component of their decision to seek care and adhere to health-seeking behaviour, even when there is no specific risk factor associated with the pregnancy (Kowalewski, Jahn, & Kimatta, 2000). Both women and healthcare professionals tended to avoid discussing the topic of obesity-related risks; however, many women were aware of, feared and accepted the risks associated with obesity in pregnancy (Relph et al., 2020). Women have been reported to lack knowledge about perceived risk if they have excessive weight, which can affect them and their baby (Knight-Agarwal et al., 2016). Although maternal obesity is an emerging public health problem in Africa, these women face difficulties

during pregnancy and birth (Nkoka, et al., 2019; Onubi et al., 2016). However, there is a dearth of literature on the perceived risks for African obese pregnant mothers.

Culturally, women perceive the risk for losing a pregnancy as related to making their pregnancy status known, and therefore many women choose to shroud their pregnancy in secrecy. Unfortunately, this leads to delayed ANC (Finlayson & Downe, 2013; Kea et al., 2018; Tinago et al., 2019). More studies are needed to investigate women's pregnancy-related risks and the cultural context in low- and middle-income countries. Pregnant women's reasoning about perceived pregnancy risk influences their emotional state and impacts how they make decisions about seeking healthcare in pregnancy and childbirth (Lennon, 2016). This perception of risk to the self and the baby may increase women's compliance with recommendations on prevention to reduce the prospect of the occurrence of an adverse event.

In China, pregnant women perceived their risk for contracting COVID-19 to be higher than their risk for contracting other health conditions, except for influenza (Lee et al., 2020). Understanding the perception of risk has been stated in studies focused on factors that influence health-seeking behaviour (Rajbanshi, Norhayati, & Nik Hazlina, 2021; Sheeran et al., 2014). A major shift in care during pregnancy is that from the natural state to one more focused on examinations because of advances in technology, which reflect more objective and subjective socially constructed estimations of risk (Lennon, 2016). However, even without any risk, pregnant women have been found to develop complications (Danilack, Nunes, & Phipps, 2015), which highlights the need for ANC.

Gaps in the literature

The present review highlighted various factors that influenced ANC attendance in sub-Saharan Africa. A prominent observation was the limited availability of analytical frameworks capable of categorising these factors into evidence-based, practical information for use by midwives and other healthcare professionals. An illustrative example of such a framework was that employed by Kyei-Nimakoh et al. (2017). That 2017 review aimed to synthesise literature on barriers to obstetric care at health institutions in sub-Saharan Africa. Their findings underscored the existence of commonalities in barriers to obstetric care across sub-Saharan Africa; however, they emphasised the need for country-specific strategies to address challenges related to ANC access.

Those authors concluded that governments must proactively develop strategies geared towards enhancing healthcare systems and elevating the overall socioeconomic status of women. These measures are crucial in addressing both supply- and demand-side barriers to obstetric care access.

Furthermore, studies from sub-Saharan Africa have illuminated the intricate contextual challenges that hinder many women from accessing ANC (Magoma, Requejo, Campbell, Cousens, & Filippi, 2010b; Owino, Legault, Mumbo, Odera, & Ayugi, 2013). Although numerous studies have delved into various barriers and facilitators influencing women' ANC attendance, these endeavours often lacked comprehensive coverage and had limitations. For example, despite sub-Saharan Africa having the highest rates of HIV, no country in the region has achieved universal coverage of prenatal care HIV testing (Awopegba et al., 2020). A study focused on prenatal care coverage and correlates of HIV testing in sub-Saharan Africa indicated substantial progress had been made in the East and Southern African regions, which ensured that virtually every pregnant woman received testing. However, in the West and Central African regions, prenatal care testing coverage remained notably low, with disparities related to socioeconomic factors. Wealthy and well-educated women generally had better access to testing, whereas those from disadvantaged backgrounds were less likely to get tested. In addition, marginalised women, including sex workers, tended to discover their pregnancies late, often because they were unplanned (Parmley et al., 2019). This resulted in ANC presentations typically occurring 1–4 months later than recommended by the WHO, subsequently delaying the initiation of antiretroviral therapy. Addressing disparities in access and coverage of HIV testing among pregnant women is therefore imperative in these sub-regions.

Defining midwives in Kenya poses a challenge, and few studies have explored the barriers to ANC from midwives' perspectives. Some research has examined healthcare professionals in general, including doctors, clinical officers, and nurses, but not specifically midwives. However, studies that encompassed midwives identified certain factors. For example, a South African study explored healthcare providers' understanding of why women-initiated ANC later than the recommended 20 weeks of gestation and how this affected providers' experiences and interactions with patients (Jinga et al., 2019). That study concluded that the timing of ANC was influenced by complex decisions women made during pregnancy, starting from accepting their

pregnancy to recognising the necessity of ANC. To encourage early ANC, it is essential to enhance awareness programmes and emphasise the relationship between healthcare providers and women (Jinga et al., 2019).

Importantly, there appears to be no analytical framework available to weigh these characteristics, apart from one (Jacobs et al., 2012) that was used to discuss the use of obstetric health services in general (Kyei-Nimakoh et al., 2017). Women should be able to make an informed decision about ANC attendance during pregnancy, labour, childbirth and postnatally for a smooth transition into motherhood (Sanders & Crozier, 2018). Furthermore, there is little information about women who encountered barriers to attendance but somehow managed to overcome these barriers. This information would be of use for women encountering barriers that do not have strategies to get around those barriers.

Research has revealed that complex contextual challenges work against ANC attendance for many women (Magoma et al; 2010; Owino et al; 2013; Parmley et al., 2019). Although there has been a number of studies that explored barriers and enablers to women attending ANC, these were not comprehensive, and many had major limitations. The characteristics of available services, midwives and policies also appeared to be less of focus in most papers, making it difficult to operationalise research findings. Although there have been numerous studies and some synthesis reviews identifying factors influencing ANC non-attendance, none of these studies aimed to weigh the importance of identified barriers/enablers from women's perspectives. Interpersonal factors were noted by 25 studies and two studies overtly commented on the husband's characteristics (occupation and level of education). However, none of the reviewed studies sought to group the barriers and enablers in any way. For example, there was no prioritisation, factors were scattered across the studies, and some did not discuss any interpersonal characteristics (autonomy, perception of risk).

Conclusion

This chapter provided a discussion of the reviewed literature, which focused on studies conducted in sub-Saharan Africa. It provided an overview of the evidence related to midwives' and pregnant women's experiences related to ANC access and attendance. This chapter also considered factors that influenced ANC access and attendance by pregnant women.

These factors were discussed in the form of barriers and enablers, which were arranged using the categories of the Neuman system model as a framework. This includes the categorisation of factors as intrapersonal, interpersonal, and extra-personal in the context of the pregnant woman's health-seeking behaviour. In reviewing the literature, the following key aspects were found to be relevant.

The review considered the individual woman's autonomy and her influence in decision-making in the context of patriarchal societies where male dominance has been acknowledged; this demonstrated the inability of women to make decisions about attending/not attending ANC. There were gaps in the literature concerning the women's temporal analysis and risk perception to determine whether to attend ANC. This showed that it is important to consider whether the thoughts women have about whether or not to seek ANC determined if they perceived different factors as barriers or enablers. This reflected the rationale for this study and its unique contribution to knowledge and the vision of preventing maternal morbidity and mortality through ANC attendance. The next chapter provides a detailed discussion of the methodology applied in this study.

CHAPTER 5: RESEARCH METHODOLOGY

5.1 Introduction

This chapter provides a reasoned explanation supporting the selection of qualitative descriptive methodology and methods for this study. This approach was strengthened by arguments for the elimination of possible competing qualitative methodologies, which were ultimately found to be unsuitable for the topic under study. Reasoned arguments are supplied for the epistemological position adopted for this study and the use of descriptive content analysis. Ethical considerations are also explained, along with the methodological rigor that underlies this study.

The literature review (Chapter 4) established that although barriers and enablers to ANC attendance had been researched over past decades, few frameworks had been used to analyse the determinants of ANC use (Hijazi et al., 2018; Kyei-Nimakoh et al., 2017). The systematic literature search showed that existing models analysed obstetric barriers to ANC use and were inadequate for the purpose of directing and affecting strategies to ensure ANC attendance. In addition, available models did not consider women's temporal analysis of the risk for maternal mortality associated with not attending ANC in a timely manner in the first trimester and not meeting the maximum of eight contacts during pregnancy (as per WHO recommendations).

5.2 Study Aims

Chapter 4 established that there were gaps in knowledge about how women made decisions to attend/not attend ANC; this phenomenon guided the development of the following research aims for this study.

1. To explore pregnant women's (mothers) experiences in decision-making around their access to ANC and attendance frequency.
2. To explore midwives' experiences of pregnant women's ANC access and attendance.
3. To identify the barriers to health- and help-seeking behaviours of pregnant women in accessing and attending ANC.
4. To explore the enablers of health- and help-seeking behaviours of pregnant women in accessing and attending ANC.

Objective

The present researcher sought to describe women's temporal analysis in evaluating their need for and ability to attend ANC. In this context, the term 'need' referred to: i) professional guidance (national guidelines on scheduling ANC attendance), and ii) women's personal decision to seek ANC, based on their perception of the risks associated with not attending ANC.

Research approach

Interpretivism was best suited to exploring the research question in this study. Interpretivists argue that reality can vary among individual participants based on their personal experiences in the social world, which is subjective; therefore, general interpretation is impossible (Alharahsheh & Pius, 2020). The interpretivist paradigm enabled the researcher to gather in-depth information from participants regarding their experiences with health-seeking behaviour at the antenatal clinic. For interpretivists, people's knowledge is a social construction by human actors and depends on the meaning people attach to culture and their behaviour and interactions with others and the environment (Chowdhury, 2014). This study focused on the experiences and views shared by participants, which were gathered through in-depth interviews. Experts in research methodologies agree that qualitative studies are suited for locating the meanings that people attach to events, processes and structures in their lives, and the associated perceptions, assumptions, and pre-suppositions (Patton, 1999).

5.2 Epistemological positioning

Although researchers focus on philosophical matters, Sandelowski (2010) stated that this may have no association with the study findings. However, the philosophical underpinning of a study is important when the research is looking for differences and similarities in the research approaches (Bondas & Hall, 2007). The present researcher needed to ground herself in ways of thinking and personal beliefs about the phenomenon under study. A paradigm may be viewed as basic beliefs that presents the worldview based on an individual's assumptions; this is reflected in the way research methods are chosen, and also in the nature of the world and the way the researcher views the world around them (Creswell & Poth, 2017; Guba & Lincoln, 1994). A paradigm represents the commitments, beliefs, values, methods, and viewpoints in the researcher's thinking about the world and how problems are solved (Schwandt, 2001). Research

paradigms are characterised by their ontology, which is the nature of reality, and epistemology or the way of knowing what we know, which leads to the appropriate way of 'finding out', which is known as a methodology (Crotty, 1998; Guba & Lincoln, 1994). The axiology, which is what we believe is true, is part of research in which human subjects are explored that requires our own ethics and value systems to work together to select the most appropriate paradigm.

Philosophical stance

A philosophical stance or research paradigm provides the theoretical underpinning for a research study and its relationship to reality and the nature of reality (Al-Ababneh, 2020). Central to this paradigm is the researcher's worldview, which in turn shapes their understanding of the importance of different aspects of reality (Corry et al., 2018). In the context of this qualitative study, which sought to explore the experiences of midwives and pregnant women in accessing and attending ANC in Kilifi, Kenya, it was vital to establish and clarify the ontological and epistemological perspectives that guided the research process. These philosophical standpoints ultimately determined the selection of the research methodology and ensured that it was aligned with the study's objectives and overarching goals (Schwandt, 2001).

The ontological perspective of this study centred on social constructivism. This perspective recognises that reality is not an absolute, fixed concept but is socially constructed through human interactions and interpretations (Creswell, 2018; Rodriguez & Smith, 2018). In particular, qualitative research serves as a valuable tool for researchers to explore the lived experiences of participants and gain a nuanced understanding of the meanings they ascribe to those experiences (Sutton, 2015). This ontological perspective was particularly pertinent in the specific context of this study. It acknowledged that the experiences and perceptions of both pregnant women and midwives in relation to accessing and attending ANC are intricately shaped by their interactions in the healthcare system, as well as the prevailing social norms and cultural contexts. Furthermore, this ontological perspective resonated with the notion that the realities of both midwives and pregnant women in Kilifi, Kenya were not fixed entities but rather evolved over time and within their unique circumstances. It recognised that there were no universal truths or absolutes, only varying interpretations and constructed understandings influenced by the complex interplay of factors.

In essence, the social constructivist ontological perspective adopted in this study provided a solid foundation for comprehending the dynamic, multifaceted experiences and perceptions of midwives and pregnant women regarding ANC access. It acknowledged the fluid nature of their realities and offered an ideal framework for qualitative research that aimed to unearth the nuanced meanings embedded within their experiences. The epistemological stance for this study aligned with interpretivism. Interpretivism asserts that individuals perceive the world based on their subjective experiences; therefore, understanding these experiences requires interpreting the meanings and interpretations that individuals assign to their circumstances (Creswell, 2018). Grasping the depth of these experiences entails careful interpretation of the meanings and significance that individuals ascribe to their experiences. In this framework, it is crucial to acknowledge that multiple subjective truths exist, with each intricately shaped by the unique perspectives of the participants involved in the study (Holloway & Wheeler, 2002). This epistemological perspective was well-suited for understanding the nuanced experiences of midwives and pregnant women in a specific cultural and healthcare context such as Kilifi, Kenya. Given the diversity of subjective truths that may emerge from their distinct viewpoints and lived realities, interpretivism provided the ideal philosophical foundation for comprehending the unique ways in which these individuals perceived and made sense of their world.

Qualitative research places the researcher in a central role as a co-creator of knowledge and understanding using creativity, sensitivity, and flexibility to make sense of life events (Sutton, 2015). In this study, the researcher acknowledged her position as a midwife, which had potential to influence the research because of background knowledge and related professional insights. However, the researcher's background as a midwife was both an advantage and a necessity, as it empowered her to delve deeply into the experiences and engage meaningfully with pregnant women and healthcare providers. Therefore, the researcher's role encompassed the responsibility of navigating these interactions and the potential influence on the research, while also applying the principles of reflexivity throughout the research process. Furthermore, it is crucial for a researcher to maintain an awareness of their values and experiences throughout a study. The researcher's position as both a participant and a facilitator can significantly impact the findings, particularly if the interpretations of participants' experiences align closely with their own values (Olmos-Vega et al., 2023). In constructivist research, the research focus and themes emerge dynamically through the interactions between the researcher and participants. Consequently, a

rigid or predetermined research question is not conducive to this approach. It is in the dynamics of these relationships and interactions that the essence of the research unfolds, meaning the role of the researcher as a participant-facilitator was essential for this study.

In summary, the ontological and epistemological perspectives guided the selection of the research methodology for this qualitative study. The social constructivist and interpretivist perspectives emphasised the importance of understanding the subjective experiences and interpretations of the research participants. Qualitative research methodology was considered an appropriate choice to capture the multifaceted factors at play and delve deeply into the experiences of midwives and pregnant women in Kilifi, Kenya, ultimately facilitating a holistic exploration of ANC access and attendance.

5.3 Research methodology: a process of elimination

The research question and phenomenon under investigation determine the most appropriate methodology (Patton, 1999). It is recommended that the researcher reviews available research methods and then selects the most appropriate method for the purpose of answering the research question (Green & Thorogood, 2018; Opoku, Ahmed, & Akotia, 2016). In this section, commonly used qualitative methods were reviewed for suitability (i.e. best fit with the research question). Five research methods were explored as possible approaches to meeting the research aims in this study. Following this elimination process, detailed justification is provided to support the choice of a qualitative descriptive method.

Eliminating possible approaches

Various versions of reality or knowledge, even for the same individual, are closely related to the context in which they occur and fundamental to qualitative research (Braun & Clarke, 2013). Different versions of reality may be collected in grounded theory, ethnography, narrative research, phenomenology, case study research and discourse analysis.

Grounded theory

For research to be linked with grounded theory, it must demonstrate that drawing on the data will develop new conceptual categories and abstract analytic categories developed from the data analysis (Charmaz, 2014). The literature review in this study showed that conceptual categories of help- and health-seeking were well developed for women in pregnancy (Ahmad et al., 2019; Kifle et al., 2017).

Furthermore, exploration using grounded theory would not assist in answering the research question (Maqbali, 2019; Huaman et al., 2013; Laisser et al., 2022; Levy, 1999). This study aimed to provide in-depth and detailed descriptions of midwives' and pregnant women's experiences regarding the specific challenges and facilitators to ANC access and attendance, and their interactions with ANC services. Therefore, opting for a qualitative descriptive design allowed for a rich, in-depth exploration of these experiences without the need to develop new theoretical frameworks.

Ethnography

Ethnography requires the researcher to become immersed in the field, interacting and living with the participants to share the patterns of behaviour, language and actions in their natural setting and particular cultural context (Atkinson, 2007; Charmaz, 2014). This is achieved through sustained observations and interviews covering multiple dimensions to collect data over a prolonged period (Charmaz, 2014; Silverman, 2016). The researcher describes and interprets the shared and learned values, behaviours and beliefs of a culture-sharing group (Creswell & Poth, 2017). The identification of discrete values and beliefs of different cultural groups has been effective in identifying a complex reality where care delivery was impeded (Arnold, van Teijlingen, Ryan, & Holloway, 2019). However, ethnography may not clearly reveal women's temporal decision-making based on the complexity of their circumstantial reality, which includes women's cultural diversity, levels of health literacy, socioeconomic status, preparedness, communication, and geographic access (Belton, Myers, & Ngana, 2014). In addition, as the researcher is a midwife and has provided ANC, the immersion of the researcher had already occurred and was continued through a reflexive process (Berger, 2015). This insider perspective enhanced the understanding of midwives' and women's experiences. In this context, a qualitative descriptive design allowed for a focused exploration of these experiences without the need for the extensive immersion that is characteristic of ethnography. By employing qualitative descriptive methods, this study aimed to provide detailed, yet concise, descriptions of the experiences of midwives and women in accessing and attending healthcare services during pregnancy, while also considering the diverse and complex factors that influenced their decision-making processes.

Phenomenology

The philosophical assumptions of phenomenology rest on the concept of the lived experiences of individuals and the view that these experiences are conscious and capable of description (Creswell & Poth, 2017). This approach was rejected for this study because there are multiple meanings attributable to a lived experience. Women differ greatly in their obstetric history, which is often related to their age and circumstances of pregnancy (e.g. gravida and para status); therefore, there are multiple realties that are unlikely to lead to a cogent understanding of temporal analysis. Currently, there is little support for or understanding of health and social adversity in pregnancy (Yelland & Brown, 2014). A qualitative descriptive design was considered more applicable than phenomenology for this study because it allowed a straightforward, detailed exploration of midwives' and women's experiences. By focusing on the voices of study participants, this methodology provided an understanding of their experiences with ANC access and attendance. In addition, this approach provided a pragmatic and accessible framework for capturing the nuanced experiences of midwives and women without exploring the complicated philosophical complexities that phenomenology entails.

Discourse analysis

Discourse analysis was considered unsuitable for the present research design as it was likely to lead to an understanding that women's discourse was reactive/responsive to a gender imbalance in terms of decision-making about their personal care needs in pregnancy. Discourse analysis is supported by textual analysis (e.g. women's magazines) and spoken word (Hunt, Adamson, & Galdas, 2010; Roy, 2008). Texts (protocols, policies) are not seen as truth, but as cultural representations that surround normal practices (Frost, 2011). However, in the unique context of this study, understanding women's temporal analysis for timing their ANC attendance was important, and did not align with the constraints of discourse analysis. In addition, expecting women to maintain diaries, which is a common method in discourse analysis, was not feasible in this study. Therefore, a qualitative descriptive design was more suited to this research as it enabled a detailed exploration of midwives' and women's experiences without relying on textual or spoken representations. By directly engaging with study participants and examining their lived experiences, the qualitative descriptive design provided a more direct and contextually rich understanding of the complexities surrounding ANC access and attendance during pregnancy.

This approach ensured that the study captured participants' experiences while respecting the limitations and reality of the research context.

Narrative research

A narrative research approach requires the researcher to study individual lives and ask for stories using audio-visual, imagined dialogue, artwork, field notes and written narratives about their experiences (Connelly & Clandinin, 1990; Merriam & Tisdell, 2015). The challenge with this method is that the researcher needs to collect intensive information about participants and have a clear understanding of the context of the individual's life (Creswell & Poth, 2017). Critics of the narrative approach emphasise limitations in the trustworthiness and validity of the data. For example, respondents may provide fictional solutions to personal dilemmas that reflect unresolved conundrums they grapple with. This verisimilitude may divert researchers from deeper, more intractable and more important concerns (Loh, 2013; Polkinghorne, 2007). The researcher's understanding may also go beyond the individual's self-understanding to the detriment of validity (Kvale, 2012). The interviews in this study allowed for some narrative description, which were particularly useful in understanding women's experiences of near-miss maternal mortality (Souza et al., 2009). To understand midwives' and women's experiences in ANC access and attendance, a qualitative descriptive design was preferred for the methodology over a narrative approach. The structured and focused nature of the qualitative descriptive design aligned seamlessly with this study's aims, enabling a systematic exploration of practical aspects. Through in-depth interviews, this approach facilitated a direct inquiry into the experiences of midwives and women. The qualitative descriptive design offered a comprehensive and practical exploration of the research topic, which contrasted with the focus of the narrative approach on personal stories and subjective interpretations.

Case study

A case study is a method used in qualitative research that offers a level of flexibility compared with other methods such as phenomenology and grounded theory (Hyett, Kenny, & Dickson-Swift, 2014). Case studies can be formed around single cases (e.g. individual pregnant women), and usually examines them to draw qualitative and quantitative data (Yin, 2014). A previous study (Kohlbacher, 2006, p. 5) noted an important point 'that a case study is not a method but a

research strategy'. Case study research is a heterogeneous activity and therefore, 'a case study cannot be defined through its research methods, but rather in terms of its theoretical orientation and interest in individual cases' (Hartley, 2004, p. 324; Stake, 2000, p. 435). In case studies, the researcher develops an in-depth analysis of a case/cases over a period of time through detailed multiple sources. The cases being studied may not be similar to other cases; there is no single reality in the individual experience because individuals may hold unique issues. As such, a study of separate cases would not meet the objectives of the present study, which sought to establish a breadth of knowledge required to inform policy designed to improve ANC care for women.

Research Method

5.4 Qualitative descriptive design

This section describes the methods and rigour issues underpinning qualitative descriptive research. The key attributes and value of the description methodology are highlighted. Researchers have used a variety of methods to identify factors that impede ANC attendance. A qualitative descriptive design was used in this study based on the supportive discussion that follows. Proponents of the methods recommend it use in the following context.

> *A qualitative description design is particularly relevant where information is required directly from those experiencing the phenomenon under investigation and where time and resources are limited* (Bradshaw, Atkinson, & Doody, 2017).

Both Bradshaw et al. (2017) and Sandelowski (2000) provided a guide through the philosophical, ontological, and epistemological perspectives, which supported validating the purpose of qualitative descriptive research. A qualitative descriptive approach was used in this study to explore the experiences and perceptions of women when deciding to access and attend ANC in the study context. Qualitative descriptive designs are part of the naturalistic approach, where participants ascribe meanings to the phenomenon under study. A qualitative descriptive design is similar to other qualitative methods and may have overtones from phenomenological, grounded theory or ethnographic approaches in its descriptions (Neergaard, Olesen, Andersen, & Sondergaard, 2009; Sandelowski, 2000). Therefore, describing the overtones in qualitative descriptive research is preferred rather than incorrectly naming the research approach as phenomenology, grounded theory, or ethnography (Lambert et al., 2012).

Unlike grounded theory, which seeks to identify social processes and aims to construct high-level abstracts of a theory to explain the phenomenon, a qualitative descriptive study offers various descriptive explanations of the phenomenon in summary rather than to discover a theory (Bradshaw et al., 2017; Sandelowski, 2000).

Qualitative descriptive research is a design used in healthcare research when a straight description of a phenomenon, as informed by the participants, is desired (Doyle, McCabe, Keogh, Brady, & McCann, 2020; Sandelowski, 2000). Sandelowski (2000) described qualitative descriptive research as a distinct, eclectic, and acceptable design with a goal of summarising everyday events. It is naturalistic and employs the use of everyday language and low inference interpretation, where the researcher is close to the data in the form of words and experiences to make conventional descriptions (Sandelowski, 2000). Qualitative descriptive research is seen as '*categorical*' and not a '*non-categorical alternative*' as the researcher is close to the data and the surface of the words but does not require a deep theoretical interpretation of the data (Sandelowski, 2010).

The strength of qualitative descriptive research for the present study was that it could give detailed and rich descriptions of the experiences as presented by the midwives and women's voices through discussions or with minimal abstraction using a language similar to that of the participants, meaning the researcher remained close to the data (Sandelowski, 2000). Qualitative descriptive research involves low-inference interpretation; the researcher remains aware that the descriptions always depend on the perceptions, inclinations, sensitivities, and sensibilities of the describer. Therefore, the quality of data starts with the describer; in cases of two researchers, they can agree easily based on the facts even if there is a difference in the descriptions (Sandelowski, 2000). However, even in cases of minimal interpretation, its common to find qualitative research that is reported to have both descriptive and interpretative approaches (Sandelowski, 2010). This represents an inductive, cyclic, and constant comparative analysis, and compression of data into themes. A qualitative descriptive design was considered appropriate for this study to explore the phenomenon of interest and capture midwives' and pregnant women's perspectives and experiences through their voices in their own context in Kenya.

Qualitative content analysis can be used in either an inductive or a deductive way (Elo & Kyngäs, 2008; Patton, 2011). This study adopted a predominantly deductive lens. It was assumed that women's decisions to minimise the health risks of pregnancy to themselves and their unborn child involved some understanding of the benefits of attending ANC, and the importance of timing/scheduling ANC visits across all three trimesters. It was assumed that women's temporal analysis of the risk for maternal mortality and the benefits of ANC should offer a good reason for them to want to overcome barriers to attending ANC. The main barriers to attending ANC for pregnant women in Africa are well established; therefore, both deductive and inductive approaches were appropriate for analysis. This study sought to describe what women experienced when dealing with the complex factors that impeded ANC attendance. Sandelowski and Barroso (2003) supported the use of qualitative descriptive approaches such as content analysis. Thematic analysis is considered appropriate for researchers who wish to employ a relatively low level of interpretation (deduction) (Sandelowski & Barroso, 2003). A descriptive content analysis approach is used in coding and interpreting data, whereas the thematic analysis is used to present detailed qualitative data (Braun & Clarke, 2014; Vaismoradi, Turunen, & Bondas, 2013). Several versions of thematic analysis exist that differ in their paradigms, philosophies, and procedures, making it difficult to have a general standard (Braun & Clarke, 2021a). The use of an iterative process in which data and concepts were interconnected, gave an in-depth understanding of the research findings in this study (Becker 2017).

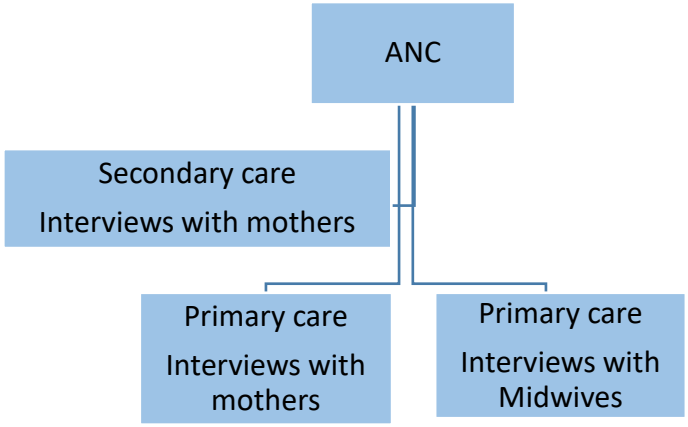
The philosophical underpinning of the qualitative descriptive approach is explained by the following points.

- An inductive process.
- It is subjective; each person has their own perspective and each perspective counts.
- Designed to develop an understanding of and describe a phenomenon.
- The researcher is active in the research process.
- The researcher takes an 'emic' stance and insider view.
- Conducted in a natural setting.

5.5 Study participants

The study population comprised two groups: healthcare professionals and pregnant women attending the antenatal clinic and those in the ward on their day of discharge. For the purpose of this study, the healthcare professionals were referred to as midwives. The pregnant women were referred to as mothers. The setting of this research was Kilifi County Referral Hospital and Malindi Sub-County Hospital where the midwives and the women were recruited from the antenatal clinic and wards. Participants were enrolled voluntarily after providing written informed consent, as approved by the Ethical Review Committee at the University of Salford, the National Commission for Science, Technology, and Innovation (NACOSTI) and Kilifi County Ethics Review Committee. Relevant demographic and non-invasive personal data (e.g. age, gender, occupation, and experiences in accessing and attending ANC) were collected using semi-structured interview guides (written in both English and Kiswahili). This site was selected because of prior experience in maternal health issues in this county. The scope of this study was to give a voice to pregnant women and midwives to explore their experiences regarding ANC access and attendance in this context. Pregnant women were recruited from the antenatal clinic and ward to gain insights on why they chose to attend or not attend ANC on time, or not attend at all. In addition, the roles of temporality and autonomy were explored to understand the challenges women faced when making decisions in a patriarchal society where women depended on their spouses. Data were collected from three groups in the healthcare setting as shown below.

Group	Participant type	Setting
1	Individual interviews with nurses/midwives	ANC, primary care
2	Individual interviews with pregnant women	ANC, primary care
3	Individual interviews with pregnant women before birth	Secondary healthcare



The interviews were semi-structured and based on literature that explored factors that enabled and hindered ANC access and attendance in less developed countries, including sub-Saharan Africa.

Participants were recruited from two locations:

a) an antenatal clinic in a primary care setting, and
b) an acute care obstetric ward in a secondary care facility.

The primary care setting was used to identify women who:

i) delayed their first scheduled ANC visit,
ii) missed more than one ANC appointment or
iii) attended all scheduled ANC visits up to the time of this study.

The secondary care (inpatient) setting was used to identify women with pregnancy-related health issues, who:

i) delayed the first scheduled ANC visit,
ii) missed more than one ANC appointment,
iii) attended all scheduled ANC visits up to the time of this study or
iv) never attended ANC.

5.6 Recruitment and Sampling

The aim of sampling is to enable the generation of a systematic database for the studied phenomenon so that clear inferences can be drawn from the data. A critique of contemporary literature (Chapter 4) established that a significant limitation in previous studies was the use of a single qualitative dataset (e.g. women's accounts of ANC or midwives' accounts).

However, (Heath et al. 2018) observed that ‘it is increasingly common for a variety of interview methods to be employed within a project’. In this study, sampling limitations were addressed by collecting multiple qualitative data. Interviews were conducted with i) women attending ANC, ii) midwives providing ANC and iii) women who had experienced a near miss of maternal mortality (irrespective of their ANC attendance status). This process supported triangulation of data to detect similar and differing perspectives on factors affecting ANC attendance. In this thesis three groups of interviews were held.

1. Women were interviewed when attending ANC to identify barriers and enablers to their attendance.
2. Midwives were interviewed when providing ANC to identify barriers and enablers to women’s attendance.
3. Women in acute care were interviewed to describe their experiences/missed experiences of being in ANC and gain an understanding of their risk for maternal mortality.

The purpose of using multiple interviews was to meet the study aims, increase the quality of this research by using of at least two research elements and provide more insights into the phenomenon under study (Schoonenboom et al., 2018). This mixing assisted in participant triangulation in comparing the views of the midwives and mothers for similarities and variations. Constructivist researchers rely on feedback from multiple participants to extrapolate deductive and inductive interpretations because the world is perceived through multiple realities rather than as a static state; therefore, all realities are relevant and valid (Bisman & Highfield, 2012; Fusch et al., 2017; Heit & Rotello, 2010).

The entire research population may not be studied because of limitations in access, time, and resources. Therefore, the sampling process is an important component of selecting participants from the total population who are capable of answering the research question. Sampling is commonly described as a process of selecting a sample with certain characteristics from a total population (Elfil & Negida, 2017).

Sampling method

There are two main types of sampling methods: probability and non-probability methods. In probability sampling, each member of the target group has an equal chance of being selected. These methods include random sampling, systematic sampling, and stratified sampling.
This section explains and justifies the use of a non-probability sampling method to select participants for this study. A non-probability sampling method permitted flexibility in the selection of participants who were known to have rich information about the subject area, as identified in the research question (Creswell, 2013). For this study, non-probability sampling was considered appropriate because there was no intention of generalising the findings, and data synthesis was not intended to be representative of the population (Creswell, 2013). Specifically, a purposive sampling approach was chosen to ensure that those selected could provide the information needed to answer the research questions (Patton, 2002). A small purposive convenience sample was used to provide important and rich data and obtain a clear description of the phenomena of interest (Mason, 2017).

5.6.1 Sampling strategy

The sampling strategy used in this study was informed and guided by principles explained in a previous study (Kemper, Stringfield, & Teddlie, 2003). The sampling strategy was also guided by midwives' knowledge of the population of interest (mothers later than 12 weeks of gestation). Midwives were asked to provide the number of women scheduled to attend ANC and those women who may arrive unexpectedly. Midwives were also asked to identify women that had physical or mental conditions that could affect their ability to participate in a brief interview, facilitated by guided questioning from the researcher. This strategy was intended to minimise the risk for accessing a vulnerable population (e.g. acute obstetric emergency patients) and ensure that consent was obtained humanely, and decision-making was prompt (Houghton et al., 2018). This approach necessitated the use of a purposive sample to select mothers that were fit for purpose in the research process (DeJonckheere & Vaughn, 2019).

Aim of the sampling strategy

The main aim of a sampling strategy is to reduce sampling bias. However, maximum variation sampling reduces but does not eliminate sampling bias.

The flexibility in qualitative research guided the categories as the information from participants gave insights to emerging aspects of importance to the phenomenon, which led to increasing the sample size.

> *A maximum variation sample is constructed by identifying key dimensions of variations and then finding cases that vary from each other as much as possible* (Benoot, Hannes, & Bilsen, 2016, p. 5).

In this study, there was no indication that a homogenous sample would be tapped through the use of purposive selection. The women attending ANC would have a variety of demographic characteristics (e.g. religious beliefs, income, wealth). In addition, they were gynecologically diverse as they would vary in their trimesters of pregnancy, parity (number of previous miscarriages and live births) and age. A small purposive convenience sample was sought to give rich and important data, with a clear description of eligible participants prepared using specific inclusion criteria (Mason, 2017; Palinkas et al., 2015) (Box 1). Sandelowski (1995) recommended that a small sample selected purposively to provide rich information for the studied phenomena was fundamental to a qualitative enquiry; however, the sample should be large enough to bring out quality information.

5.6.2 Recruitment and data collection

Recruitment of research participants is a critical step in the research process, and involves the identification, selection and enrolment of individuals who meet specific criteria for a study (Bonisteel et al., 2021). In this research, a purposive sampling technique was used to select midwives and women who met the inclusion criteria to share their perspectives on their experiences in ANC access and attendance (Creswell & Poth, 2017). By engaging midwives and women who had relevant information, the researcher explored various factors affecting pregnant women's access to and attendance of ANC services.

For midwives, the researcher met with the clinic in-charges before the interviews and explained the research purpose and inclusion criteria for potential participants. Participants were then reached through these in-charges or gatekeepers, as they had potential to facilitate access; however, the researcher provided sufficient information so they could confirm if identified participants were those sought (King, Horrocks, & Brooks, 2018). All forms intended to be used in this study were provided, including consent and assurance of confidentiality.

The researcher accessed the study site with ease. The in-charges communicated with potential participants regarding the researcher's intention and arranged a meeting where the study could be explained. The researcher also requested a suitable quiet interview room away from the busy work of the clinic to allow for good quality audio recording and ensure participant privacy and confidentiality. As this study took place at the height of the COVID-19 pandemic, international/local measures such as observance of social distancing, hand washing, and use of face masks were followed for all individual in-depth interviews.

Pregnant women were engaged through face-to-face communication, during which verbal information about this study was provided, and any questions they had were addressed. The facility in-charge assisted in recruitment by applying the specified eligibility criteria. The consent form (Appendix 6) and participant information sheet (Appendix 5) were available in both English and Kiswahili. Interviews conducted in Kiswahili were translated into English and then back translated by a professional linguist to ensure accuracy while retaining the original meaning. Those who agreed to participate were interviewed, and those who declined to participate were reassured that their care remained unaffected, and services would be provided according to their needs. For participants who could not speak Kiswahili, an interpreter was used during the interviews. Care was taken at every step of transcription and translation/back translation to preserve the authenticity and accuracy of the information drawn from the interviews.

During the site visit, the researcher initiated the interaction by introducing herself warmly to the nurse in charge of ANC and familiarising herself with the facility and potential participants. After approaching expectant mothers with a friendly manner, the researcher used the predefined inclusion criteria to engage them comfortably within the antenatal clinic and ward. A concise 10-minute presentation about the research was given to these women. For those unable to read or write, the researcher verbally explained the study's purpose, read them the participant information sheet (Appendix 5) and allowed them to confirm their participation with their thumbprint.

Subsequently, the researcher collaborated with each participant to schedule a suitable date, time and location for their face-to-face interview, and address any questions or concerns they had. To maintain confidentiality and convenience, interviews were conducted at the facility but away

from consultation rooms. Before each interview, the researcher ensured that all participants had signed and returned the consent form. The researcher reiterated information about the interview process to establish trust and encourage the women to freely share their experiences. The duration of the interviews ranged from 45 to 60 minutes; this timeframe was clearly communicated to participants beforehand, which allowed them ample time to prepare and participate comfortably.

Before selecting participants for this study, the researcher carefully considered the language issue. Despite the diversity of languages in Kenya, the majority of the population speak Kiswahili, including the pregnant women in this context, and some also speak English. The facility in-charge confirmed that both the local community and the hospital staff, including nurses and midwives from various areas, could communicate effectively in Kiswahili. Given that Kiswahili and English are Kenyan national languages, the interviews for this study were conducted in these languages to accurately capture the women's voices. The interviews were recorded for later transcription, and detailed notes were taken immediately after each session. To ensure the participants' comfort and confidence, the interviews were conducted in a quiet room away from the clinical area. Refreshments were provided and arrangements were made for mothers who came with children. Adult attendees were requested to supervise the children, and toys, paper and pens were provided for older children to keep them engaged, allowing their mothers to focus on the interview.

5.6.3 Inclusion/exclusion criteria

The researcher assumed that women's experiences related to factors influencing ANC access and attendance were likely to differ across different aspects, such as time of ANC, admitted with illness, trimester and parity. Consequently, it was decided to focus on gathering information from women attending routine ANC, women admitted to the inpatient ward and midwives providing this care. Omen that had near miss maternal mortality were included in the sample because a previous study (Lee, Ayers, & Holden, 2012) stated that pregnant women and midwives held different views on perceptions of risk.

The researcher also considered it was unsuitable and unethical to interview women admitted in a state of an acute obstetric emergency/acute illness with symptoms of distress, which could have interfered with the way they responded to questions. In addition, those who presented with

mental illness at the time of recruitment were excluded. The broad inclusion and exclusion criteria for participant selection are presented below (Box 1).

Box 1: Inclusion/ exclusion criteria.

Inclusion	Exclusion
Midwives: • Nurse/midwives working in the antenatal clinic and ward for over 12 months. • Nurse/midwives who provided written informed consent to participate in the study. **Women:** • Pregnant women attending routine ANC. • >12 weeks of gestation • Pregnant women admitted in the antenatal ward on the day of discharge. • English/Kiswahili speaking	**Midwives:** • Nurse/midwives away on leave or sick leave **Women:** • Mothers overtly distressed by obstetric/medical complications. • Mothers diagnosed with a serious mental health problem or cognitive disability

5.7 Sample Size

This section explains the sample size and sample selection for this study. Strategies to maximise the sample were employed to ensure that the information obtained was from a sample that was large enough to allow the unfolding of new information that was rich in understanding the phenomenon investigated in this study. The purpose of this qualitative research was to describe and explain midwives' and mothers' experiences in ANC access and attendance. Consequently, there was no attempt to generalise the gathered information or use inferential statistics in this study (Crouch & McKenzie, 2006).

The aim of determining the required sample size in this qualitative study was to support an in-depth enquiry to provide rich information through semi-structured interviews (Denzin & Lincoln, 2005). Qualitative research requires a thorough understanding of the optimum sample size and its relationship to achieving the research aims.

It is convention to cease sampling once no new evidence is forthcoming, which is often referred to as data saturation (Guest, Bunce, & Johnson, 2006; Lincoln & Guba, 1985). However, some critics have suggested that few research reports actually explain how saturation was achieved (O'reilly & Parker, 2013).

Research suggests that the experience of most qualitative researchers is that after interviewing around 15 people in a homogenous group of participants, little 'new' information is elicited (Green & Thorogood, 2018). However, a smaller sample of 6–12 interviews has been recommended as potentially adequate (Guest et al., 2006). Another study (Ritchie, Lewis, Nicholls, & Ormston, 2013) suggested that no more than 50 individual interviews should be conducted to manage the complexity of the data analysis. However, there are no established rules for the sample size used in qualitative research (Patton, 2002). Critics of sampling methods indicated that qualitative researchers often demonstrated a low level of transparency in sample size attainment; rather, they followed their own rules in the approximation of numbers based on experience from previous studies (Malterud, Siersma, & Guassora, 2016; Mason, 2010). However, a general tool for estimating the sample size in qualitative research was established by Guest, Namey and Chen (2020) that uses the base of runs and saturation points. In the present study, the target sample size was estimated at approximately 30 participants (10 from each phase) to obtain data from midwives and pregnant women in both outpatient and inpatient settings.

5.7.1 Data saturation determined the sample size.

The analytical process used to categorise data into themes in this study was progressive and ongoing. Therefore, the interviews continued until the point of data saturation. How and when saturation occurs is an ongoing debate among qualitative researchers and critiques of qualitative approaches (Braun & Clarke, 2021; Fusch & Ness, 2015; Guest et al., 2020). Saturation is an important concept in data coding and deeper analysis to determine when to stop data collection, although it does not always reach a fixed endpoint (Braun & Clarke, 2021). Data saturation is commonly considered to have occurred when no more evidence of information, categories, codes or themes are produced from participant interviews (Lincoln & Guba, 1985). Saturation also means that the researcher has an endpoint for data collection, as they have gained information of sufficient depth, and no new information is being found.

The traditional approach used to determine data saturation involves the researcher's *impression* of when to stop; this creates an overall understanding that transcripts, field notes and discussions with other researchers in the field come to an '*end point'* in the analysis (Braun & Clarke, 2021). However, recent critics of this concept argue that the process of saturation may never be complete as new information may emerge at any time (Braun & Clarke, 2021b). However, pragmatically, the researcher must make a decision to move from one step to another in their study; for example, to proceed from coding to themes and finally write a report, as there is no absolute endpoint (Braun & Clarke, 2021b; Low, 2019).

5.8 Methods of Data Collection

Face-to-face interviews: justification

In qualitative research, interview data can be used to offer rich and detailed information to understand people's experiences, values, and beliefs (Hennink, Hutter, & Bailey, 2020; Padgett, 2016; Sutton & Austin, 2015). An interview's purpose '…is to gather descriptions of the lifeworld of the interviewee with respect to interpretation of the meaning of the described phenomena' (Kvale, 1983:171). This study used face-to-face interviews to collect data that were characterised by synchronous communication in time and place. The advantages associated with synchronous face-to-face interviews include the potential for the researcher to respond to social cues, such as a participant's voice, intonation, and body language. Recording of these cues can be achieved using an audio recorder (e.g. capturing the tone of voice, periods of silence or the significant time delay between a question and an answer) and the researcher's notes (body language, facial expressions) (Phellas, Bloch, & Seale, 2011).

In this study, audio recordings were made to allow the interviewer to concentrate on explorative questioning guided by the participant's responses to previous questions. As Opdenakker (2006) noted, the synchronous interview process is a busy time for the researcher.

> *…you must be both listening to the informant's responses to understand what he or she is trying to get at, and, at the same time, you must be bearing in mind your needs to ensure that all your questions are liable to get answered within the fixed time at the level of depth and detail that you need* (Wengraf, 2001:194).

An interview protocol was developed for this study to minimise the interviewer's effect on participants' responses; this helped to standardise the interviewer's behaviour across all interviews. Open-ended interview questions required the cultivation of relationships with participants, which was achieved through the researcher's self-introduction and creating a rapport. The open-ended interview questions were not uniformly constructed and tended to vary across contexts with different participants (Jacob & Furgerson, 2012).

An evaluation of the net effects of the advantages and disadvantages of face-to-face interviews vis a vis other methods of data collection (e.g. surveys, focus groups), was conducted early in the research process. The researcher concluded that the time and cost expended on the interviews were justified because of the richness of descriptive data collected. This decision was consistent with that of other eminent qualitative researchers (Carteret al., 2014; Gill, Stewart, Treasure, & Chadwick, 2008; Guest et al., 2017; Schwab, 2020).

Interview questions: choosing a semi-structured approach.

The selection of an appropriate interview style took into consideration the following information. Structured interviews were avoided because they tend to be rigid with predetermined questions that have little or no variation for further follow-up and elaboration, and take a shorter time (Gill et al., 2008). Semi-structured interviews comprise predetermined key questions based on the overarching research question. This method allows some flexibility, as previous points made by a participant can be further explored through follow-up probes to give a deeper understanding of the phenomenon under study (Gill et al., 2008). Although there are several types of semi-structured questioning, these interview questions have a greater probability of identifying new data that reflects changes in a social context (e.g. normative gender roles, gender equality) and contemporary issues (e.g. ease of access to healthcare) (Emslie & Hunt, 2009; Galletta, 2013; Talbani & Hasanali, 2000; Ugwu & de Kok, 2015).

The literature review (Chapter 4) established that little is known about mothers' temporal processes in determining the personal risk associated with not attending ANC. When a phenomenon is poorly understood, open-ended questions are used to allow participants to freely respond to questions and the researcher is able to probe their responses (McGrath, Palmgren, & Liljedahl, 2019).

The ultimate design used for the semi-structured interviews in this study was guided by the work of McIntosh and Morse (2015), who made a clear distinction between 'descriptive ~ confirmative' and 'descriptive ~ corrective' interviewing styles. Using a confirmative style of interviewing, the objective knowledge of the interviewer's frame or lens is *confirmed/not confirmed* by the subjective responses of interview participants. This approach is considered particularly useful when seeking to capture the impact of health services and policy research.

In this study, a descriptive ~ corrective style of interview was used because it sought to capture the dominant discursive representation of an experience and compare it with participants' actual experiences. In this case, the dominant public health representation concerned what ANC can do to reduce maternal mortality and the actual experiences of women were used to understand their decision to attend/not attend ANC based on their temporal analysis of barriers, enablers and personal risk associated with not attending ANC. McIntosh and Morse (2015) contended that 'this type of interview epistemologically privileges both the knower and the known'. The descriptive ~ corrective interview style is also characterised by an empathetic approach to question formation; as such, it is particularly useful for researching feminist topics (McIntosh & Morse, 2015). Women have a humanitarian right to safe and timely healthcare and ANC is clearly protective against maternal mortality. Furthermore, where societal and professional factors impede access to healthcare, researchers have a duty to expose any injustice and recommend corrective action.

The development of the semi-structured interview questions for this study was based on a review of the literature (Chapter 4) and inductive and deductive reasoning drawing on clinical practice experience (Busetto, Wick, & Gumbinger, 2020). However, to avoid rigidity in questioning, the reflexivity of the researcher aimed to maximise the empathetic approach in question formation. The interview setting was established in a way that encouraged participants to think aloud to fill in the 'blank page' (Hammer & Wildavsky, 2018). The present researcher piloted the use of the semi-structured interview questions before gathering data because it is widely acknowledged that using this technique requires the researcher to use several skills simultaneously (McIntosh & Morse, 2015).

> *…the interviewer must concentrate much more on the questions to be asked and the answers given. Especially when an unstructured or semi-structured interview list is used, and the interviewer has to formulate questions as a result of the interactive nature of communication* (Opdenakker, 2006).

The present researcher enhanced her interpersonal and research skills and practised the interviewing technique before the interviews, which strengthened her knowledge of the information required in the interviews and that of the participants (DeJonckheere & Vaughn, 2019; Whiting, 2008). The questions were first piloted with a small sample of midwives (n=2) and women (n=2) in a different site (Mombasa) before this study was conducted to ensure that all questions were appropriate for the study. In addition, piloting strengthens the interview guide and allows improvements to be made before the actual data collection starts (Castillo-Montoya, 2016; Kvale & Brinkmann, 2009). This method permitted the researcher to explore rigorous data, including some sensitive issues, from participants about the topic of interest through their personal feelings, thoughts, attitudes, views, and beliefs (DeJonckheere & Vaughn, 2019; Whiting, 2008). The semi-structured interview questions used in this study are presented in Appendix 4.

5.9 Ethical considerations

Researchers must obtain approval from the relevant ethics committee before conducting human research. Therefore, it is crucial to prioritise research ethics and uphold them without fail. This study adhered to the principles set out in the Declaration of Helsinki and other relevant ethical guidelines. The primary goal of the University's Research Ethics Committee is to oversee research involving human subjects and their data, ensuring that it is conducted in a manner that minimises risks for both participants and researchers while adhering to best practices at all stages. Before ethics application and submission, the University Ethics Committee policy guidelines were carefully examined, and the procedure to obtain approval was discussed with the researcher's supervisory team together with online sessions with the ethics team. The procedures of the research review committees contribute to the ethical conduct of a research study (Head, 2020). On completion of the application, the researcher sought approval from her supervisors to ensure the application was complete. The application was then submitted to the University Ethics Committee through the Ethics App. Ethics approval was obtained from the University of Salford

Ethics Committee in the School of Health and Society on 15 December 2020 (Ref. 203; Appendix 3).

Qualitative research studies require 'procedural ethics' and 'ethics in practice' guided by the principles enshrined in the Declaration of Helsinki and the Nuremberg Code (Guillemin & Gillam, 2004; World Medical Association, 2013). To safeguard the dignity, rights and welfare of research participants, ethical principles of beneficence, non-maleficence, justice, and autonomy are central to procedural ethical review. Ethics in practice deal with the background ethical issues that arose when conducting a research study. This is also viewed as a code of ethics or a professional code of conduct and explains how the researcher accessed participants and how the information as used to preserve participants' anonymity (Moriña, 2021).

Additional codes such as the professional code of ethics have been criticised by researchers as being restrictive. However, Guillemin and Gillam (2004) argued that professional codes of conduct for organisations may not apply to actual ethical issues that can arise while conducting research, but they may serve as general guidelines for research (Guillemin & Gillam, 2004).

In Kenya, procedural ethical approval for this study was provided by the NACOSTI (Appendix 4) and Aga Khan University Institutional Ethics Review Committee (see Appendix 5 for the approval letter). As part of the approval process for this PhD research, permission was required from all appropriate institutions and regulatory bodies, which included the Department of Health Services of Kilifi County (Appendix 6) before commencement of data collection. The ethical issues considered while conducting this research included informed consent, confidentiality, and anonymity, which are requirements for qualitative and quantitative research (Guillemin & Gillam, 2004). The following section discusses how these ethical issues were addressed into this qualitative descriptive study.

5.9.1 Informed participant consent

Informed consent for human participants is an important ethical requirement for human subjects and can be obtained in various ways (Giraud et al., 2019). Informed consent can be obtained after establishing a rapport or immediately when the researcher comes into contact with the participant. For this study, the researcher obtained informed consent from participants after establishing rapport to allow them time to choose whether or not to participate in the study. Both written and verbal consent to participate in the study were obtained from each participant.

The template from the Institute of Health Research from the University of Salford, a template for research ethics and an example consent form were used as a guide development of the consent form. Participants who were unable to sign the consent form used their thumbprint on the section for signatures.

A study conducted among antenatal women noted that participants held a variety of views on the nature of informed choice, and the majority sought and valued the advice of health professionals (Ahmed et al., 2012). The role of the researcher in this study was to facilitate an informed choice about participation for women and midwives to gather information about their experiences in health- and help-seeking behaviour in ANC access and attendance.

First, the researcher distributed participant information sheets to potential participants (Appendix 5) and gave them 24 hours to agree/decline to participate so they did not feel obliged to consent. This was done before the study started to allow participants time to make an informed decision regarding their participation. Eligible women were approached and informed them about the research by the researcher and given an information sheet that explained the aims of the study and what it meant if they chose to take part. Those interested in participating returned the forms to the researcher, who answered any questions and ensured they understood the research so they could make an informed choice about participating. Although they gave verbal consent, they were also provided with a consent form to sign or place their thumbprint.

Most participants were able to read and write, but three who could not write were assisted and used a thumbprint to sign the consent form. The researcher had planned for this based on recent research that suggested that physical limitations to administrative procedures for informed consent may occur with illiterate clients from rural areas who are not able to provide a written signature (Giraud et al., 2019). The presence of illiterate women in this study ensured that women were not denied the opportunity to participate regardless of whether they could read and write. Although critics of formal consent for illiterate participants have indicated that this may introduce suspicion and withdrawal from participants, this did not happen in this study as participants were treated with respect, felt safe and were made comfortable. Previous research showed that factors associated with poor health-seeking behaviour during pregnancy included low education and rurality; therefore, this group was a good information resource for this study.

The researcher assured participants that even after they had consented and agreed to participate in this study, they were free to withdraw at any time without giving a reason if they felt uncomfortable, and that there would be no negative consequences. They were also informed that if they withdrew, the University would continue to process the information they had already provided. This information would only be used for research purposes and in an anonymised way to ensure that they could not be identified. Participants (mothers) were also assured that withdrawal from this study would not affect the ANC care and benefits that they were entitled to in any way. Midwives were reassured that withdrawal from this study would not affect their role/job. The established relationships between the researcher and participants were maintained throughout data collection. If any information significant to the study became available as the study progressed, participants were informed immediately.

The consent forms signed by research participants were filed to keep count of the number of interviews. This enabled the researcher to make a clear schedule (i.e. date, time and place) before the day of the interviews. Some interviews took place on an ad hoc basis, such as with inpatient participants on the day of discharge. Study participants were also informed that the interviews would be audio recorded using a digital audio recorder for later transcription. A convenient time and place for the interviews were arranged before confirmation of recruitment of the participants for this study.

5.9.2 Anonymity and Confidentiality

Research with human subjects requires the protection of the participants by keeping their information anonymous to ensure confidentiality (Kaiser, 2009). In this study, the participant information sheet addressed issues of anonymity and confidentiality. As noted above, this was carefully read out to participating women before data collection. Confidentiality is an integral part of research, and the setting and participants should not be identified in the report of the study (Ngozwana, 2018). Before conducting the interviews, the researcher sought permission from participants to record their voices, which they provided. Confidentiality was maintained by using codes for all participants, storing information on password-protected computers, and locking up and paper-based information provided by participants.

Although a few of the participants were known to the researcher at the time of their interview, the collected data were anonymised with pseudonyms or a coding system. Participants' identities were not disclosed at any time to avoid any harm that may occur from such disclosure (Creswell, 2013). Demographic information was obtained but any identifying information (e.g. name) was removed as soon as the data were complete, and pseudonyms and codes allocated. All data obtained were kept strictly confidential and stored in a locked cabinet that was only accessible to the research team. All publications from this study will not include personal details for any participant, and any addresses and names will be anonymised. Pseudonyms were used while transcribing the interview data. All the transcripts were stored safely in a locked cabinet and only accessible to the researcher and the research team for analysis.

5.9.3 Protecting participants: addressing risks and discomfort.

As a midwife, the researcher was particularly cognisant of any potential risks to mother or baby and had the contact details for the nurse/midwife in-charge who was able to be called for any emergency. The researcher also informed participants that if they experienced physical or emotional problems during their interview, the interview would be stopped so the participant could receive any necessary care from healthcare professionals.

In the event that a participant revealed that they were subject to abuse or any illegal activity, there could potentially have been a need to break participant confidentiality. In such a case, the researcher would inform the participant and facilitate referral back to the nurse in-charge who could provide support and appropriate follow-up. It was also possible that participants could have made complaints and highlighted malpractice of midwives or health professionals. The interviewed midwives could reveal malpractice that could place women and babies at risk. In such a case the researcher would inform the nurse in-charge without disclosing the identity of the participant and offer recommendations for best practice. This was to avoid any breach of confidentiality and protect patients and other staff from the risk for malpractice. The results of this study will be published in research journals or presented in conferences or elsewhere without disclosing participants' names. To avoid illegal access to information, all electronic data were stored on a computer that was password protected and only accessible by the researcher team. However, if safeguarding issues arose related to a woman or her family, confidentiality could not be maintained; women were informed about this possibility before their interview.

5.9.4 Approval to conduct interviews with midwives.

The researcher was required to seek approval from the health facility to ensure that the participating midwives would not be affected or treated unfairly during the research process. The researcher received approval from the University of Salford School of Health and Society (Ref. 203; Appendix 3). After gaining approval from the University of Salford, the Kenyan process for obtaining ethical approval for this study was started, which was provided by the NACOSTI (Appendix 4) and the Aga Khan University Institutional Ethics Review Committee (Appendix 5). As part of the approval process, the researcher (as a PhD student) applied to the research Department of Health Services of Kilifi County (Appendix 6). Following approvals, the directors of the two hospitals were approached and the approval letters were presented. Their permission to collect data was then obtained. Invitations to participate in this study were distributed by hand to potential participants, and those who agreed to take part in this study received an explanation of the aim of the study and a participant information sheet. Convenient dates and times for face-to-face interviews were scheduled with participants, with interviews held outside the working area to ensure privacy and confidentiality.

5.9.5 Data handling and storage

The databases at the university are password protected. Within the health facilities, participants were anonymised using codes. The main database containing audio-recorded data from participants were coded and stored in the university on a password-protected computer that could only be accessed by the research team. All paper-based copies of the completed interview guides and field notes were coded and stored in a locked filing cabinet in a locked office, which was only accessible to the research team. The data will be stored for a period of 5–10 years after the publication of the results to enable verification of the data if challenged. The data will remain anonymous and securely stored awaiting appropriate shredding and disposal according to institutional policy. The audio tapes from the interviews will be destroyed upon completion of this study as the data are available on paper and electronically.

5.10 Method of Analysis

This section explains the process of analysis for the interview data and notes taken by the researcher. The analysis aimed to gain an understanding of factors that influenced the timing of health-seeking behaviours of women attending and accessing ANC.

An understanding of the timing of the first and subsequent ANC visits is important because the scheduling of ANC based on the WHO guidelines has been found to offer high protection against maternal mortality (Bidhan Krishna Sarker et al., 2020). Therefore, the researcher was particularly interested in women's temporal analysis of the factors that influenced the timing of their decision to attend ANC. A qualitative descriptive method was used for data collection because it aims to provide a comprehensive summary of participants' experiences using their own voices and perspectives. The literature review (Chapter 4) identified a gap in women's voices in terms of the intrapersonal thought processes that occur when temporally assessing the need to attend ANC (i.e. protective against maternal mortality).

5.10.1 Content analysis

The procedure for data analysis in this study was content analysis, which is a flexible methodology for qualitative data analysis. Content analysis seeks clarity in the qualitative descriptive data gathered, with the goal of providing a comprehensive summary of events in everyday terms with minimal inference (Sandelowski, 2000). It is also used to analyse the presence/meanings of and relationships among words and concepts as described by participants during interviews (Elo & Kyngäs, 2008; Neuendorf, 2017). Content analysis makes inferences systematically and objectively by identifying characteristics in the texts, messages and other forms of communication, thereby allowing valid and potentially replicable results in further research (Krippendorff, 2018; Lindgren, Lundman, & Graneheim, 2020; Prasad, 2008).

Content analysis can be used in an inductive or a deductive way (Satu Elo et al., 2014; White & Marsh, 2006). The analysis in this study was predominantly deductive and used a manifest approach (i.e. described what the informants actually said, stayed close to the text provided) and kept clear of a latent approach (i.e. avoiding concerns over deep structured meanings) (Elo & Kyngas, 2008). In this manner, participants voices and experiences were heard with minimal theoretical inference (Assarroudi et al., 2018; Bengtsson, 2016).

Four possible methods of content analysis were considered for use in interpreting the textual data (interview transcripts) (Palmquist et al. 1997). Relational analysis was chosen as a means of understanding the data in this study. Relational analysis is an approach in which the analysis determines the existence and frequency of the concepts in specific text and builds a step further by examining relationships among the concepts in that text (Palmquist et al., 1997).

There are three subtypes of relational analysis that affect extraction of data: i) evaluation of emotions in a text; ii) proximity analysis, which evaluates the occurrence of concepts in a text; and iii) cognitive mapping, which involves visualisation of the prior two types. Cognitive mapping was adopted in this study with a humanistic framework used to organise the content from the interview transcripts. For example, if the literature suggests that patriarchy is endemic in sub-Saharan Africa and is a barrier to women's ANC attendance, a mapping exercise may show that promoting women's autonomy may be beneficial to overcoming this barrier. This mapping can take place within an existing theoretical framework. The humanistic framework was drawn from the work of Betty Newman. The Neuman model is a systems model that was broadly applied in this study to analyse the data systematically in categories (Neuman & Fawcett, 2011b). The Neuman system model views the client, who in this study was the pregnant woman, as an open system interacting with the environmental stressors associated with ANC. Neuman valued the mental state of the client as determined by their interactions with external environments (physical) and social roles (expectations) and personal thoughts. Neuman captured this in three systems: intrapersonal (temporal thoughts), interpersonal (interaction between the individual of interest and one or more others) and extra-personal (the physical environment and social norms/aberrations) (Alligood, 2013). Individuals experience stressors within each of these three systems that can diminish their health or sense of health. In this way, the Neuman model offers a comprehensive understanding of a person in relation to their health. The role of the midwife is to minimise the number of stressors to help a client (pregnant woman) maintain stability regardless of the nature of the environment, by using prevention as an intervention for health promotion (Neuman & Fawcett, 2011). A pregnant women's decision-making is best when stressors are manageable and do not overtly affect her mental health/sense of well-being (Montano, 2021).

The literature review (Chapter 4) identified a large number of factors as barriers and enablers to mothers attending ANC, and the Neuman model was useful to categorise these barriers/enablers into intrapersonal, interpersonal and extra-personal stressors. Therefore, there was continuity between the literature review analysis and the analysis of transcripts. However, the flexibility of the Neuman model allowed for the identification of new stressors in the analysis of the transcripts. That is, the researcher was not constrained in analysis of the interviews by the categories that appeared in the reviewed literature.

Analysis of the transcripts sought to identify women's thoughts around help seeking during pregnancy for actual and potential health problems (of the woman and her foetus). Temporality in decision-making is a concept that was applied in the analysis of interview data in this study. Bengtsson (2016) established that researchers hold different opinions on the use of concepts, analytical procedures and interpretations in content analysis. However, 'there are similarities in the way the researchers explain the process. Temporal decision making remains a concept commonly used in the exploration of women's choices about their reproductive health' (Yuill et al., 2020). The concept of temporal perception was applied in this study to understand what factors women considered when choosing to access/attend ANC to minimise the risk for maternal mortality. Temporal analysis comprises subjective phenomena such as simultaneity, successiveness, temporal order and the subjective present (Pöppel, 1997). Temporality can be related to the acquisition of knowledge about the physical time between events (Church, 2012). In this study, the researcher sought to understand if the timing of women's decision about attending ANC was influenced by their temporal assessment of risk for maternal mortality. For example, women with a clear understanding of the relatively high risk for maternal mortality may actively seek ANC as soon as possible rather than as soon as personally practicable.

Seeking ANC in accordance with WHO recommend scheduling (WHO, 2016) would be a rational decision given the evidence that ANC is protective against maternal mortality (Okedo-Alex, 2019). However, a previous review (Lee, Ayers, & Holden, 2012) indicated that women with medically high-risk pregnancies did not perceive this risk to be extreme and that women and healthcare professionals had poor agreement on perceptions of risk. A more recent study by Okonofua, Ntoimo and Ogu (2018) focused on Nigerian women's perceptions of the causes of maternal mortality revealed that delays in reaching hospital or receiving in-hospital interventions were leading causes of maternal mortality. There was no analysis of these women's sense of locus of control over reducing delays in getting to hospital (Okonofua et al., 2018). However, it was noted that potentially modifiable factors contributing to delays in seeking care included 'poverty, ignorance, not using a health facility at all, preference for home delivery, among others' (Okonofua et al., 2018:5). In this study, healthcare professionals were included in the data collection because mothers' temporal analysis to attend/not attend ANC involved interpersonal interactions with midwives, whose opinions, knowledge, and behaviours are influential.

Verbatim transcription

Following the interviews with mothers and midwives, the researcher carefully listened to the audiotaped recordings. The content was then transcribed verbatim into a word document by the researcher (Halcomb & Davidson, 2006). Transcription of data can be complex; as such it is not rule-based, and it is likely to have inconsistencies in interpretation during transcription (Poland, 2003). Guidelines are set for the need to transcribe ordinary language; what was said, how it was emphasised or not emphasised and how it was said is an important element of interviews (Azevedo et al., 2017). For the purpose of content analysis, the process of transcribing itself was restricted to the selective and interactive (reflexive) representation of the audio recording with the text, with minimal inference (Davidson, 2009; Sandelowski, 2000). As a quality check, the researcher reviewed the data for completeness and inconsistency of responses. The data were then entered progressively into Microsoft Excel 2016 and coded.

Coding

A numerical coding system was avoided because it may not have added to the researcher's understanding of the studied phenomenon. This is because people's lived experiences may be interconnected, making it difficult to decide where it should be placed in a subcategory or sub-theme. A long-standing proponent of content analysis (Krippendorff 2004) highlighted the risk of numerical data sorting as potentially misleading.

> *I contend that trying to understand diverse agreement coefficients by their numerical results alone, conceptually placing them on a conservative−liberal continuum, is seriously misleading* (Krippendorff, 2004: 411-433).

Therefore, the researcher did not stray too far from the raw data in this study. The researcher read the verbatim data to attain a first impression of the parts related to the codes in the literature review. These were highlighted with coloured pens on a line-by-line basis to develop familiarity with the content of the interview data (Hsieh & Shannon, 2005). Colour coding in this manner is common practice (Maguire & Delahunt, 2017). The researcher then developed preliminary codes from the highlighted texts in the transcripts.

Next, the text was reduced and summarised into categories and codes comprising words or patterns that occurred in the concepts in the text in simple terms. The researcher also explored

the relationships between concepts in terms of strength, sign, and direction. The colour coded words and meanings were analysed and explored for any relationship between concepts in the texts to clarify the strength (the degree to which concepts are related), sign (whether positively or negatively related) and direction (which concept occurs before the other) of the relationship. Using the identified relationship in the concepts, the researcher then placed value on the codes and noted important information related to the concepts.

An in-depth analysis of factors influencing ANC access and attendance already appears in the literature (see literature review, Chapter 4). This prior knowledge was used to create preliminary codes (Elo & Kyngäs, 2008; Neuendorf, 2017). However, the researcher's clinical practice experience suggested that other factors may also influence ANC access and attendance. The preliminary coding assisted the researcher in determining how saturation was achieved in the section of the sample size (as previously discussed in this chapter). The descriptive content analysis provided secondary and new codes linked to the concepts of interpersonal, interpersonal, and extra-personal factors. This temporal information was not previously found in the literature. The obtained codes were cleaned for richness in the information for the purpose of ensuring data saturation. This action facilitated a more informed approach to subsequent interview questioning, such as expanding on the points made and exploring what was not previously discussed.

The addition of temporal information related to risk perception suggested that a new model should be developed to drive public health policies and services to improve timely and sufficient ANC attendance. Both content and thematic analysis techniques were extensively used to understand the meaning of the primary information provided by participants in the interviews (Vaismoradi, Turunen, & Bondas, Satu Elo et al., 2014; Sandelowski, 2000; 2013). A thematic framework based on the literature review was applied to all interviews. The literature review provided the researcher with prior knowledge; however, the researcher was also open to new information that emerged during the interviews.

5.10.2 Thematic Analysis

Thematic analysis is widely used in qualitative research because of its flexibility and utility (Braun & Clarke, 2006). Thematic analysis is performed through a process of identifying, analysing, and reporting patterns in specific data.

Both qualitative content analysis and thematic analysis approaches were used in this study as they are commonly used by researchers across different disciplines, including health. These approaches have been described as having similarities and differences in terms of the theme as the final product of data analysis (Vaismoradi & Snelgrove, 2019).

Vaismoradi and Snelgrove (2019) concluded that although there were differences in terminology between qualitative content analysis and thematic analysis, the similarities appeared to subsume any differences. Both approaches are involved in theme development to facilitate the results of data analysis, improve rigour, and yield an in-depth understanding of multifaceted experiences gathered through interviews, which can aid in determining interventions (Vaismoradi & Snelgrove, 2019). The four phases of theme development in qualitative content analysis and thematic analysis that are widely agreed upon and used in this study were as follows.

1) The initialisation phase, where the transcripts were read and reread. All information that had meaning was highlighted using coloured pens, and any relationships were identified. The codes were identified from the transcribed participant interviews and the researcher's experiences in the field were documented in the field notes using reflective summaries.
2) The construction phase, where the researcher reflected on the process and organised the codes into labels, sub-categories and sub-themes and then compared and classified them through an iterative cyclical process for the data to generate themes, noting the differences and similarities.
3) The third phase involved the researcher both immersing and distancing herself from the data to allow themes to emerge from the coding process to refine the data. The researcher remained close to the data to represent participants' views and experiences in their own words.
4) The researcher engaged in writing a report giving a general perspective of the findings from participants' perspectives with minimal inference (Vaismoradi, Jones, Turunen, & Snelgrove, 2016).

The researcher made decisions regarding the development of each theme and category based on the research aim and objectives to reach descriptive (manifest content) and subsequent interpretive (latent content) levels of analysis from the data (Vaismoradi & Snelgrove, 2019).

The researcher conducted thematic analysis of the semi-structured, audiotaped, in-depth interviews with the 10 midwives and 20 mothers that were held between May and September 2021, where they reflected on their experiences in ANC access and attendance using a qualitative descriptive methodological approach.

The collected data were organised and analysed according to Braun and Clarke (2006) thematic analysis as follows in figure 5.1.

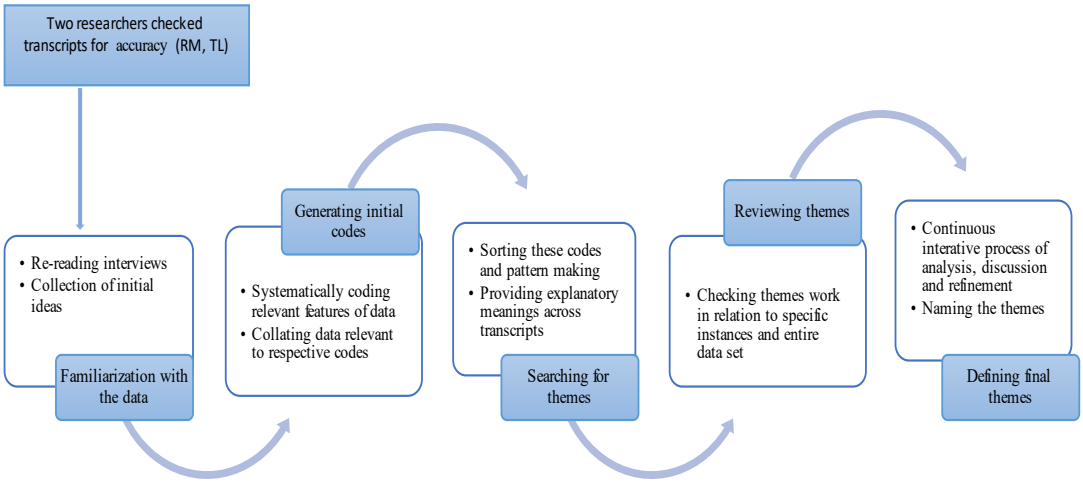


Figure 5.1: Braun and Clarke's framework for thematic analysis

Step 1: Familiarisation with the data

In this first and important phase, the researcher familiarised herself with the depth and breadth of the data and transcribed the verbal data by listening to the audio recordings several times. The researcher then read the transcripts and became immersed in the data by re-reading the transcripts and searching for meaning and patterns systematically through the datasets (Maguire & Delahunt, 2017). In this phase, the researcher checked the transcripts against the audio recordings for accuracy to ensure the meanings were not lost.

This was to ensure that the data retained the original meaning of the information desired through the voices of the participants. It is recommended that the entire dataset is read again before coding begins. This may lead to the identification of ideas and possible patterns formed as researchers become familiar with all aspects of their data (Nowell et al., 2017). Key concepts and recurring themes were identified, marked, and recorded in field notes for further analysis.

Step 2: Generating initial codes.

After familiarisation with the data and key ideas, the researcher noted the recurrent themes. This involved going through the transcripts manually and coming up with the important initial highlighted codes from the data and describing the content. In addition, the data were organised into meaningful groups to identify repeated patterns (themes). The researcher interacted with and reflected on the characteristics of the data and generated ideas from the raw data (Braun & Clarke, 2006; Nowell et al., 2017). Furthermore, the researcher was aware that many levels in coding can be counterproductive to achieving the goal of organising and interpreting the data (Nowell et al., 2017). Although computer software such as NVivo is known to work efficiently in sorting and organising data with complex coding schemes, the researcher chose not to use such software because none is capable of an intellectual conceptualisation process to transform data without the input of the researcher.

Step 3: Search for themes

When all data were coded and collated, they were assigned to broader categories of themes. In this phase, sorting and collating all potentially relevant coded data was performed to extract themes (Braun & Clarke, 2006). The codes were examined and combined based on similarity and relationships, and some formed themes or sub-themes.

Step 4: Review themes

After developing the themes, they were reviewed and refined to check if they qualified to be themes based on the data or needed to be combined further. This helped the researcher make judgements about the meaning by looking for similarities and relationships. The researcher was also keen to identify unique and unanticipated insights related to temporal analysis. Some themes were broken down after the interpretation of the descriptions to find associations.

Step 5: Defining and naming themes.

This phase aimed to ensure that the identified themes were a representation of the data, and changes were made to identify with the data from the interviews. A thematic map was developed from the data, and the themes were defined and refined through the identification of the meaning of each theme and the overall representation of the research question. Themes were then organised and reorganised until the data were presented and displayed in a meaningful manner. Research suggests that for data to be considered final, they have to be read and scrutinised at least twice. Therefore, the themes were read through, and the coding was scrutinised twice by the researcher to ensure the credibility of the findings before finalising the data (Nowell et al., 2017). Each theme was compared with the collated data organised and followed by a narrative of detailed analysis to identify any stimulating theme. The themes were arranged to reflect the data in the narrative.

Step 6: Writing the report.

The sixth step involved writing a report of the thematic analysis results, which was in form of a narrative. A central tenant (best practice) for the coding process is the use of procedures that are defined at the outset, have rigorous development and consistent application; this means that they conform with the validity and reliability standards agreed upon by qualitative researchers (Williams & Moser, 2019). Precursors to coding are verbatim transcriptions of audio or visual data before code development. Coding was performed using highlighter pens to organise the themes and subthemes and link them with appropriate passages in the transcripts. The audio data were analysed to preserve the voices of the participants (e.g. volume, tone and pauses in speech). The transcripts were reviewed simultaneously with audiotaped recordings to reduce any errors (Parameswaran, Ozawa-Kirk, & Latendresse, 2020). Codes were developed through deductive and then inductive content exploration. Coding comprised a breakdown of data content into different components and pseudonym, or labels were allocated. The ideas from the data were labelled so that they aligned with the research question, whereas the interpretation of ideas was grouped as patterns appeared (Elliott, 2018). Any repeated categories of coded individual themes were clustered together and links between different codes were structured. The researcher articulated the meaning of each theme and the assumptions underpinning that theme together with the implications of that theme (Braun & Clarke, 2006).

Refinement of analysis refers to a thorough, non-linear, and cyclical process undertaken by the researcher. This cyclical process included repetition of the data analysis, including filtering, and highlighting to generate categories and concepts, linking themes back to the data and linking data back to the themes (Elliott, 2018; Parameswaran et al., 2020; Saldaña, 2021). The cyclical process allowed the researcher to understand: 1) themes in relation to the research aims and questions and 2) identify similarities and disparities with published studies appearing in the literature review. Figure 5.2 shows the coding created in Microsoft Excel that plot midwives' experiences of ANC access and attendance.

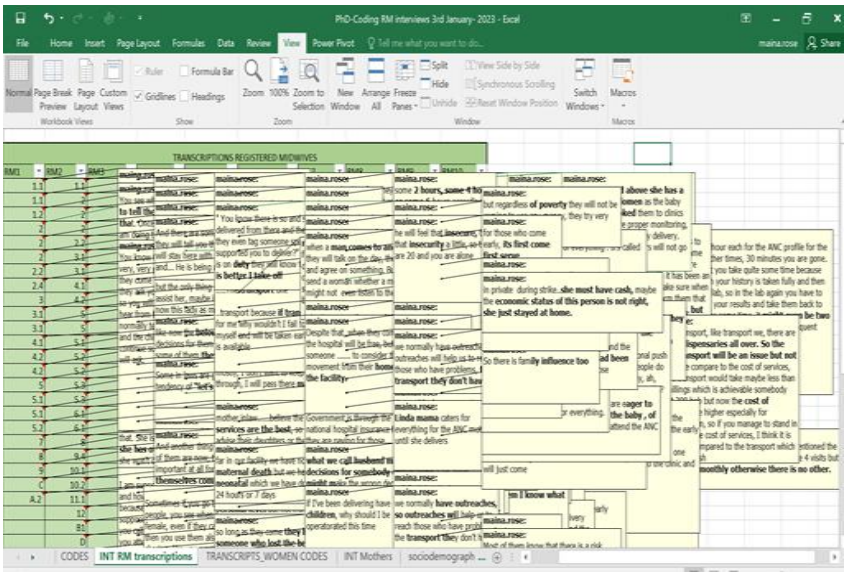


Figure 5.2: Coding created in Microsoft Excel that plot midwives' experiences of ANC access and attendance.

5.10.3 Triangulation of data

The researcher can mitigate bias through the way data are collected and subsequently triangulated (Bekhet & Zauszniewski, 2012). Triangulation is a concept referring to the need to use multiple data sources or methods to meet the aim of developing a comprehensive understanding of studied phenomena (Patton, 1999). The overarching goal of triangulation is to reduce systematic bias and thereby reinforce the credibility and dependability of a study (Fusch & Ness, 2015; Patton, 1999; Stavros & Westberg, 2009). Four types of triangulations have been categorised in previous studies (Denzin, 1978; Patton, 1999): (a) method triangulation,

(b) investigator triangulation, (c) theory triangulation and (d) data source triangulation (Busetto et al., 2020; Carter et al., 2014; Denzin, 2009). Although a fifth triangulation approach has been suggested (Lemon & Hayes, 2020), use of text-mining software would not add significantly to the rigour of the methodology discussed here.

In this study, the multidimensional approach to data collection included ANC attendees, midwives and women in acute care who/may not have attended ANC. This provided for a unique analysis of factors influential in promoting and determining ANC attendance. Therefore, data source triangulation was used to access the experiences of mothers attending ANC and midwives providing ANC services. In this study the perspectives of midwives and mothers were triangulated in three ways: i) the individual interviews were coded and analysed independently, ii) the views of the midwives and mothers were analysed for interrelated codes and iii) the codes were compared for similarity and differences. This triangulation (comparison approach) was supported by a previous study (Vogl, Schmidt, & Zartler, 2019) that used three categories: a) convergence, indicating almost total alignment of data codes; b) complementary, indicating partial overlapping of data codes; and c) divergent, indicating no overlap of data codes.

The inference of these categories was explained as follows.

> *From a positivist stance, convergence would be interpreted as results being unbiased. Within an interpretive paradigm, convergence of data from different actors or data sources may mean a joint social reality. Complementary findings in triangulations neither validate nor reject a particular reality, 'rather they combine (within a positivist paradigm) to produce a composite picture of reality (Erzberger & Prein, 1997), or within a constructivist paradigm they produce a composite research construct* (Perlesz & Lindsay, 2003: 34).

In answering the question, 'How researchers make sense of the dissonant data in divergent codes', Vogl et al. (2019) contended that it depended on the epistemological positioning. For example, in a positivist framework, dissonance may be interpreted as bias and a lack of trustworthiness. In a constructivist framework, dissonance may simply reflect different views or multiple truths, and the lived experience in different social worlds (Farmer, Robinson, Elliott, & Eyles, 2006).

In this study, the descriptive content analysis showed awareness of the epistemological positioning (interpretive, positivist and constructive) in the context of convergence, complementary and divergent categories, but offered a minimal inference evaluation of data codes and emerging themes. For example, there may be convergence concerning the 'type' and 'frequency' of incivility perpetrated by midwives towards mothers in ANC services. However, midwives may find 'excuses' for their behaviour. Furthermore, mothers may state that morally the behaviour is 'inexcusable', representing divergent views. This type of data triangulation and external analysis concerning the same events adds validity to the research process (Fusch, Fusch, & Ness, 2018; Marshall & Rossman, 2014).

5.11 Reflexivity

Reflexivity is described as a vital practice in qualitative research where the researcher has a relationship with the research and performs self and research evaluation in an ongoing continuous process (Attia & Edge, 2017). Critics have described reflexivity as an important but not mandatory inclusion in all research studies. This study used reflexivity in a personal, interpersonal methodological and contextual manner (Olmos-Vega et al., 2023). Research is thought to bring in neutrality without prejudice, but this is not always the case as biases may occur in data collection, interpretation or presentation influenced by the researcher (Creswell & Poth, 2017; Ritchie et al., 2013). The role of the researcher is to reflect on the influence that may be in the form of beliefs and values that may cause bias in the research process (Ritchie et al., 2013). The present researcher had preconceived knowledge of the subject (i.e. ANC) and was familiar with the context (i.e. maternity care); this was an advantage so long as it did not affect the informants or interpretation of the results. The researcher considered their 'pre-understanding', both in the planning process and during the analysis process, to minimise any bias from self-influence. The researcher's summary of reflexivity is presented below.

I continuously reflected on what I already knew and questioned my own values, motivation, assumptions and interests to ensure transparency in my position as a researcher (Reid, Brown, Smith, Cope, & Jamieson, 2018). As a researcher, I had to reflect on the nature of knowledge of my own conflicting and competing ideas and views experienced during the research process. It was not easy to stand back and examine my own affect and assumptions during data collection and analysis.

I am a midwife and female that has worked for over 20 years with other consultants in the maternal and newborn areas caring for women during pregnancy, labour, delivery, and the postnatal period, although I had not conducted research in these areas. It is not possible to separate ourselves from who we are and what we know (Charmaz, 2017). Having worked in these clinical areas, I have, to the best of my knowledge, developed expertise in practice that supports my daily work. However, this has an impact on the way in which construction of knowledge created from research is displayed.

The initial idea of conducting this research was based on my experiences as a midwife and maternal and child health manager responsible for auditing and answerable for maternal and neonatal morbidity and mortality in the unit. For my master's degree, I studied the outcomes of pregnancy by looking at monitoring tools and outcomes. I found that women who had not attended ANC had come in as a 'near miss' and had negative outcomes. I thought that it was important to give voices to women and midwives to better understand the barriers and enablers to ANC attendance, which could eventually help to avert negative outcomes. I think what women go through is part of the midwife's interest, as I hold deeply most of the experiences they go through. I find it useful to gather information from women to further understand their experiences during the trajectory of pregnancy as they make decisions to seek care. This experience allowed me to engage in critical decisions to improve maternal health in the hospital. A maternal/newborn death was always a moment of silence for the department. I was deeply saddened as we sat to analyse each death and come up with a root cause and action plan to prevent future occurrences. Some maternal and neonatal deaths audited had an element of lack of or inadequate ANC and were avoidable if care had been sought during pregnancy.

Another experience was my position as a clinical coordinator in a project where part of my responsibilities was to equip and train more than 200 healthcare professionals in conducting maternal death surveillance and response in government rural facilities. I had an opportunity to attend their maternal audits; notably on reviewing the files of women who died, ANC was either lacking or inadequate. Although I was not engaged in research then, when I joined my PhD programme, my concept note was on determinants of maternal mortality. Later, conducting a literature search led me to the health-/help-seeking behaviours of pregnant women in ANC.

I am a midwife and a constructivist and believe in multiple truths from the different voices of participants. Working with pregnant mothers and midwives and conducting interviews involved

a lot of challenging moments based on the cultural context and my education and practice of over 20 years supporting maternal, child, and newborn health across the continuum of care. I had to continuously reflect and seek to understand the different realities as I interacted with participants as they shared their experiences with ANC (Barrett, Kajamaa, & Johnston, 2020).

I have over two decades of experience as a midwife and a midwifery teacher, and it was important for me to reflect on how this might have an influence on this research. I have also worked in this context before; I am a Bantu, like the community in which this research was conducted. I understand the sociocultural context that influences maternal health and the three delays model. Notably, the experience that I bring to this study included my views on the factors that influenced ANC access and attendance. This was because I had trained/mentored midwives on quality maternal healthcare and participated in many maternal and perinatal deaths surveillance and response cases in the facilities in this context, and interacted with midwives to come up with solutions; one of which was to improve the quality of ANC. I was aware of my position as a researcher and midwife and reflected on this as I conducted this study. As a midwife, it was apparent that the views shared by the midwives and mothers were familiar to me, and I knew I was there to listen and represent their voices without judgement.

In this study, positioning myself as a female and senior midwife who had prior similar knowledge on the experiences related to the research question meant that I identified myself in this context to contribute to the construction of the research findings required the use of reflexivity. I had to consider myself as an ‘insider’ and ‘outsider’ at the same time and remain cognisant of the power relationships that exist in research when the participants are considered subordinate to the researcher. It was important to be reflexive on the issues of positionality and insider/outsider stances and recognise their roles and effects throughout the study process. Listening sensitively to participants’ accounts of their experiences in accessing and attending ANC made me feel that the information I received could not have been understood and perceived by an outsider better than I did in my current position. This was a unique strength and perspective in collecting and analysing the data that enabled a deep level of understanding and interpretation. Awareness of my influence on the subject and the participants under study and how this affected me as a midwife was important (Merriam & Tisdell, 2015).

As a senior midwife interviewing junior midwives, I was aware of potential bias, especially as the interviews occurred in the health facility. As a researcher and midwife, there was a need to know my position and be aware of the power dynamics in relation to participating junior midwives and mothers (Swaminathan & Mulvihill, 2019). I am a senior midwife and although not all midwives had a prior encounter with me, they could have viewed me as a person with a wealth of experience and felt intimidated about their interview. Therefore, I established a rapport with each participant and assured them I was there to listen to their experiences and no judgment about the information given would be passed at any time. Imbalance and vulnerability because of power dynamics may affect junior midwives, and I was aware when conducting the interviews that power dynamics can create bias (Grenier et al., 2023). When establishing rapport with each participant, I was mindful of the existing power dynamics in the midwifery hierarchy. I made participants feel comfortable to share their experiences and thoughts on ANC access and attendance and emphasised the confidentiality and anonymity of the collected data. Although I had a wealth of experience, I allowed participants to define their experiences with their mothers' ANC access and attendance. From my training in qualitative research, I was able to ask open-ended questions and probe for in-depth insights without leading participants in any way. I remained neutral and had self-awareness where I remained flexible, so that the interview could flow naturally, unearthing unexpected insights. I reflected after each interview on any biases or reactions during the interview.

My own and assisting midwives' cultural background influenced the interview process and led to adjustments in the interview guide. For example, I made sure that the questions were relevant and relatively unstructured to allow flexibility in the discussion, while being conscious of my tone of voice and listening keenly while maintaining eye contact. Consideration was given to the research relationships between me and participants, including experiences of power shifts within and around the interview and when 'rapport' ceased (Miller, 2017). Power dynamics influence interactions between clients and the midwives providing care and can affect communication and decision-making. This aspect was crucial, and I needed to carefully position myself, reflect and address sensitive issues in healthcare that exist in our culture where participants may be afraid to discuss their real experiences for fear of receiving suboptimal care.

I was aware that the first encounter with participants should focus on creating rapport, empower and reassure them about confidentiality and allow them time to read the participant information sheet that confirmed this study would not affect their care. To ensure a balance, the interviews were conducted away from the clinical area.

From the perspectives of some participants, I came from a different culture and religion, which could have introduced differences in the way experiences were understood in this environment. When addressing the issues of patriarchy and decision-making to seek care, I had to remain non-judgemental even though I come from an empowered community where women are allowed to make decisions in matters of health for their families. I was mindful of cultural differences and refrained from forcing my cultural perspective on ANC. For example, pregnant women said they avoided having breakfast to avoid the midwife palpating food instead of the baby. This was new to me, but I refrained from looking surprised and telling them it was not true. However, after the interviews, I discussed the importance of educating the mothers and communities against this myth with the in-charge, as it was not evidence-based but based on traditions.

I knew that not all midwives were comfortable answering the questions and could be answering with fear knowing that I was also a midwife and could possibly judge them. I did all I could to remain neutral and non-judgemental and listened to them keenly, noting down any controversies for later discussion. For example, when discussing with midwives whether the time mothers took for consultations was too long, it was not in a judgemental manner but to seek clarity and how it could be improved. However, their explanation made it clear that this was beyond their control, and I assured them that I would note this point in my recommendations.

During the interviews, some participants asked questions and I assured them I would discuss these after the interview. I also answered questions later when I called them to confirm the data were true as transcribed. They were receptive of additional information and looked forward to dissemination. When conducting interviews with peers, the complexities of prior interactions create additional dimensions for the research and can be an obstacle to accessing the participant's views and experiences. Therefore, it was important for me to understand my position as a senior midwife interviewing junior colleagues to enable me to obtain their experiences. To clarify my positionality, the interviews were held away from the clinical area so that the power balance would be more equal and avoid introducing further power dynamics (Quinney et al., 2016).

I remained mindful and adopted a neutral body posture and tone of voice during the interviews to avoid influencing participants' responses.

I practised this skill by engaging in active listening, which allowed me to fully understand the complexities of their experiences and viewpoints. I worked to establish an environment where participants felt at ease, enabling them to openly share their experiences and perspectives. For example, I conducted the interviews away from the workspace to ensure that the participants were able to speak freely without coercion or intimidation, whereas in the workspace they could feel obligated to attend to my interviews.

When I walked in the room and met the participants, the eyes of the midwife were my first impression. With women, I noticed how many weeks, their gait, mood and the nature of the participant in general. Sometimes I needed to suppress my instincts and concentrate on the interview. I worked in a tertiary hospital and in the community on a project to improve access to and use of maternal health services in government facilities. In this project, I helped women reach referral hospitals when there was no means of transport, and the available ambulance had no fuel. I remember one particular woman who went into labour and was bleeding profusely. I found the nurse looking for an ambulance, which was not available at the time. I asked the nurse and medical superintendent if I could use our vehicle to save the life of this woman, which I did; she was attended, transfused, and discharged, although it was a huge hydatidiform mole that had been undiagnosed because she had no scan during her pregnancy. I also attended women during my mentorship, such as when I found a midwife waiting for an ambulance to refer a mother with a breech presentation. I conducted the delivery, and both the mother and baby were safe. The ambulance arrived 2 hours later.

During the transcription and analysis of the data, I involved my supervisors to reduce the impact of individual bias which, as a midwife, could have affected this study based on both prior knowledge and personal values. I also called participants and asked them to validate their interviews and add any information that they may have forgotten during the interview. Finally, I reflected on the ethics process, which took 2 years to get approval. This was because of the advent of the pandemic a few weeks after my submission. The university decided to withhold any approval for research involving human participants for fear of contagion and the safety of the researcher.

This was followed by the introduction of the 'Ethics App', which was new to me; during my application, I was asked to include how the risk of COVID-19 would be avoided during data collection. This was accompanied by delays and uncertainty as the world waited for a vaccine and the end of the pandemic.

Finally, I received ethics approval from the University of Salford and began the ethics application for Kenya, which took another 3 months. When I finally got all approvals, I went to seek county approval; by then, the third wave of the COVID-19 pandemic had just ended, vaccines were available and face-to-face data collection, as envisioned in this study, was possible with strict measures to prevent contagion. Fear of the COVID-19 virus was now low and the 'new normal' of wearing masks, handwashing and social distancing was used throughout the data collection period. Notably, there was relaxation in adherence to the COVID-19 measures among the population, but these measures were encouraged, and no one could be interviewed without a mask. I had extra masks available for those who came to their interview without one to ensure my safety and that of the participants.

5.12 Quality of qualitative research

Study Rigour and Trustworthiness

Research value depends on the trustworthiness of the study findings. The rigour of qualitative research differs from quantitative research and uses different techniques (Lincoln & Guba, 1985). However, as in quantitative research, qualitative researchers have to ensure that the standards of rigour are met during their study (Creswell, 2013). Regardless of the research question and data collection methods/analysis, the results should be defendable. The present researcher employed the techniques of credibility, transferability, dependability, and confirmability in this study (Lincoln & Guba, 1985; Wahyuni, 2012).

For this study, trustworthiness was ensured by describing the context of the study and using a semi-structured interview guide during data collection to gather the detailed information required. The data collected from the midwives and pregnant women were rich, and saturation was reached to ensure the trustworthiness of content analysis. The questions in the interview guide broadly addressed the phenomenon of interest in terms of the experiences of pregnant women in relation to ANC access and attendance (Heale & Twycross, 2015; Kyngäs, Mikkonen, & Kääriäinen, 2019).

Credibility

Credibility comprises considering the level of trustworthiness of the collected data. The researcher established a rapport with participants before commencing the interviews to develop trusting relationships and enable participants to be willing to exchange information. During the interviews, the researcher expressed compassion and empathy with the participants, although the study population is known to be welcoming and easy to establish rapport with. Follow-up questions (probes) were used through prolonged engagement allowing flexibility and freedom for participants to provide a rich understanding of their experiences with ANC (Houghton et al., 2013). The researcher used the collected data to support the interpretative process as a way to show the credibility and trustworthiness of the findings. To ensure credibility, this study used data triangulation (different data sources), participant validation to verify data accuracy, adequate engagement when collecting data and reflexivity (Kyngäs et al., 2019; Stahl & King, 2020). To enable data triangulation, women's interviews, accounts of mothers' experiences from midwives and a literature review were used.

Confirmability

The researcher obtained a full description of participants' demographic data. Member-checking processes to verify data accuracy were used throughout data collection (Thorne, 2016). The researcher recorded all notes from the field during data collection in a reflexive journal. An audit trail was used during the data collection and analysis processes. The research findings represented the data gathered and were not biased by the researcher, which was evidenced by the inclusion of direct quotations from participants using their own words.

Dependability

The researcher maintained an audit trail describing the study's procedures, the research process and the decisions made during the interviews**.** The researcher accounted for and documented the changes when explaining the findings to enable replication by others who wish to conduct a similar study to safeguard dependability. Quotations from different participants (with pseudonyms) were included in the report to ensure the transparency and trustworthiness of the findings (Tong, Sainsbury, & Craig, 2007).

Transferability

This was achieved through the purposive sampling of participants; the sample was defined in a clear manner with an in-depth explanation of the study context and explicit descriptions of how data were collected and analysed. The researcher assessed the findings if they could be transferable/applicable in other similar contexts and maintained a reflexive journal. The research findings contain rich descriptions and sufficient study details have been provided so that replication could occur in other settings as applicable.

5.13 Summary

This chapter discussed the rationale for the methodological approach and method of analysis employed in this study. The methodology was consistent with the study aim, which was to gain an in-depth understanding of the experiences of ANC access and attendance from midwives and pregnant mothers' perspectives. The following chapter presents the empirical findings from midwives and pregnant mothers.

CHAPTER 6: FINDINGS

6.1 Introduction

This chapter is the first of two chapters that present and analyse the findings of this study, which were derived from interviews conducted with midwives and pregnant women regarding ANC access and attendance. These findings were aligned with the Neuman model, which provides a comprehensive perspective of individuals' responses to stress and the impact on their health- and health-seeking behaviours, as discussed in Chapter 3. This model encompasses the physiological aspects of care and considers broad environmental and interpersonal factors that influence ANC experiences. The model aligns with the study's primary goal of exploring the experiences of midwives and pregnant women in accessing and attending ANC in Kilifi, Kenya. To document these experiences, 30 semi-structured interviews were conducted (see Appendix 4) with midwives and pregnant mothers in Kilifi County and Malindi hospitals between May and September 2021.

This study adopted a descriptive qualitative approach, using in-depth interviews with pregnant mothers and midwives as the data collection method. The primary objective of this research was to explore the experiences of midwives and pregnant mothers concerning ANC access and attendance in Kilifi. In this context, the terms health- and help-seeking behaviours are used interchangeably to refer to healthcare-seeking behaviour. The specific study objectives were as follows.

1. To comprehend the factors that influenced pregnant mothers' access to and attendance at ANC.

2. To gain insights into midwives' perspectives about the challenges and facilitators related to pregnant mothers' ANC access and attendance.

Content analysis

The first part of this section offers an overview of the content analysis tables and explains and justifies the coding process. The subsequent section focuses on the development of sub-themes and themes.

Content tables: In these tables, the coding system used was derived from established research, specifically the coding system developed by Betty Neuman. This coding system classifies stressors into three main categories: intrapersonal, interpersonal, and extra-personal. Using validated coding systems from reputable sources is a recommended practice to ensure the reliability of an analysis (Galle, Borg, & Gall, 1996; Vourvachis & Woodward, 2015).

Merging data: The content tables show how data from midwives' and mothers' interviews were merged. Analysing the differences and similarities between the two datasets substantiated the effectiveness of the coding system in accurately describing the data, thereby enabling inferences to be drawn.

Qualitative content analysis: In this study, the researcher used qualitative content analysis to allow for minimal inferences on interpersonal, intrapersonal, and extra-personal characteristics. The analysis of verbatim transcripts revealed the presence of 18 primary codes, which are presented in detail in Appendix 14.

The verbatim examples are excerpts derived from the primary codes that originated directly from the interviews. They are highlighted to help readers distinguish whether they originated from midwives or mothers. For example, an excerpt labelled RM1 represents data from midwife number 1, and an excerpt labelled Mother1 represents data from mother number 1.

Coding process

Themes are essential components of qualitative analysis, and help to capture recurring experiences, behaviours and emotions that manifest across multiple codes. They often come into play during latent analyses, unveiling hidden or latent causal relationships in participants' statements (Kleinheksel et al; 2020; Lindgren, Lundman, & Graneheim, 2020). By organising coding categories into themes, researchers can explore the fundamental underlying meanings in the data, which enables them to draw meaningful conclusions (Graneheim & Lundman, 2004). Erlingsson and Brysiewicz (2017) suggested that content analysis is a continuum, progressing from code development to category creation, and ultimately leading to the identification of themes. It is important to note that although a theme can encompass multiple codes or categories, this is not a universal rule (Kleinheksel et al; 2020). An example is set out in Figure 6.1 below.

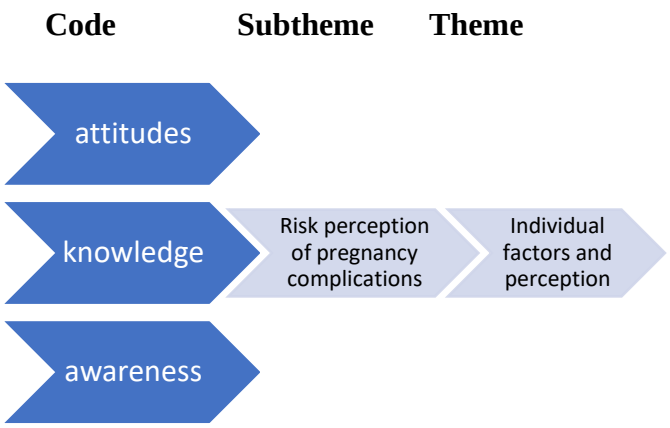


Figure 6.1: Example of coding the code, subtheme and theme.

The primary coding verbatim examples are in the table 6.1 below.

Table 6.1: Verbatim examples of primary coding

Risk perception of pregnancy and complications	
Midwife	'…. we can say they are aware because they tend to even come before their attendance date…. who had bleeding and reduced foetal movements, also swelling because of the hypertension they came back'. RM6 '...Yes, they feel because even a mother may come to a clinic for the antenatal the routine one, but because they perceive a certain risk. A mother might come and tell you my baby is not moving he is so quiet, or a mother may come complaining I feel a lot of dizziness, I am bleeding...I think they have that perception…' RM10
Mother	'…My current pregnancy now, so this one was a bit challenging too, because I was experiencing some drops of blood while I was still pregnant when it was like 3 months. So, it, it led me to start my ANC earlier'. Mother13 '…I fear delivery of the baby...the fear I have because many people lose their lives there. Many pregnant women lose their lives when they are giving birth or maybe the babies and just have complications…' Mother15.

Researcher's inference	Knowledge of complications and danger signs were a reason for attendance as they perceived a particular risk. Pregnant women waited until they had a problem to seek help in the hospital. Expectation of risks appeared to be low, but this contradicted widespread knowledge within communities of women who had died prior to delivery or in delivery (maternal mortality).

6.1.1 Participants' demographic characteristics

This study was conducted at a healthcare facility with an antenatal clinic and acute care wards. Thirty participants were interviewed: 10 midwives and 20 pregnant women from the antenatal clinic and acute care wards. Participants' demographic information is organised into three sections: a) midwives, b) pregnant mothers attending the ANC clinic and c) pregnant women admitted for acute complications.

6.1.2 *Midwives' demographic characteristics*

All 10 midwives who participated in this study were registered with the Nursing Council of Kenya (Table 4). Eight midwives were female and two were male, and their ages ranged from 27 to 53 years. Nine midwives had diplomas (i.e. Kenya Registered Community Health Nurse) and one had a bachelor's degree in nursing. On average, they had 14 years of working experience, with the most experienced midwife having 31 years of experience and the least experienced having 2 years. Seven midwives had worked in the antenatal clinic for fewer than 10 years, and the average work experience in this particular setting was 9.8 years. All midwives held full-time, permanent positions and followed shift schedules determined by a monthly roster. The midwives demographic characteristics are shown in table 6.2 below.

Table 6.2: Midwives' demographic characteristics

Registered midwife	Age, years	Gender	Highest education level	Experience, years	No. of years in ANC
1	53	M	Diploma (Kenya Registered Community Health Nurse)	30	15
2	43	F	Diploma (Kenya Registered Community Health Nurse)	20	12
3	39	F	Diploma (Kenya Registered Community health Nurse)	12	10
4	27	F	Diploma (Kenya Registered Community Health Nurse)	2	2
5	59	F	Diploma (Kenya Registered Community Health Nurse)	31	31
6	42	F	Bachelor's degree in nursing	16	5
7	27	M	Diploma (Kenya Registered Community Health Nurse)	4	4
8	38	F	Diploma (Kenya Registered Community Health Nurse)	15	10
9	28	F	Diploma (Kenya Registered Community Health Nurse)	6	4
10	39	F	Diploma (Kenya Registered Community Health Nurse)	15	5

6.1.3 Demographic characteristics of pregnant women

The 20 participating pregnant women were aged between 18 and 45 years (Table 5). Nineteen women were married and three were single, and 17 lived with their partners. Only two participants were self-employed, and none had a permanent source of income. Three women were engaged in small-scale businesses and two worked as farmers for their family's needs, all of whom reported modest incomes. In terms of parity, 15 women had previous pregnancies, ranging from one to eight children. Notably, participating women had varying levels of education; four had no formal education, 10 had completed primary education, three had finished high school, and three had attended college or university. The demographic of women characteristics are shown in table 6.3 below.

Table 6.3: Demographic characteristics of participating pregnant women

	Parity	Gravida	Age, years	Gestation, weeks	Marital status	Education	Occupation	Husband's occupation	No. ANC visits	Living children
1	1+0	2	29	34	Married	Secondary	Tailor	Records officer	4	1
2	3+1	4	35	32	Married	None	None	Farmer	6	3
3	2+0	3	23	19	Married	Primary	None	Security	3	2
4	2+1	4	23	37.5	Married	Primary	None	Housekeeping	4	2
5	0+1	2	24	21	Married	Primary	None	Security	1	0
6	0+0	1	22	12	Single	University	None	Farmer	1	0
7	5+1	7	28	28	Married	None	None	Carpenter	1	5
8	1+1	3	24	17	Married	None	None	Plumber	1	1
9	1+0	2	21	30	Married	Primary	None	Bus driver	1	1
10	0+1	2	19	39	Married	Primary	None	Mason	6	0
11	3+0	4	39	38	Married	Primary	Business	Police officer	3	3
12	2+3	6	26	36	Married	Primary	None	Motorbike rider	5	2
13	1+0	2	37	21	Married	Secondary	None	Pump attendant	5	1
14	3+0	4	34	24	Married	College	None	Tailor	1	2
15	2+0	3	35	17	Married	College	Tailor	Business	1	2
16	0+0	1	18	24	Married	Primary	None	Security officer	1	0
17	0+5	6	25	12	Single	Secondary	None	Business	1	0
18	5+0	6	30	24	Married	Primary	Tailor	Motorbike rider	1	5
19	9+0	10	43	23	Married	None	Farmer	Teacher	1	8
20	2+0	3	35	32	Married	Primary	None	Business	5	2

6.2 Overview of the main themes

The findings from this study were organised into three overarching themes that captured the multifaceted factors influencing pregnant women's ANC access and attendance. The first theme was labelled 'individual factors and perceptions' and explored the beliefs, risk perceptions, timing considerations, autonomy, health literacy, knowledge about ANC and the practice of secrecy among pregnant women. These individual attributes profoundly shaped their healthcare-seeking behaviour. The second theme was labelled 'sociocultural and economic influences' and encompassed an array of factors that were deeply intertwined with a woman's decision to access and attend ANC, such as cultural beliefs and norms, gender roles, family and community influence, sources of information, male involvement, pregnancy health promotion and financial challenges. The third theme, 'system and structural factors', examined structural and systemic elements, including respectful maternal care, government projects on cost, transportation constraints, healthcare system barriers and external influences such as the COVID-19 pandemic. These findings aligned seamlessly with the Neuman model, providing a holistic understanding of how these various factors interacted and affected women's health- and help-seeking behaviours, making it a valuable framework to guide strategies to enhance ANC access and attendance. The themes are shown in figure 6.2 below.

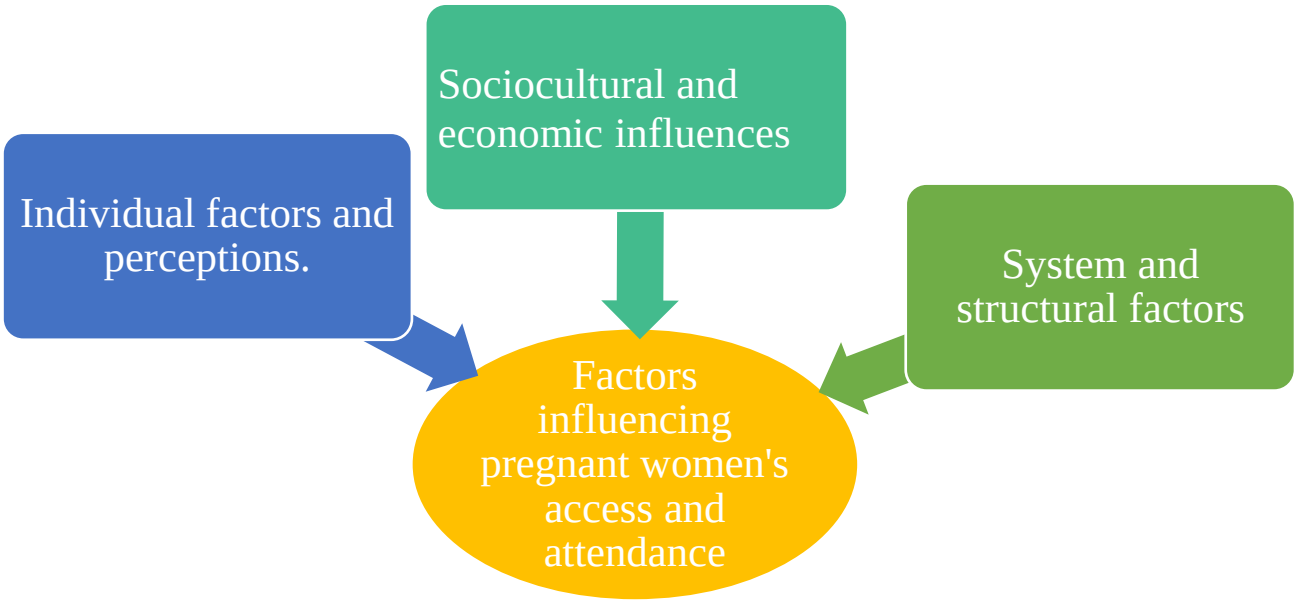


Figure 6.2: Themes drawn from participants' data.

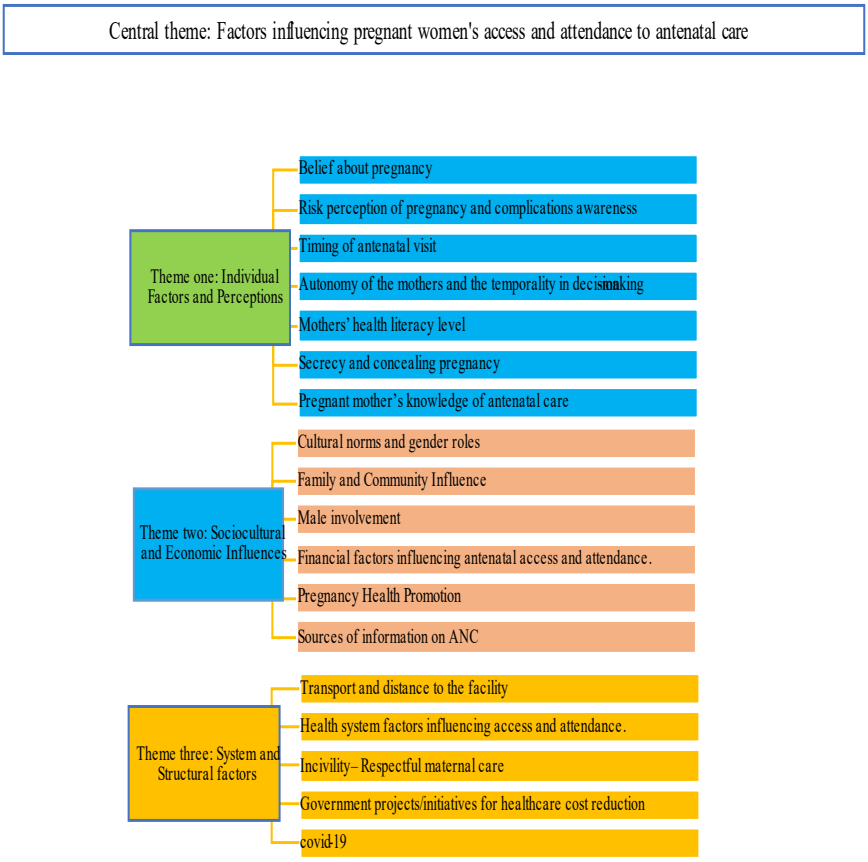


Figure 6.3: Mind map of the main themes and subthemes that emerged from the data.

Table 6.4: Themes and subthemes that emerged from the data

Central theme: Factors influencing pregnant women's ANC access and attendance	
Theme one: Individual factors and perceptions	Beliefs about pregnancy Risk perception of pregnancy and complications awareness Timing of ANC visit Autonomy of the mothers and the temporality in decision-making Mothers' health literacy level Secrecy and concealing pregnancy Pregnant mothers' knowledge of ANC
Theme two: Sociocultural and economic influences	Cultural norms and gender roles Family and community influence Male involvement Financial factors influencing ANC access and attendance. Pregnancy health promotion Sources of information about ANC
Theme three: System and structural factors	Transport and distance to a facility Health system factors influencing access and attendance. Incivility, respectful maternal care Government projects/initiatives for healthcare cost reduction COVID-19

6.3 Theme one: Individual factors and perceptions

This theme explored temporal factors such as personal attributes, beliefs and perceptions that significantly impacted pregnant women's decisions to seek ANC. This theme captured the complex aspects of these individual factors, including the women's beliefs about pregnancy, their perceptions of risk and complications, considerations related to the timing of ANC visits, the role of autonomy in their healthcare decisions, their level of health literacy and the practice of concealing pregnancy. The data showed that these unique attributes underpinned women's healthcare-seeking behaviour. The findings derived from the interviews highlighted the prominent influence of pregnant women's perceptions and beliefs on their choice to access and attend ANC. It was evident that a woman's perspective on pregnancy played a pivotal role in shaping her health-seeking behaviour, and the concept of temporality emerged as a crucial factor in this decision-making process. These aspects aligned with the Neuman model, which provides a comprehensive perspective on individuals' responses to stressors and their impact on health- and help-seeking behaviours. The personal attributes and beliefs of pregnant women, as explored in this theme, fit seamlessly into the model framework, emphasising the dynamic interplay between individual perceptions and healthcare-seeking behaviours in the context of ANC access and attendance.

6.3.1 Beliefs about pregnancy: 'I am not sick. I have no problem'.

The pregnant women in this study held distinct beliefs regarding their well-being and health throughout the pregnancy and childbirth continuum. Notably, they equated uneventful past childbirth experiences with future protection, which significantly influenced their healthcare choices. The qualitative data gathered from midwives revealed a recurring pattern in pregnant women's perceptions and behaviours related to their ANC access. Specifically, the data illustrated that some pregnant women subscribed to the notion that early ANC visits were unnecessary (which was attributable to ignorance) if they felt well and did not have any health issues. This was also reported by multiparas owing to the previous experiences of uneventful pregnancies and childbirth which were uneventful.

> *'…I have the experience…I don't have any problem I don't feel I have any problem so why should I come early…So sometimes they feel why should I be coming very early…here we have so many clients, why should I be coming here and queue for hours? And I feel I don't have any problem… for these multiparas, they know everything.*

….they know is just the ignorance...' [RM8]

'…Common reason is that inadequate information let's say that one of saying, especially the multiparas then others it is ignorant, there are ignorant they say I feel my pregnancy is just ok. So, she comes the month that she desires, she can even come at 8 months, 1 month then she delivers, 7 months…Some it is ignorance'. [RM7]

Midwives noted that some pregnant women faced resistance from their families when attempting to access ANC, particularly when they had no immediate health issues. In such instances, family members questioned the necessity of seeking care, which reflected a lack of awareness and understanding about the importance of ANC for preventive services and the continuous monitoring of both the mother and the unborn child.

'…She will rely on somebody, and it will depend also that neighbour might cheat her, so they tell them don't go. You have no problem, your child is ok, the heart is beating, ok, it is ok you can wait, even me I was like that, and no complication happened. So, they share from the previous experience forgetting that every pregnancy has its own complication'. [RM1]

Participating midwives also emphasised that mothers with previous pregnancy experience often believed that ANC was only essential in cases where a problem arose during pregnancy.

'…I have the experience...I don't have any problem I don't feel I have any problem so why I should come early…They didn't have any issues…nothing and delivered nicely there was no complications delivered and went home…And then here we have so many clients, why should I be coming here and queue for hours? And I feel I don't have any problem'. [RM8]

These midwives' insights were echoed in the narratives of pregnant women themselves. The parallel perspectives shared by midwives and expectant mothers highlighted a prevailing belief that ANC was deemed essential primarily in the presence of complications or discomfort, resulting in delayed attendance for regular check-ups.

'…so I said that, the first one I didn't go at all and I delivered well so this other one I will go not that I will not go because it was famous that there is no delivering at home it is a must you go to the hospital, so I said that I would go but when I am near the end that is when I would go because I don't carry the pregnancy with issues, as in when I carry

my pregnancy I am very much okay, so I said because I am not in pain like that or like that I would go but towards the end'. [Mother16]

However, some mothers attended routine ANC check-ups to ensure their health and the well-being of their babies.

'I came to clinic they did a lot of things when they listen to my baby moving, when he measures and touches, they tell me, "You are fairing on well, the baby is okay" I know my weight…When right now he touches and listens he says, "your baby is breathing well and is moving well". He gives me a lot of happiness in my life…It is just that they need to follow up they know about the baby'. [Mother2]

Interestingly, even in cases of previous pregnancy loss, a few women held strong beliefs about witchcraft and hesitated to seek treatment at the ANC clinic.

'…if you are told, you don't understand, going to the witch doctors, going to be massaged, you follow that, you have been bewitched and you don't come to the hospital to follow up on the matter'. [Mother11]

In summary, the qualitative data from both midwives and pregnant women showed that multifaceted perceptions, beliefs and behaviours influenced access to ANC. Although some women held the notion that early ANC visits were unnecessary when they felt well and were free from health issues, others were motivated to attend routine check-ups to ensure the well-being of themselves and their babies.

6.3.2 Risk perception of pregnancy and complication awareness

The subtheme 'risk perception of pregnancy and complication awareness' explored how pregnant women's behaviour was influenced by their perceptions of risk during pregnancy. Understanding how women perceived the risks associated with pregnancy and their awareness of potential complications is pivotal in comprehending their decisions and actions related to accessing ANC. Midwives noted a range of attitudes among pregnant women concerning pregnancy risks, with some exhibiting fearlessness, which was often rooted in fatalistic beliefs shaped by their religious perspectives. Midwives reported that many pregnant women perceived that if their time to die had come, it was unavoidable regardless of the birthing location. This religious fatalism was explained by one midwife as follows.

'…They don't have that fear, you see for them they say you can give birth at home, and you can give birth in the hospital but if your days have come to die, you will die.

Because that is not your wish, it is not my wish, it is God's; plan you were born and you will die, so if it is a matter of death, you can die at home you can die at the hospital, how many mothers have died in hospital because of delivery, there are so many isn't it, so there is no need, some of them say like that, so they say, whether you were in the hospital or you are at home, if you were meant to die that day you will die, if you are not meant to die on that day, you will not die because you can deliver at home and you will not die, you will be taken to the hospital and you will be ok. You are at the hands of the doctors and the nurses, and you die, why? It is because it is God's wish'. [RM2]

In contrast, other midwives believed that women were well aware of the risks inherent in pregnancy and sought medical care when facing issues.

'...Yes, they feel because even a mother may come to a clinic for the routine antenatal but because they perceive a certain risk, so they perceive they are at risk. A mother might come and tell you my baby is not moving he is so quiet, or a mother may come complaining I feel a lot of dizziness, I am bleeding...I think they have that perception'. [RM10]

However, it was not just an awareness of risks during pregnancy that motivated early ANC visits. An underlying fear of losing the baby or the mother, along with past experiences or stories from the community could also serve as motivators for women to seek ANC.

'...the fear of losing the baby and the fear of losing even the mother…we discourage them attending the traditional birth attendants because of complications…when we talk to them, they realise it and they will now tell you their incidents or maybe what they have heard from a neighbouring home, some now get scared and decide I will be going to the hospital for delivery'. [RM2]

In addition to these emotional factors, one midwife highlighted that some women attended ANC early because of complications such as vomiting, which could arise in the early stages of pregnancy. Moreover, previous complications, such as pregnancy-induced hypertension, could drive expectant mothers to prioritise early ANC visits.

'...They have complications, they are vomiting, those minor complications of early pregnancies are the other reasons that will make them come to clinic early…some come because of the previous complication, maybe somebody had hypertension, pregnancy-induced hypertension in pregnancy'. [RM3]

Several pregnant women shared their experiences regarding seeking ANC, which they indicated were influenced by various factors. One mother expressed that her decision to initiate ANC was prompted by feelings of unwellness, even though she could not pinpoint the exact issue.

> *'…I was not feeling well a problem that was not a disease, but it was something that was scaring me, you know, so you sit somewhere not knowing what medication to take so that you feel well. I feel problems so those made me to start the clinic because I endured the first month, the second month, when it reached the third month I was overwhelmed because if it is dizziness so you can't know the problem "is that the blood that is low?" You can't know how your health is, so you get sick not knowing which sickness it is'.* [Mother2]

Another mother shared a story of a friend's experience, which left her with apprehensions about her own pregnancy. Her friend had a caesarean section during her first childbirth, which resulted in her child's death. After 6 months, she became pregnant again and carried the fear from her previous experience into her subsequent pregnancy.

> *'...I have a friend who was, who was operated, she got her firstborn through caesarean section so, then that child died, so after 6 months she got pregnant, so she had that fear…'* [Mother13]

Moreover, several mothers shared experiences that highlighted the critical role of complications in influencing their ANC-seeking behaviours. For example, one mother revealed how she encountered challenges in her current pregnancy, particularly experiencing episodes of bleeding when she was 3 months pregnant. These complications compelled her to initiate ANC earlier than originally intended.

> *'…My current pregnancy now, so this one was a bit challenging too, because I was experiencing some drops of blood while I was still pregnant when it was like 3 months. So, it, it led me to start my ANC earlier'.* [Mother13]

Furthermore, participants highlighted a common sentiment among some pregnant women who rejected prescribed ANC medications because of their strong faith in prayer and belief in God's protective power. These women expressed scepticism about the effectiveness of ANC medications, arguing that reliance on prayer was sufficient to ensure their baby's well-being.

'*…There are those who don't like ANC they say even me if I don't go, firstly the medication that we are given there are some women who don't take them they say that the one to pray to is God it is not the medication so even if I don't take it even me I know my baby will be fine…that matter last year when I was attending clinic for this pregnancy…when we reached there we were asked, "do you take medication?" by the nurse. Another pregnant mother who did not have any shame at all said, "me, I don't take them" ...Another one said, "aah the one to pray to is God, it is not a must we take, they don't have any benefit'. [Mother16]*

In addition, some mothers reported a religious fatalism perspective that showed they believed in God during the pregnancy journey, which was consistent with the reports form midwives.

'...I told you it is to pray to God for everything because every child has its own pain you can like when you carry the pregnancy this one you may vomit and the other one you will not vomit you see every child has its own pain everything is to pray to God'. [Mother11]

'…Their faith doesn't allow them as in they don't believe in going to the hospital because they believe in God. God answers prayers and that's all...' [Mother11]

In summary, the data showed a diverse array of perspectives regarding how pregnant women's behaviour was affected by their perceptions of risk during pregnancy. These diverse perspectives highlighted the complex interplay of risk perception, emotional factors, religious factors and health-related experiences in shaping women's decisions concerning ANC access. The excerpts from the data revealed that pregnant women had their own perceptions regarding pregnancy, which influenced their health- and help-seeking behaviours. Comments made by midwives during the interviews suggested that seeking care was all 'in the mind of women'; therefore, temporality was an important concept.

6.3.3 Pregnant mothers' timing of ANC visits

The interviews conducted with midwives and pregnant women shed light on the timing of initiation of ANC visits and the various factors influencing this decision. The majority of pregnant women tended to begin their ANC during the second trimester. This pattern was influenced by their perception that initiating ANC early would lead to a high number of clinic visits, which they considered burdensome. This perception played a key role in shaping the timing of ANC initiation in the community.

'…not all of them start at the same time but actually most of them start during the second trimester. Why? They say when you start your clinics early you will visit a facility so many visits'. [RM5]

However, there was some inconsistency among midwives regarding the necessary frequency of ANC visits, with some advocating for monthly visits and others suggesting up to eight visits were necessary. Many women struggled to match the recommended attendance, and it was evident that the majority could not complete even the minimum requirement of four ANC visits.

'…so, the information they are disseminating is like, "why should you start the clinic early you will have to go monthly, monthly, so if you go the second month you will have to go like seven, nine, 10 times, so you would rather wait". So, the information they give, the multiparas give the primigravida, yeah, even the timings it is not that; where do they get them…they don't want to keep coming to the clinic many times. That coming is what they don't like so much'. [RM3]

The midwives noted that women's attendance times, number of visits and scheduling displayed significant heterogeneity. Some women hesitated to initiate early ANC, primarily because of concerns about the frequency of visits.

'…but they used not to come early because they used to say if you go early, you will go there for so many visits. [RM1]

For other women, especially those who planned to deliver at home, past experiences appeared to dictate their late initiation of ANC.

'…for those who deliver at home they tend to be rigid enough, such that they come even, they are remaining with 1 month to deliver, that's the time they come. I tend to think it's because of their past experiences'. [RM6]

In addition, the perception of too many clinic visits led some women to intentionally delay their ANC.

'…For those who say they are tired of many visits; I can say you will just know them they normally come late…And if you try to ask about the previous pregnancies the time they started, they will just say they are many. I started in the fifth month, I started in the sixth

month because they don't want that, the too many visits. So, they try to delay a bit'. [RM2]

The perspectives of pregnant women and midwives were closely aligned regarding factors contributing to the late initiation of ANC. Many women expressed concerns that commencing ANC early would lead to frequent clinic visits, resulting in additional indirect costs, particularly transportation expenses. This shared sentiment is exemplified in the quotations below.

'...I start 5 months otherwise the months will be many. It's because when you start early you spend a lot of time here. When you come here, a date is written for you to come back, and the months will be many. You will come here many times…the ticket, 200/- coming and going'. [Mother17]

'...As in from home, every month you are here…I saw that it is better to come at sixth month...because I use fare, you know 100/- going, 100/- coming back, 200/- every month; I said I will start on my sixth month'. [Mother9]

Some mothers justified their late ANC initiation by emphasising their lack of complications.

'...but when I am near the end that is when I would go to clinic because I don't carry the pregnancy with issues…so I said because I am not in pain like that, I would go but towards the end'. [Mother16]

'...I just told myself that I will be going on my sixth month. Because I don't have any problems'. [Mother15]

Another mother expressed concerns about frequent clinic visits. She mentioned feeling tired from the regularity of monthly appointments and stated that she opted to delay starting her ANC visits until the sixth month, closer to delivery. Interestingly, she mentioned that she was not provided with specific reasons for the recommended timing of ANC visits but was simply told to start clinic visits at 4 months. The timing of ANC initiation was a complex issue influenced by diverse factors, as revealed in participants' narratives. Many women expressed concerns about the frequency of clinic visits and the potential exhaustion caused by visiting the clinic each month.

'…I saw that I would get tired fast, every month I would come to the clinic, so I said let me reach the sixth month I will be near to deliver…They didn't tell me the reason, but they just say that you should come to the clinic with 4 months'. [Mother14]

Other mothers highlighted that the idea of multiple visits was a challenge, with some women opting to delay their ANC initiation to avoid this perceived burden.

'…They say that coming many times exhausts them. They tell you, "You don't see I have been here another month as in I am coming every month people see me until I give birth". So, to other people they take it as a challenge that they can't start their clinic early'. [Mother2]

Furthermore, some women expressed a preference for late ANC initiation because of discomfort or difficulties associated with clinic visits.

'…There are women already here who don't love coming to the clinic, they say, "me, I will not go to the clinic already when I come on the eighth month and when I go twice, I will just deliver". Maybe she sees the difficulty of walking in those clinics, she sees some difficulty. She stays when it reaches the eighth month, she knows that when she comes for the first visit, second, she will come to the maternity to deliver'. [Mother4]

Other mothers suggested that the best time to begin ANC was around 4–5 months of pregnancy, as this period allowed psychological readiness and the ability to confirm foetal movement.

'…I think the best time, the best time to start clinic is 4 months, 5 months…because you have grown psychologically, and the baby also has grown. Yeah, and you can also feel some movements'. [Mother13]

Several mothers identified work-related challenges as a significant impediment to their attendance at ANC appointments. These women reported struggles in securing permission or time off from work, primarily because of concerns about potential reductions in their salaries for missing work. The narratives of these pregnant mothers shed light on the work-related barriers to ANC attendance.

'…The thing that has made me to come today, I wanted to come earlier on but I was busy at work...it is not all that we get offs somewhere they work, maybe they rest on Sunday,

…on Sunday the clinic is not open, the clinic is Monday and mostly on Friday. Like today, so someone like that you find them, you know some employers you have to ask them for permission so that they allow'. [Mother6]

'…I asked and begged her to go to the clinic and she said, "You when you leave work when you go there, I will cut your salary"'. [Mother7]

This subtheme highlighted the complex reasons behind the delayed initiation of ANC visits among pregnant women. Many women perceived early ANC initiation as burdensome because they anticipated frequent clinic visits. Financial constraints, particularly transportation costs, appeared to be substantial barriers. Some women delayed ANC based on the absence of complications or discomfort, whereas others cited work-related challenges, fearing salary deductions and job security issues if they took time off for an appointment.

6.3.4 Mothers' autonomy and temporality in decision-making

The findings from this study revealed that maternal autonomy played a pivotal role in the decision-making process for seeking ANC. Although the prevailing cultural norms often dictated that women should be 'seen but not heard', it was evident that some women exhibited the capacity to make decisions independently, particularly when they were empowered with knowledge about the importance of ANC. This autonomy enabled them to overcome various barriers and prioritise their health and the well-being of their babies, including attending ANC earlier in their pregnancy.

'…if she is empowered with the knowledge and she knows then she has information to challenge the husband…you see a mother who is single she is the decision maker, so she can make the decision herself but this one (married) she is not the decision maker, somebody has to make the decision for her, so if she decides to go to the clinic she will just go'. [RM1]

The midwives also reported that older primigravida women tended to have a sense of autonomy and attended ANC early. Midwives reported that another enabler was when a woman had a bad obstetric history and infertility, and the excitement about having conceived facilitated their early ANC attendance.

Moreover, midwives noted that certain factors facilitated early ANC attendance, including advanced maternal age, a history of obstetric complications and infertility. Older primigravida mothers, in particular, were eager to receive early care for their pregnancies.

> *'...elderly primigravida mothers, those that are looking forward to precious babies, maybe they had problems so when they conceive, they come to the hospital earlier compared to those that have other babies at home'.* [RM1]

In addition, some women in this study displayed a self-motivated approach and took the initiative to discuss and persuade their husbands to grant them permission to attend ANC. Even in the face of resistance or scolding from their spouses, they were resolute in their determination to access ANC.

> *'...my husband can scold me not to go to the clinic, but as a woman I have to convince him'.* [Mother13]

> *'.. I got motivation from myself…so I know the dangers for not coming to the clinic, it's better for me to come early than to wait for him...so it is you to plan when you will go'.* [Mother9]

Nevertheless, it was acknowledged that not all women had the same level of autonomy, and some recognised the need to seek permission from their husbands. When this permission was granted, it facilitated timely attendance at the clinic.

> *'...I discuss with my husband because he is my next of kin, he's the one who I live with. So, my idea, taking it was my idea to give birth there and he accepted because I am the one who's going to give birth, not him'.* [Mother13]

However, this study also identified instances where women, despite their willingness to seek ANC, faced delays because of lack of spousal consent. Such delays were emotionally and logistically challenging for these women and could lead to missed opportunities for early intervention and care.

> *'...I would like to start going to the clinic next month…you might not get the permission…and your morale diminishes because you had planned earlier to go to the clinic on a specific day but now it is not like that. This will lead to delay…'* [Mother18]

In summary, this subtheme highlighted the significance of maternal autonomy, knowledge and empowerment in influencing the timing of ANC attendance. It also highlighted the contrasting experiences of women who must navigate complex social dynamics and negotiate permission with their partners, potentially leading to delays in accessing essential ANC services.

6.3.5 Mothers' health literacy level, education level and ANC attendance

The role of literacy in influencing maternal health-seeking behaviours, particularly in relation to ANC use, emerged as a significant subtheme in this study. Participants noted that the educational background of both mothers and their families played a crucial role in promoting early ANC visits. It was generally observed that mothers with higher levels of education and literacy were more inclined to initiate ANC early, as they possessed a better understanding of the importance of ANC. Participating midwives emphasised the impact of knowledge on ANC attendance, highlighting that well-educated mothers tended to prioritise ANC services, often overcoming challenges such as distance and financial costs.

> *'…that part of knowledge plays a big part because the one who are very much educated, they overlook distance, they will try and get that money, they are educated they know the importance so she is aware about important so she's aware about ANC services so you find that way she will come'.* [RM4]

> *'…It will depend on the family where she is coming from if they are well educated enough, they will also see the importance of coming to the clinic earlier but if they are not educated, they will have to stay'.* [RM2]

Educated mothers were not only aware of the importance of ANC but were also perceived as more capable of interpreting health-related information from various sources, including the media.

> *'...in fact, I would say that those ones who are educated most of the times, they understand, you know even when they see the information from the media they understand'.* [RM1]

Conversely, midwives noted that illiteracy presented a significant barrier to ANC attendance. Women with low levels of education often lacked information about the significance of early and subsequent ANC visits.

> *'…especially those who never attended school are the ones who usually come late to the clinic…it's because of illiteracy…if my level of education is low, then I don't understand the consequences of not attending clinic'.* [RM6]

> *'…illiteracy contributes a lot. You find like those who didn't attend school at all they just don't have the knowledge, who don't attend school at all a mother stays at home, but she will not have that push or urge to come for ANC and when she comes during delivery you ask why you didn't attend the visits, the baby was kicking well. I didn't have any problems…The most barrier would be illiteracy'.* [RM9]

Midwives noted that in some cases, illiterate women relied on others for information, which left them vulnerable to being misled or discouraged from seeking care.

> *'…but if you get somebody who is illiterate, you see it is not easy for her to see and read unless somebody translates for her, and if there is nobody to translate for her, how is she going to get the information? She will rely on somebody, and it will depend also that neighbour might cheat her, though it is not easy, but there are there also, so they tell them don't go. You have no problem, your child is ok, the heart is beating, ok, it is ok you can wait, even me I was like that, and no complication happened'.* [RM1]

Moreover, language barriers were mentioned as an additional challenge for illiterate women during ANC appointments. Midwives described the need to adapt communication to cater to the local language (Giriama) and comprehension levels of illiterate mothers.

> *'…after giving health message when you sit one-on-one to that woman you try to ask questions to see if that woman, she's learned anything or if she can demonstrate any knowledge; then you find that sometimes you need to start from zero because she is illiterate, she doesn't get anything in a certain language. So, you use that language if it is "Giriama" you use Giriama'.* [RM4]

Consistent with the midwives' assertions, some mothers shared personal accounts that emphasised the relationship between education and the understanding of the significance of ANC services. These accounts illustrated that formal higher education was not a prerequisite for recognising the importance of ANC. As an example, one mother, who had not pursued higher education, conveyed her understanding of ANC.

'Let me tell you the truth, I didn't go to school like that but from whatever I learned, when I reached class 4, we were being taught that when someone is a mother, they get pregnant, they are needed to go for tests'. [Mother19]

Despite these challenges, participants reported instances of midwives using visual aids and picture demonstrations to convey health messages effectively to illiterate women. This inclusive approach aimed to ensure that all women, regardless of their literacy levels, could benefit from ANC services and receive crucial health information.

'If you go to this hospital, there are some charts there and you are told, "if you see this…" for those illiterates you are shown some pictures. "When you see this, then it is a bad sign. If you see this, this a bad sign, if you see this, it is a bad sign". So, I think all of them benefit, both benefit because I am educated and I will read and understand, there will be someone else who is not educated, might see the picture also, you see, plus the doctor who is there explaining, so if you are social a lot you will say, "what does this mean?" and you will be explained to and you will understand'. [Mother13]

In summary, the level of maternal education and literacy significantly influenced ANC attendance. Educated mothers were more likely to understand the importance of early initiation of ANC, and illiterate women faced barriers and potential misguidance because of their limited knowledge. This study also highlighted the importance of adapting communication strategies to address language and literacy challenges, making healthcare facilities more accessible and inclusive for all expectant mothers.

6.3.7 Pregnant mothers' knowledge of ANC

This subtheme focused on pregnant mothers' knowledge of ANC and captured the spectrum of understanding and awareness that these women had regarding ANC services and the importance of early attendance. It explored the factors influencing their knowledge, including previous pregnancy experiences, sources of information and individual circumstances. Pregnant women's knowledge of ANC services varied based on their prior experiences, as highlighted by the insights shared by midwives.

Midwives noted that multigravidas, or women who had previous pregnancies, often believed they already possessed sufficient knowledge about what to expect during pregnancy and ANC visits. In contrast, primigravida women, or those experiencing their first pregnancy, lacked prior information about ANC services. This discrepancy in knowledge could influence their attitudes and behaviours regarding ANC attendance.

> *'…It is because, the multigravidas, tend to think they know already but with this ones, the primigravida, she doesn't know anything so she has not been given TTs, she has not been given anti-malarial, then she will say, you see I have been given those injections I have finished but for you have not been given, so if you stay home you are going to get tetanus with your child. Me I won't get so you had better go early, so they tend to see, they tend to come early compared to the multigravidas'.* [RM1]

Midwives also associated late ANC attendance with a lack of knowledge among some mothers who initiated their ANC visits during the second or third trimester of pregnancy.

> *'…most of the mothers used to start the clinic late, ok, maybe in the second trimester, some in the third trimester because they used to not have the knowledge that it is important for them to start the clinic early'.* [RM1]

Furthermore, another midwife highlighted that some women lacked awareness of when to initiate their ANC visits or had received inaccurate information from their informal networks.

> *'…Some they are not aware that they are supposed to come early enough, so when they ask from others, they will just be told, "ok, when you are ready just go". You see but they will not tell them that it is important to attend antenatal clinic, because as early you go it is good because you will be investigated upon and any problem that can be seen will be treated early enough, it can be addressed in good time, so that you won't be facing complications later on. They are not told that. So, I think also they lack that information'.* [RM2]

Midwives highlighted the specific challenges encountered by adolescent mothers when it came to commencing ANC. They noted that some adolescents were overwhelmed by their unplanned pregnancy and apprehensive about potential social stigma and tended to delay seeking ANC

services. Furthermore, these young mothers often lacked the necessary information about when to begin their ANC.

> *'And maybe if we have the adolescents, they don't know, they are scared, they don't have knowledge totally, they are afraid, how will I reach the clinic. So you find they will just will have to keep delaying themselves when they are supposed to start, they don't know at that time, that information they don't have because I have met some are asking me when is someone supposed to start the clinic, "I thought it is until someone reaches 6 months then I can start", so we have those who know and those who don't know and others who just have ignorance they just sit there and wait; they don't have any apparent reason'.* [RM3]

Mothers who were well-informed about ANC services and recognised the importance of early attendance emphasised the significance of receiving vaccinations, STI testing, monitoring pregnancy weight gain and assessing blood pressure throughout their pregnancy. They emphasised the potential consequences of delaying ANC attendance, such as missing vital vaccinations and medications that aided in improving blood health. These mothers emphasised the value of regular ANC visits in ensuring the well-being of both themselves and their babies, providing a deeper understanding of their pregnancy progress and addressing potential health issues in a timely manner.

> *'...but others go at 8 months, 9 months when they want to deliver, that's when they go to the clinic. Let's say you go to the clinic at 8 or 9 months, but you will miss the vaccines. There is medication that you are given to help you on improving the blood, and during delivery the blood has to be the right amount, if you say that you are going to deliver on the 9th month it would be bad because you will not know if the blood is enough and also whether the baby positioned well. You won't know. You will just be carrying and there are many diseases that you will not know if you are okay or not; hence you have to go to the hospital so that you are tested rather than carrying the pregnancy thinking you are okay '.* [Mother19]

> *'...because I get to know my weight every month if I have added, if I have lost, I will know through ANC, I'll know my blood pressure, I'll know if my baby is doing good.*

> *I will not be just assuming the baby is fine, the baby is moving but when I come, or in reality I don't feel anything so it's very beneficial and plus there are these medications that people are given, these for blood, folic, for reducing fever is very important'.* [Mother13]

On one hand, some women initiated their ANC visits without prior knowledge of pregnancy, or the processes involved.

> *'…No, I didn't know anything. I just knew that you could come then you are told, "you could have even started on the first day". I didn't know anything, so me, I was just coming to confirm. I didn't know anything, I just came to see what people are being done for at the clinic, you are treated or what is done to you, I didn't know anything. I was just coming'.* [Mother6]

On the other, some women delayed attending ANC because they were not aware of their pregnancy.

> *'…I told you the reason was that I didn't know which month it was as I was just seeing I am carrying, and I didn't know. I would see my belly growing and I didn't know that's when I felt someone moving'.* [Mother19]

In summary, women's knowledge of ANC varied significantly. While some women had a clear understanding of the importance of early ANC attendance, recognising the benefits of vaccinations, STI testing, monitoring pregnancy weight gain and checking blood pressure, others were less informed. Some mothers were unaware of their pregnancy and attended ANC without prior knowledge, whereas others delayed seeking ANC because they lacked awareness of their pregnancy or the importance of early attendance. Midwives also noted the challenges faced by adolescent mothers, who often delayed ANC because of fear, lack of knowledge or concerns about the consequences of an unplanned pregnancy. Overall, women's knowledge of ANC was shaped by various factors, including their prior experiences, sources of information and personal circumstances.

6.3.6 Secrecy and concealing pregnancy

Participants' narratives revealed that some mothers, especially adolescents, concealed their pregnancy and kept it a secret from their family, which could result in delayed initiation of ANC visits. Although adolescent pregnancy is associated with the potential risk for maternal death, a delay in the initiation of the first ANC visit among adolescents was reported by midwives. This was mostly because they were scared and felt lonely and isolated from their family and peers. Therefore, they felt they needed secrecy/privacy and concealed the pregnancy from their parents, often because their pregnancy was culturally unacceptable and stigmatised. The secrecy about and concealing of pregnancies by adolescents were deeply rooted in cultural norms that stigmatised pregnancies outside of marriage. These young mothers chose to hide their pregnancies out of fear, often feeling alone and disconnected from their families and peers. Societal expectations dictated that pregnancies should occur within the confines of marriage, making it culturally unacceptable for an unmarried young woman to reveal her pregnancy. One midwife shared an instance highlighting the severity of such secrecy, where twins who had been raped by their grandfather had concealed their pregnancies.

> *'There was one time I did an analysis. We had very few primigravidas, primary school girls, who came late, and we came to realise that even their parents didn't know that they were pregnant. Maybe they were hiding, that was one incidence where we had two twins, who had been raped by their grandfather'.* [RM6]

The implications of secrecy were profound, extending to delayed ANC initiation and ultimately, increased risks for maternal and child health. Adolescents would often wait until their pregnancies became visible, only then disclosing their condition to someone and seeking care. The fear of judgment and stigma associated with teenage pregnancy exacerbated these delays, preventing timely access to ANC.

> *'…because some of them they now hide the pregnancy until now the mother now notices there is something wrong, so when they are asked now, they open up and say yes I am pregnant'.* [RM2]

For adolescents, concealing pregnancy was also a strategy to avoid being seen in the clinic and potentially facing judgment from older women or peers who were still in school. The fear of mixing with other young girls and being judged by older women who viewed their behaviour negatively deterred them from seeking early ANC.

> *'…But here is because, they don't want maybe to mingle with their children because most of them mothers they're pregnant, their daughters are pregnant. So sometimes they affect, you see their mother will come late, maybe sometimes they'll come late, because she doesn't want to mingle with this young mother sitting here, very old mama 40s sitting there with a very 18-year-old mama is very uncomfortable, listen to these young mothers'.* [RM8]

In addition to the midwives' perspectives, pregnant mothers confirmed the negative impact of stigma and fear of peer mockery because of teenage pregnancy. These pervasive societal judgements, stigma, and isolation that young mothers experienced ultimately hindered their willingness to seek ANC.

> *'…let's say, a young person, like when I was young, when I, when I gave birth with my firstborn, like a 15-year-old girl, the journey wasn't easy because I was young, so I was tortured psychologically…I didn't have such support because my family just saw like what I have done…I have committed a very big sin, so I was away from home…she cannot come to this clinic because she will feel, I'm too young, why should I go to the clinic? Like, will I be laughed at, you see, I will be laughed at will they gossip about me? How will they see me? You see…what will the doctors tell me? I did this and that and it wasn't right. You see. So those, that psychological trauma, just when it grows, that person won't come to the clinic'.* [Mother13]

Participating mothers' accounts highlighted the fact that the secrecy and fear associated with teenage pregnancy often led to a lack of psychosocial support, limited access to healthcare services and subsequently, further delays and complications.

> '*…My mother doesn't know about this pregnancy…My mother would be angry with me…if she found out that I am pregnant now with 1 or 2 months now she would really*

love for me to abort, and I was not planning to abort so I decided to keep it a secret and let her realise when I am 5 months or 4'. [Mother17]

'...I can't tell my mum; she will be very disappointed'. [Mother6]

Furthermore, some pregnant mothers recounted feelings of guilt and shame when seeking ANC as teenagers. Some were reluctant to attend ANC clinics near their schools and the shame led to delays in seeking regular ANC and only showing up at a health facility to deliver.

'*...The reason I have come, the first one I didn't go to the clinic because I was in high school and I got pregnant there and I had that shame because if it is the hospitals they are near the school so I carried myself with that pregnancy and I decided that I am not going; I didn't go, I hid myself until I went to the clinic of the baby when I delivered so that one I didn't go and my reasons were those because I was little and my mind was not open'.* [Mother16]

Concealing pregnancies, particularly among adolescents, presented considerable barriers to accessing timely ANC services and highlighted the need for culturally sensitive and supportive approaches to maternal care. In addition, emotional burdens, and societal pressures that teenage mothers may face when considering ANC influenced their decisions on when to attend ANC. This highlighted the importance of addressing the unique challenges and vulnerabilities of pregnant teenagers in accessing timely and supportive healthcare services.

6.4 Theme two: Sociocultural and economic influences

This theme captured participants perspectives of the information needs, timing and frequency of ANC and the sources of information for both midwives and mothers on when to initiate care and the number of recommended visits. The various sociocultural and economic factors that impacted the information needs, timing and frequency of ANC visits were explored. This theme also described how cultural norms, economic circumstances and the sources of information influenced decisions regarding when to initiate ANC and the recommended number of visits. It shed light on how these external factors shaped the choices and behaviours of both healthcare providers and pregnant women in the context of ANC.

6.4.1 Cultural norms and gender roles

This subtheme highlighted the complex relationship between cultural norms, gender preferences and maternal healthcare choices. It captured the contrasting perspectives of pregnant women and midwives regarding traditional birth attendants and the choice of healthcare providers based on gender. It highlighted the pivotal role that cultural beliefs and traditions played in shaping these choices, and how midwives had to strive to respect and adapt to these cultural nuances. In this cultural context, midwives shed light on the locus of control for decisions related to initiating ANC. They noted that the family, including the husband and mother-in-law, and sometimes the broader community, often held sway in determining when a pregnant woman should seek ANC.

> *'…apart from that date the return date can be next month, but she experienced like a problem in between that time she is supposed to come so that's to evaluate what is the problem, but you find that the one to decide is mother-in-law'.* [RM4]

This pattern of decision-making could be attributed to the prevailing patriarchal cultural beliefs, where the husband holds power in granting or refusing permission for a pregnant woman to access ANC services. The husband's primary role as the decision-maker means that a woman could only commence ANC when her husband granted permission, a practice referred to as the '*Mwenye syndrome*'. Furthermore, cultural barriers, particularly among Muslim communities, also influenced ANC attendance. In this context, the husband's role as the family's head and primary provider, including the finances required for transportation to healthcare facilities, positioned him as a key decision-maker.

'…so if you go and start the ANC clinic without informing him, it becomes a problem, so in Kilifi, we have the Mwenye syndrome, (husband being the decision maker syndrome) so the husband is the one to decide for the woman because "you are my wife, you have no right", the Swahili's have stated that, "sikio halipiti kichwa" (he is the head of the family) that means the husband is the head of the home not the woman, so you should listen to whatever you are told. Go and start the ANC clinic, if you are told not to go, you don't go…Cultural barriers, like the Muslims, some of them are not allowed to go to the hospital'. [RM1]

An important aspect revealed in this study was the fact that many women had assumed the role of housewives, which entailed looking after their other children. However, fulfilling this cultural role posed a barrier to ANC attendance as there were often no caregivers available for the other children while a woman attended ANC visits.

'…so somebody will come here and stay over 6 hours, so she won't come because of that. She is needed somewhere, and maybe she has other children who need her, she won't come because of that'. [RM1]

'…some others who say that you know, they are taking care of their children. there is nobody to leave with their younger children. You know most of our clients here they don't do family planning. So, by the time she is pregnant she already has another small baby which is almost like 1 and a half years, 2 years so carrying them and coming to the here they have to have somebody to leave with the children. So, if you don't have somebody to leave with their children, they will leave it, they will not come early'. [RM8]

Financial dependence emerged as another significant factor. Most women relied on their husbands to provide funds for transportation to ANC visits, resulting in the husband's control over the timing and frequency of these visits.

'…because the husband has to give them the fare to come and then who will make the decision to come early, it is the husbands; if the husband has not given the way forward or the go ahead this mother won't come early'. [RM8]

Midwives also reported on the influence of cultural beliefs, particularly in the Mijikenda community, where traditions suggest that childbirth and pregnancy-related issues have been handled at home successfully for generations. As a result, some individuals from this community are resistant to modern medical practices and continue to adhere to these cultural norms. They were often hesitant to seek healthcare services until complications arose that could not be managed through traditional methods, thereby delaying necessary medical intervention.

> '*…we have different community, different tribes and especially the native of this area the Mijikenda actually they have that, there are cultures where they say "grandmothers was born at home, she conceived at home, she delivered at home and nothing has happened to them" so they want their generation not to have the modern or in the modern medicine, but they continue with the cultural beliefs so you find such people; you might wait them and wait till you'll meet them when there is a complication, when they are sick and maybe if the sickness you may see they are having, if it can be treated traditionally you will not see them. They will only come to you when there is a complication that cannot be treated from their homes'*. [RM5]

The midwives also discussed the common preference among pregnant women for traditional birth attendants over healthcare professionals. These mothers had expressed discontent with their experiences at healthcare facilities, often describing instances of rudeness and mistreatment as significant concerns. As a result, they viewed traditional birth attendants as more compassionate and attentive, and able to meet their emotional and physical needs during pregnancy.

> *'...these mothers express their satisfaction with the care provided by traditional birth attendants in their homes in contrast to their experiences with midwives in healthcare clinics. They frequently report instances of mistreatment and rudeness by midwives, which contributes to their dissatisfaction. Traditional birth attendants are often perceived as kind and attentive, offering the emotional support and care these mothers desire. As a result, many women express a preference for traditional birth attendants, emphasising the attention and compassion they receive in contrast to the healthcare setting'*. [RM2]

The midwives revealed that they had developed strategies to accommodate the preferences of patients, especially when some mothers declined to be attended to by male midwives. This was attributed to cultural beliefs and traditions, which dictated that individuals of the opposite sex, particularly men, should not be involved in their healthcare.

> *'…Some traditions they believe in, like when they come to the hospital, culturally they are not supposed to be attended by people of the opposite sex especially men, so they fear coming to the hospital to be attended by younger men compared to them. So according to them, they feel they are disrespected or that is not allowed in the culture. So, I think cultural factors is also a factor especially when they come for delivery, they don't want to be attended by male nurse. So, I think culture plays a role…if they decline...we have to look for a female midwife…Yeah, we have to, because they will decline completely…At the point of giving the service, like when you admit them, they are comfortable but when it comes to examination, they say "no, I cannot be examined by this one"…And that is why in our unit you cannot find any shift that has the male midwife alone, we always combine like one male midwife and two female nurses. You cannot get only male nurses because you consider such like clients'.* [RM10]

> *'…especially when the, the provider is a man, some communities, not all of them, but there are some areas they tend to think you are not supposed to expose your body to anyone, so if you come here, I am alone, I am a man, who is going to attend to you, you are supposed to cover yourself, you expose your body only to the members of your family and only to your husband, so if you get somebody like that one, she will not attend, she will look for a place where there is a woman'.* [RM1]

The same sentiment was acknowledged for certain religious communities.

> *'…for the case of Muslim, you know there like they're supposed to be attended by ladies if it's a lady'.* [RM4]

Echoing the sentiments of midwives, some mothers voiced their preference for traditional birth attendants as their source of comfort and trust. They felt a sense of security under the guidance of their mothers-in-law, who strongly recommend traditional birth attendants over hospital care. The convenience of these attendants being nearby further added to their appeal.

'…they say at the TBA (traditional birth attendant) it is best and what the doctor's do to you? at the TBA you are attended to well you are put well and when you deliver, you deliver without a problem and the hospital, you are helped to deliver but them they don't give you the challenges like the ones for our place because you can go and a little the baby has changed and this one can return it but the hospital you don't know, it will not be turned you will be put under the knife (caesarean section) so there is the badness of the hospital and the goodness of here, so you choose by yourself, at the TBA you are attended to well'. [Mother12]

'…mother-in-law…believe the TBAs' services are the best, so they will advise the daughters-in-law to go the TBAs…instead of going to the hospital'. [Mother3]

'Others believe already in "miti shamba" (herbs). These TBAs so they see when they go to the TBAs, they feel safe already, and they don't go to the hospital'. [Mother8]

In addition, some women reported that men were sometimes reluctant to support clinical care for their wives, often highlighting the perceived success of traditional home births.

'…There are some men who don't give out money for the clinic and they don't want to hear about anything to do with the hospital. They can say, "my mother has taken care of a pregnancy, and she delivered us at home. She didn't go to hospital and us we are fine. So, you what kind of problem are you bringing?"' [Mother20]

Furthermore, a noteworthy preference among some mothers was the desire to be attended by a female midwife, which highlighted their comfort and trust in female healthcare providers.

'…I would prefer a female…She is a fellow female and if she sees my nakedness, I have no problem'. [Mother17]

Although some mothers expressed a preference for female midwives, others were pragmatic, accepting the healthcare they received from whichever medical practitioner was on duty, as they felt they had no alternative.

'…As long as me, I get the service as long as it is a female or male as long as I am attended to I thank God and I go home, I don't choose that I get a certain doctor, who am I, all of them are okay'. [Mother11]

'…Any doctor as long as I am treated, I don't prefer a female or a male, any doctor as long as they help me'. [Mother4]

Some mothers shared insights about prevalent pregnancy myths, traditional practices and cultural beliefs that influenced their healthcare decisions during pregnancy. These practices included the use of herbal remedies prescribed by their mothers-in-law as an alternative to attending ANC clinics and traditional postnatal practices involving hot water treatments and massages.

'…Like that usually happens a lot there in the rural area, there are mothers-in-law who use these herbs for boiling for their in-laws and then give them to drink someone will tell you, "There is no need to go to the clinic, a medication like this like that I am going to look for it in the farm I boil it for you"'. [Mother16]

'…When you deliver you are poured for hot water so that you don't swell and not have pain of the body and breathing well…and this belly you are massaged because it has dirty blood, she massages it so that blood comes out and it is massaged with hot water'. [Mother4]

One mother described a situation when she was very sick and went to the hospital for treatment, but no treatment was provided, leading her family to seek help from a witch doctor.

'I was overwhelmed as in I was in pain until I turned yellow fully, my feet as my eyes were inside there, my head was big and the body was small, he returned me to the hospital and I did not have anything, so he decided to take me to the witch doctor, so he was told that I was sick…The bleeding stopped when I was given medication by the witch doctor it stopped…they have not come back again'. [Mother10]

That mother also recounted an incident where she intervened to defend her mother-in-law from physical abuse from her husband. During this confrontation, the husband pushed her, which was evidence of domestic violence in the family.

'…so he wanted to beat her mother so I stood in the middle, he pushed me and I fell, I stood up, I wanted to struggle so I protect mum…he holds me, "you will go to your parents' home"…he talked so many things until I cried, he said, "cry but when you finish you go back to your parents"…' [Mother10]

Another mother described a recurring pattern of domestic violence wherein her husband turned abusive under the influence of alcohol.

> *'…he gets drunk and then he comes to beat me…'* [Mother11]

Another mother was from a polygamous household, where four women were married to the same man and supported each other during pregnancy. The four women openly discussed their symptoms and sought advice from one another, sharing guidance and experiences.

> *'…Us where we are, we are four women married to one man, so a lot of things when you hear, when you feel something you can follow your partner and ask, "aah I feel like this like this, what causes it?" maybe her she knows, "that is because of this and this, even me in my pregnancy I felt like this and I left it and it passed like this and like this", "So what do we do?" "Do like this like this it will leave", and that is how we ask each other at home at that state already'.* [Mother4]

In summary, this subtheme illuminated the complex interplay between cultural norms, gender preferences and maternal healthcare decision-making. It revealed a divergence of viewpoints between pregnant women and midwives regarding the role of traditional birth attendants and the influence of gender in selecting healthcare providers. Cultural beliefs and traditions played a pivotal role in shaping these choices, which highlighted the impact of societal norms (e.g. witchcraft), intimate partner violence and polygamy on maternal healthcare use. Midwives recognised the importance of respecting and adapting to these cultural tones and strived to provide care that aligned with the values and preferences of the women they served.

6.4.2 Family and community influence

This subtheme explored the complex interplay of familial, communal, and cultural forces that influenced the choices made by pregnant women regarding attending ANC. In this complex context, the impact of family members, neighbours and communal beliefs emerged as a central determinant of a woman's ability to access and attend ANC. Midwives reported the deeply entrenched role of male involvement within a patriarchal society. They described a prevalent phenomenon known as 'Mwenye syndrome' (husband syndrome) that placed husbands in positions of absolute decision-making power, often without room for understanding or correction.

This syndrome originated from a belief in male superiority and was further perpetuated by traditional customs such as dowry payments. As a consequence, women often found themselves in a subordinate position, akin to a state of subjugation, where they were expected to unquestioningly obey decisions related to their own health during pregnancy.

> *'…the husband there is what we call the "Mwenye syndrome", Mwenye syndrome (husband syndrome) is what we call husband making decisions for somebody else and might make the wrong decisions and makes that one to be the right one. Here men make, they are the superpowers, they don't want to be corrected, if he says this will be done then it means that is the one that will be done. For they believe you see marriage is like even buying a shamba (land) cash this shamba of mine is around 20,000. So, if I give you the 20,000 it will remain mine and you have no say about it now, actually so that one makes it difficult for these mothers because they are, dowry was paid at their family and now for them, it is as if they have been taken there as slaves, go and stay there, listen to what you have been told there and you are there to be seen not to be heard. So that is the challenge these women get from these communities'.* [RM5]

This belief of male supremacy and being the owner of pregnancy was reinforced by a scenario described by another midwife, where a mother's autonomy was overruled by her husband in decisions related to her pregnancy, including complex medical procedures such as a caesarean section.

> *'…like the man in in charge of everything. It's called the "Mwenye syndrome", when you as a mother, we have to do this and this, and this… "mpaka nimwambie mwenye" (I have to tell the owner of pregnancy). So, the husband is the one to decide. We have…the foetus is…maybe you have breech presentation…we have to take you to caesarean section…But you hear the mother say that the man has to decide'.* [RM9]

Midwives also emphasised how the intersection of poverty and spousal involvement could significantly impact pregnant women's access to essential healthcare services. Financial limitations and husbands' decisions could delay women's access to timely ANC.

> *'…because there was one mother who came and I asked, why have you come late? and she was like, I was not given fare, my husband was not at home……*

And that mother had…these are different scenarios one had reduced foetal movements. She had perceived these, perceived these reduced foetal movements 2 days ago and she is coming now, later, and we were like, what happened, were you not perceiving? and she was like, I perceived 2 days ago, but my husband was not there to enable me to come to the hospital. So, in terms of poverty and decision-making'. [RM6]

Midwives observed that pregnancy was generally considered a woman's issue, and they highlighted the pivotal role of the mother-in-law in navigating obstacles related to finances and transportation on behalf of the pregnant woman. The mother-in-law assumed a critical responsibility for the expectant mother, including reporting any issues that might arise. This reporting would prompt the husband to provide the necessary finances and permission for the pregnant woman to attend the antenatal clinic. To illustrate the significant influence of the mother-in-law, one midwife shared insights into the traditional cultural norms, emphasising the exclusivity of women's matters within these customs.

'...according to that culture the husband is not supposed to be aware of issues of her pregnancy if there is a problem to tell mother in-law...they say if it is women issue, it should be women issue'. [RM4]

The midwives noted that the support network surrounding pregnant women significantly shaped their health-seeking behaviours. This extended network, comprising family, neighbours and mother-in-law figures, influenced expectant mothers by encouraging pregnant women and accompanying them during their visits to healthcare facilities. The insights shared by the midwives further emphasised this support network's importance in promoting timely ANC attendance.

'…parents take it upon to make sure that the mother comes for the antenatal clinic…they are being pushed by their parents to come…they come early'. [RM2]

'…the good thing with Muslim they support one another if she's a sister who's pregnant not married you find that she comes with cousins'. [RM4]

'...You know, especially the primigravida here in Coast they are very young. Those mothers who are early 20s and late in 18 years, 17 years, even 20 years….

So, most of them they are escorted by their mothers and their mothers-in-law, so the experience of these mothers-in-law and their mothers, they're the one who make them to come early'. [RM8]

Interestingly, the community also played a notable role in influencing ANC access and attendance among pregnant mothers, regardless of their level of autonomy. It was observed that community members often encouraged expectant mothers to seek ANC and expressed concern about their healthcare-seeking behaviour.

'…it's normal from the community to say, "ah, you should go to the clinic...how far are you? 3 months? Ok, you should go to the clinic". Even though they come late, the community has concerns on clinic visits'. [RM9]

Nevertheless, it is essential to acknowledge that some pregnant mothers exhibited a level of independence. These self-motivated women took it upon themselves to attend antenatal clinics, demonstrating a personal commitment to their health and that of their unborn children.

'*...personal push for one to attend the clinic, though most of the people do come early'.* [RM9]

Midwives also observed that unmarried pregnant women, particularly in the Mijikenda community, often relied on the guidance and support of older female family members, such as their mothers or mothers-in-law. These older women were highly regarded for their knowledge of pregnancy, labour and ANC. Therefore, they decided when pregnant women should seek ANC. They also actively accompanied these expectant mothers to ANC clinics, indicating their influence on ANC attendance.

'…But with those young ladies who are singles. They are with their mothers, so their mothers are the one to decide when to come and they have to escort them…especially the mother-in-law they have to be aware that this mother is coming to such a clinic'. [RM8]

'…Mijikenda's greater influence comes from the mother-in-law…they are brought by their elderly mothers-in-law because they have a bigger say, they are thought to know much about the whole process, so every time they have a problem especially regarding to

labour and to the antenatal clinics they are handed over to, to carry the whole exercise'. [RM10]

Participating mothers' perspectives closely aligned with those of the midwives regarding the role of husbands in the ANC process. Mothers emphasised that their husbands primarily provided financial support for attending the antenatal clinic but often had limited involvement and emotional engagement in the process of accessing and participating in ANC services.

'…he sends me money, then he tells me go to the hospital and tell me what you have been told if there is a problem, we will know what to do next'. [Mother6]

'…when I am given the date that I am supposed to come back okay he arranges the fare'. [Mother12]

Moreover, some mothers' accounts revealed how their husbands actively advocated for ANC attendance, offering financial support and promoting a culture of seeking professional healthcare guidance.

'…He advises me all the time, "go to the clinic, go to the clinic"'. [Mother14]

'…Him, you explain to him that you want to go to the hospital. First, he loves that. He doesn't like when you stay at home and you tell him, "I have a headache, I have this". He can't tell you to take the medication. He will tell you, "It's good to go to the hospital"'. [Mother20]

'…in fact, he advised me to come to the clinic. He said that it is important to go to the clinic, but I say that will go. In the morning when he called, I said that I would go…mother-in-law told me to go to the clinic if I had not gone'. [Mother5]

Some mothers emphasised the influential role of mothers-in-law in rural areas regarding ANC attendance. Although mothers-in-law were generally supportive, some held beliefs that hospitals were unnecessary for pregnancy care. This perspective could potentially have a negative impact on pregnant women's ANC attendance. One mother explained that in certain family dynamics, especially when the husband was absent, obtaining permission from the mother-in-law was a crucial requirement.

'…It depends on how the family set-up is and if the rules are with the mother-in-law, if the son is at work, it is a must you ask for permission from her and if she says no, it is a no'. [Mother18]

Moreover, some mothers-in-law, particularly those in rural areas, resisted ANC attendance based on their traditional beliefs and past experiences with home births. Their opposition was rooted in the belief that home births had been sufficient for their children and that clinics were unnecessary. This resistance to ANC attendance by certain mothers-in-law posed a significant barrier for pregnant women in these communities, potentially jeopardising their access to vital healthcare services.

'…Mostly if you find the mother-in-law who stay in the interior part of the village, they don't know what clinic is. They say, "all my children have been delivered at home…you will not go. You will not go"'. [Mother20]

Some mothers reported that the community shared a collective awareness regarding the significance of ANC services. Neighbours emerged as key figures who offered support and influenced the decision to attend ANC clinics. One pregnant woman cited her neighbours' interest in her clinic visits as reinforcing the importance of seeking ANC early. This communal engagement ultimately played a vital role in shaping that woman's commitment to prioritise her healthcare needs during pregnancy.

'…because the neighbours ask me, "when will you go to the clinic?" I tell them that I will go, and they say, "health is good to know early, make sure you go", so I knew it is important to come to the clinic'. [Mother14]

In summary this subtheme presented findings on the impact of influential family members, such as husbands, mothers-in-law, and mothers, in determining a woman's ANC access and attendance. It highlighted how financial constraints, poverty and patriarchal structures could hinder timely access to ANC services. This subtheme also emphasised the influence of neighbours and community members in encouraging ANC attendance.

6.4.3 Male involvement

This subtheme explored the role of male involvement in ANC, and highlighted the challenges and efforts made to encourage men to participate in the maternal healthcare process. Midwives

observed that in this cultural context, husbands were often not expected to be directly involved in matters related to their wives' pregnancies, particularly when complications or concerns arose. Instead, these situations highlighted the significant role that the mother-in-law played in maternal health matters, which in turn reinforced the prevailing notion that maternal health primarily fell within the domain of women. This highlighted the cultural division of responsibilities and decision-making concerning pregnancy and emphasised how men were frequently distanced from these aspects of reproductive health, even during critical moments.

> *'...according to that culture the husband is not supposed to be aware of issues of her pregnancy if there is a problem to tell mother in-law...they say if it is women issue, it should be women issue'.* [RM4]

The midwives' observations revealed that the majority of pregnant women attended ANC appointments unaccompanied by their husbands. This trend was attributed to the fact that men often found it challenging to wait for extended periods and grew fatigued during the process. Midwives rationalised that women came unaccompanied because their husbands were usually engaged in gainful employment, which was necessary for the well-being of the family.

> *'…And some of them they are living with their husbands so the husband has gone to work, she is told take this money go to the hospital start the clinic, I am going to work, we cannot go all of us, we need this and that. Most of them they just come without their husbands. Most of them. If you ask them, they will tell you the husband is at work'.* [RM1]

Midwives implemented a multifaceted strategy to encourage male involvement in maternal healthcare. This approach included giving priority and providing incentives to couples attending ANC appointments. It acknowledges the significance of men's time, addresses potential attention-related challenges, and seeks to empower men by making them feel valued and motivated to actively participate in the healthcare process. This perspective was supported by some midwives' narratives.

> *'…So, and also there were incentives that they used to get, and when they come, we used to give them first priority, so any couple that we see around we have to attend to them first, and then they leave. Now with that the others used to learn, ok, If I come with my*

partner then I will be attended to first and I will go, so now they used to come with their partners, we could even see them calling them, "come there is a long queue, come", so when they come take now that advantage'. [RM2]

'…they know if they come with their husband, she will be given first priority'. [RM7]

'…We give privileges for those who come with their husband we, we first serve them…We also encourage them to continue coming until delivery because the journey is a bit long, so we encourage them'. [RM4]

Mothers' perspectives on their partners' involvement in ANC shed light on the complexities of male participation. While many mothers expressed the desire for their partners to accompany them to ANC appointments, there were various challenges and attitudes that influenced whether men actively engaged in the process. Some mothers recognised the advantages of including men in the ANC process. This inclusion ensured firsthand information for more informed decision-making. Furthermore, the shared understanding resulting from joint attendance led to improved cooperation in implementing healthcare recommendations, which is a critical factor for the well-being of both the mother and child. This practice fostered trust, shared knowledge, and enhanced emotional well-being within the relationship, collectively contributing to more effective healthcare implementation and ultimately, healthier pregnancies.

'…Yes, there is a benefit of male involvement. It is of importance because there are some men, let's say you have blood level that is low, you go explain to him that you have been told to eat fruits and vegetables. He could think that you are lying, and he might think you just love these things but when you come with him and he hears, "your wife's blood level is low, and you are to buy this and that". Like at the hospital the teachings that you will be taught, the words…all together you will understand. I see it as important…it is important because it brings love and happiness of marriage…you feel you are very happy…when you come in with your husband…I feel so good'. [Mother18]

In addition, some mothers highlighted that having their partners accompany them during ANC visits provided motivation and emotional support.

> '*…journey for carrying the pregnancy to say the truth is exhausting, it is good at least your partner motivates you there and when you come here maybe at the bench…but sometimes you can find others brought by their partners'.* [Mother1]

Although many pregnant women acknowledged the importance of male involvement in ANC as a source of emotional and financial support, there were instances where women chose not to encourage their partners to attend ANC sessions. In these cases, some women held the belief that their partners' primary role was to provide financially for the family, and taking time off work to accompany them to the clinic might be perceived as a waste of time.

> *'…I felt that it wasn't necessary because he has to work, he has to get money. I have to eat, yes. So, if we just roam around going to the clinic back and forth, when will he be look for money, so I didn't say that it was necessary, but what I was being told, I just came back straight and told him, "I have been told what should be done" …he understands'.* [Mother13]

Conversely, some women mentioned that their partners would be willing to accompany them to ANC appointments, but these women opted not to request their partners' presence. Instead, they decided to independently make decisions about their ANC and communicate the necessary information as required.

> *'…I haven't talked to him about it because I don't see the importance of him to sit because whatever I will be taught here is what I will explain to him. In any case if he will be asked to come in, I will tell him, but I don't blame him I have not told him why we should go together. Maybe he can't refuse we come together but personally I have not told him'.* [Mother18]

Nevertheless, the experiences of some women highlighted the difficulties and underlying causes behind the absence of some partners during ANC visits. These insights offered a glimpse into the multifaceted nature of male involvement, or lack thereof, in maternal healthcare. They showed the impact of work-related obligations and various other factors that contributed to men's decisions regarding attendance at ANC appointments. The following quotes provide a window into the complexities and deliberations within relationships when it comes to participating in ANC sessions.

'…He does not bring me. Me, I tell you this is my second pregnancy; even my first pregnancy he didn't bring me, even the day for delivering, I came alone…I have already told him, but he doesn't want to come…if someone does not want to come, will you force him?' [Mother1]

'…It is not that easy for him to follow me here he will always come up with excuses, "you just go, I'm busy I am doing something else"'. [Mother 15]

'…I told him, but he said he has work, so if you wait for him he says he has work, he has work so you wait for him all the time, I sit waiting for him so that he can bring me to the clinic...so I know the dangers for not coming to the clinic, it's better for me to come early than to wait for him'. [Mother9]

Another notable barrier to increasing male involvement in ANC was men's resistance to deviating from traditional norms that historically excluded them from ANC sessions. Moreover, men often failed to see the value in undergoing joint HIV testing with their partners. This deeply ingrained reluctance to change was a significant obstacle to promoting male participation, even when their partners actively encouraged their involvement.

'…it is during the time I am pregnant when I was carrying my third child I told him, "so now people go to the clinic, it is needed they go as husband and wife and we get tested all of us our state of health", and he said, "since I married you for 14 years there is no disease that I have brought to you know home, you go, put the results here when I come I will see". So I said there is no need to compete with him and because the first I did, I put the result on the table for him and I am okay, the second one I did, I brought it and was okay, that other one I brought it and I put it on the dressing table, so what did I do, I went alone and tested everything I told him that the results are okay so me, I trust myself'. [Mother11]

'…My opinion is that the fathers to be educated on the importance of supporting the women during the time for pregnancy even if someone will not come for all the visits but at least one visit, he brings you, they should be advised also during the time for HIV testing, they should not be fearful to come and get tested and know their status…' [Mother1]

Unfortunately, one mother recounted an incident where her husband, who was willing to be involved, was discouraged from attending the ANC clinic because of the hospital's stigmatisation of male participation.

> *'…I am told and then I tell him. When I tell him and then he says, "were we supposed to go together", and then he said we go, even that I have been here, it is that he has been sent away but in the evening he could have come again it is the way he was sent away and he was told, "it is not a place you be together with your wife, be outside". And that is why he said that he will not come, but he usually like to come to the hospital'.* [Mother12]

Some pregnant women expressed their openness to male involvement and recommended strategies to encourage it. They proposed a 'men-to-men' approach, where men were engaged, motivated and educated by other men, particularly respected community figures such as village elders and chiefs. The suggestion was that the government should implement initiatives that involve these influential community members to promote male engagement in ANC. This approach was seen as a way to improve men's understanding and acceptance of their role in maternal healthcare, addressing one of the key barriers to male involvement.

> *'…the government I ask should look for men to men when they talk they will understand each other more, they do for them like visiting them, talking to them, to motivate them, it is the elders of the village, those elders of the neighbourhood the work is that one, the chiefs their work is that one, so you get people the government to volunteer to educate them maybe they will listen'.* [Mother1]

In summary, the subtheme of male involvement in ANC reflected a complex interplay of factors and attitudes that influenced whether men actively participated in the maternal healthcare process. Although some men were willing and supportive, various barriers and challenges, such as work commitments, reluctance to change established norms and the stigma associated with male participation, hindered their involvement.

6.4.4 Financial factors influencing ANC access and attendance.

This subtheme concerning the influence of financial factors on ANC access and attendance explored the complex challenges faced by pregnant women and their families, including direct medical expenses, transportation costs, lost wages because of clinic visits and other indirect costs. Access to ANC is a fundamental component of maternal and child health, as it allows for early detection, prevention and management of pregnancy-related issues. However, the financial burden associated with ANC can be a significant hurdle, especially in resource-constrained settings. Midwives offered invaluable insights into the multitude of challenges that expectant mothers encountered when seeking access to ANC services, with financial constraints emerging as a predominant hurdle. Their observations highlighted the pervasive influence of poverty and its profound implications, even extending to the government's ability to address this complex issue.

> *'…if you go deeper, you ask them why? they will tell you maybe the financial problem, things like poverty, they will give you some of their challenges that they are going through in the community that makes them not to come. Poverty is a big challenge even for the government to handle'.* [RM2]

> *'…there are challenges of funds to access the facility so sometimes maybe the husband is economically unable to support'.* [RM4]

Participating midwives also emphasised the substantial power and control husbands held over their wives' access to ANC visits. As women often depended on their husbands for financial resources, particularly for transportation to ANC, they frequently had to wait until their husbands could provide the necessary funds to initiate clinic visits.

> *'…reasons maybe just financial constraints as in maybe some depend on their husbands to give them money for transport from their place to the facility. That is also another challenge. I was waiting for my husband to give me money to start the clinic, so he is the one who hadn't given me, so they wait for the husband, they continue to wait, to wait, as the pregnancy advances'.* [RM3]

Another midwife underlined the paramount influence of husbands in their wives' decisions related to ANC visits. The mention of the '*mwenye syndrome'* highlighted a prevalent societal

issue in the Coastal region, where husbands (referred to as 'Mwenye') wield absolute control. This showed the power dynamics within these relationships, indicating how women often submitted and adhered to their husbands' decisions, particularly in financial matters.

> *'…the other challenges that makes them come late for the visit, some you may find they don't have the means of transport then you find their husbands are very harsh maybe, you may tell him I want to go to the hospital then he tells her there is no money so that mother you find they are submissive so this thing of the owner of pregnancy [Mwenye] (meaning husband) they have to consult, If Mwenye refuses they don't come…there is what we call Mwenye syndrome in the Coastal region mostly, so Mwenye is that husband. If Mwenye refuses now the wife has no say, if she is told there is no going somewhere like that, that is what she will do…where there is poverty there is no money'.* [RM7]

Midwives also noted that financial concerns deterred some mothers from seeking ANC services, and even forced others to discontinue their clinic visits because of budget constraints.

> *'…they don't start clinics...Some have financial challenges to continue, some they tell say, "there's no need to go. Even if I don't go to the clinic, I will still deliver the baby, so I will not go. It is not a must for me to deliver at the hospital and there's no problem"'.* [RM19]

The pregnant mothers' perspectives on financial challenges and poverty were consistent with those of the midwives. Despite the fact that ANC visits were free, indirect costs such as transportation fares remained a significant barrier for some mothers, even for those who resorted to walking to the facility. This financial strain often led to missed ANC appointments and, in some cases, home deliveries.

> *'...There was no way I could afford to go to the clinic. These challenges compelled me to stay at home and deliver. Poverty deters women from visiting the clinic because they cannot afford to pay…if it reaches that day and he doesn't have it will make him tell me, "I have tried, I have not found, it will make you to walk, go, I can look for it right now and send you back with a motorbike but if I lack, you will come back on foot"'.* [Mother2]

Another factor contributing to limited financial resources and its impact on accessing ANC was the prevalence of unplanned pregnancies. These pregnancies strained family resources, forcing women to rely on government healthcare facilities.

> *'…most times those that come to this government hospital it is those that financial capability is low…because my husband says, "that is a sudden matter, I did not plan for it, here I don't have money".* [Mother1]

Financial constraints were a barrier to accessing and attending ANC for many pregnant women and their families. Poverty posed a substantial challenge, particularly when it came to covering transportation costs required to reach the clinic.

> *'…some families are very poor. To get that 100 bob, to come from there to here is a problem…she is married but now she doesn't have money, she is poor'.* [Mother13]

> *…they can't reach to the service because of the financial status…there is poverty'.* [Mother15]

> *'…I am not going because I don't have money'.* [Mother16]

Furthermore, for women who depended on their spouses for support, it was often challenging to justify the expenses associated with attending ANC, especially when the family's finances were primarily allocated for essential needs such as food.

> *'…Even if he knows people go to the clinic things like that as you know our men here most times…it is not issues for men, will he go to look for money we buy food we eat, or will he arrange for me tickets to come to the clinic?'* [Mother1]

> *'…you will go by foot because I don't have money. The money I had I used it to buy food and we ate, so you will just go on foot'.* [Mother2]

> *'The money that I get is already for food'.* [Mother18]

For some pregnant women who were in the workforce, attending ANC posed a significant challenge. Their jobs were demanding, and the fear of losing wages for days not worked made it

difficult for them to come to the clinic. In one instance, a mother voiced her frustration with her employer, who refused to grant her even a single day off to attend ANC. This situation forced her to make the difficult decision of quitting her job to prioritise her health and ANC appointments.

> *'…I could have come a long time ago but there at work…She can't give me even 1 day, to say I am going to the hospital. I asked and begged her to go to the clinic and she said, "you when you leave work, when you go there, I will deduct your salary" …I saw I leave that work completely so I can get a chance to come here'.* [Mother7]

> *'…it is because my job is so demanding yeah. Whenever I want to come to the clinic, I get held up somewhere and that is why I came after all those weeks'.* [Mother15]

The limited financial resources available to these families were primarily allocated to meeting the basic food needs of the household. Consequently, when pregnant women required money for transportation to the clinic and their spouses could not afford it, they were left with no choice but to wait, resulting in further delays in initiating ANC or even non-attendance. One mother explained the challenges faced by pregnant women who were willing to attend the clinic but were often delayed by childcare responsibilities and the necessity of providing food for their families. The need to strike a balance between their jobs, obtain permission from employers, work around inflexible clinic days and ensure their families were provided for all influenced women's ability to attend ANC appointments.

> '*…you see another one is a mother again is the father she wishes to get that day she comes to the clinic but when she looks at it that she is going to spend a lot of time when I come back in the evening, "what will the children eat?" It makes her cancel she goes to look for food for her children so those are the reasons some delay or they don't come at all because when someone does that, it is because there is work they want to do or offs of work, it is not all that we get offs some where they work, maybe they rest on Sunday, on Sunday the clinic is not open; the clinic is Monday to Friday. You know some employers you have to ask them for permission so that they allow, when they refuse and that is where you get the food for the children, then there you say I pray already to God it ends like that'.* [Mother16]

In summary, this subtheme highlighted the challenges faced by pregnant women and their families. The financial burden, stemming from transportation costs, indirect expenses, and job-related concerns, significantly influenced the decision-making processes and healthcare-seeking behaviours of pregnant women. Poverty and limited financial resources, along with the prioritisation of family resources for basic needs such as food all played a role in hindering the use of ANC services. Moreover, the power dynamics in relationships, where women often relied on their spouses for financial support, further complicated ANC attendance. Although government services are free, the indirect financial costs were still a barrier for many pregnant women. This suggested comprehensive systemic interventions are needed to ensure equitable access to ANC.

6.4.5 Pregnancy health promotion

This subtheme described the multifaceted process of pregnancy health promotion and information dissemination, with a specific emphasis on the pivotal role of healthcare facilities. The exploration of this sub-theme shed light on how these facilities served as key sources of essential knowledge for pregnant mothers. Diverse methods were explained, such as one-on-one consultations, group ANC and instructional materials, that empowered pregnant women with the insights and tools necessary to successfully navigate pregnancy, culminating in a safe delivery and a reduced risk for complications. Key topics explored in this subtheme encompassed birth preparedness and complications, nutritional counselling, information on endemic diseases, guidance on HIV testing and the critical aspects of timing and scheduling ANC visits. The subtheme also explored how midwives played a central role in imparting these vital insights to pregnant women with the overarching goal of reducing maternal mortality. Participants indicated that the information was also provided in pictorial form for those that could read and write but the illiterate may not benefit from this unless someone reads for them.

The midwives reported that they gave health education sessions in the morning before the clinic began, which was beneficial for women who came early to the clinic. One-on-one education was also given, although midwives' workloads meant group education was more common and applicable. The health education provided a relationship between the pregnant women and the midwives who supplied care. Midwives described health talks and educational sessions as integral components of ANC in healthcare facilities. These sessions served a dual purpose: they

raised awareness among pregnant women and explained the significance of key elements such as birth preparedness and early clinic attendance.

> *'…some come for their family planning, so we give health talks, we give health talks everyday here in the clinic, so that gives awareness…We usually teach them during their first visit and also in their other visits…we do health education'.* [RM6]

> *'…Is due to the awareness, we usually give morning talks in our clinics, so that we emphasise on birth preparedness and the importance of attending clinics early'.* [RM6]

Midwives emphasised the diverse approaches used to educate pregnant women about maintaining a healthy pregnancy. They observed that women displayed eagerness for information, and health education played a pivotal role in equipping them with knowledge about pregnancy complications. Health education served as a means to convey key subjects, including birth planning and testing for STIs.

> *'…Yeah, through health education that we give them actually most of them they want to know more about these danger signs. Otherwise, if you don't know either of the danger signs and maybe it occurs to you when you are at home, and you have nobody either to tell you about it you might even lose the baby. So, most of them actually they come to know that about the danger signs and how to prepare for themselves what we call the individual birth plan, individual birth plan for them at least to be investigated on diseases like the syphilis, things like gonorrhoea, also the HB and blood groups so they actually come to know'.* [RM5]

The midwives also emphasised the positive impact of health talks regarding the importance of early initiation of ANC on pregnant women's awareness. They noted that these talks led to increased awareness about the significance of early ANC visits. Furthermore, midwives stressed the value of providing the correct information to women, encouraging them to seek care promptly during future pregnancies and offering reasons for early attendance. This approach aimed to improve women's understanding of and comfort with ANC visits, leading to better healthcare use in subsequent pregnancies.

'…when we started giving them the health talks on the importance of starting the ANC early, we have seen the outcomes of that, at least now they are aware that they are supposed to start the ANC visits early. But after educating them or informing them that even if you come early, we are only going to schedule only four visits, for those who are not having any complications, but it will depend on the type of pregnancy you are having and if you are a mother at risk at least you might attend more visits'. [RM1]

'…we give the right information we say that next time when you have the pregnancy it is good for you to come early and we give the reasons why they need to come early and if it is maybe making so many trips so also we talk about, we just talk, you just don't come you come when there is a reason for you to come. So, if you don't, we know you are not comfortable with the trips we get to you and so as we get the information and the reason why they have come late we give, at least we give the right information to them so we are expecting the next pregnancy there will be improvement'. [RM3]

Midwives recognised the significant role of pregnant women in disseminating important information acquired during health education sessions to others in their community. This process of knowledge-sharing empowered individual pregnant mothers and also extended the reach of valuable awareness to their neighbours and friends, forming a network of informed women in the community.

'…We keep on giving health education, so you know it is like a channel so tell her neighbour tell a friend and when they come, they find the places is safe for them they get services and there is good organisation…but what is there, they need a lot of counselling at the first visit apart from their examinations when they get a lot of information about the importance of ANC visits it becomes very easy'. [RM4]

Midwives also shared their understanding of the various components of ANC visits. For example, one midwife detailed the activities during the first visit, which encompassed HIV testing and counselling, as well as addressing nutrition, basic pregnancy care, early signs of potential complications and the overall significance of these visits. In this comprehensive approach, the midwives ensured that expectant mothers received well-rounded guidance during

their initial ANC appointments, emphasising both the routine and critical aspects of prenatal care.

> *'…here in this facility, for the first ANC visit they start with HIV testing and counselling which is done and after that there is also another counselling after examination of the mother is relaxed, so we counsel the mother on all the aspect we give integrated so we counsel on nutrition, basic care of a pregnancy and also early signs and danger signs and we counsel a lot about the pregnancy so sometimes we focus on the importance of the visits'.* [RM4]

Furthermore, midwives saw ANC visits as a valuable opportunity to educate women about prevalent endemic diseases, particularly malaria, which is widespread in Kilifi. In addition to imparting knowledge, they provided essential tools for disease prevention, including the distribution of recommended malaria prophylaxis such as mosquito nets and medications.

> *'…We give nets [mosquito nets] to the first attendance, the first clinic…now that for preventing malaria, we teach them on how to prevent malaria by sleeping under nets, clearing the bushes and water, for effective control'.* [RM6]

> *'…so sometimes we in our facility here we provide with drugs like the (SP) which prevented we clear the malaria parasite in the placenta'.* [RM4]

The mothers' perspectives on pregnancy health promotion were closely aligned with those of the midwives. Many mothers noted that they had received comprehensive education on various aspects of pregnancy, including its progression and the identification of danger signs. Many women also highlighted the importance of testing during pregnancy and the value of the information they gained from these sessions.

> *'…Sometimes I ask questions, "when you look like this…when someone has reached a certain month like this, how is a baby supposed to be?" With asking my questions then I learn, I feel educated, like that…We have been told about how we take care of the baby that is inside, what we are supposed to do as mothers. They have explained many things like getting tested. We have received good lessons'.* [Mother18]

In addition, mothers received valuable information about the significance of initiating early ANC and the importance of adhering to medications and supplements.

> *'…when you come in the morning there is usually talks, there you are told you are supposed to start the clinic early so that if there is a problem that come up you will know how your pregnancy is…So, you are advised to come to the clinic earlier on don't wait the fourth month, fifth, sixth. There are others who come at the eighth month. She starts this eighth month when it reaches the ninth month, they miss the medicine because there are medications that they are supposed to take, you have missed many things the midwife has taught'.* [Mother2]

Mothers also highlighted the comprehensive nature of the health promotion they had received during ANC visits, which encompassed family planning, nutrition and addressing issues like iron deficiency. They expressed how the healthcare providers used a 'teach back' approach to ensure that the mothers fully understood the information provided.

> *'…When we start clinic, down there it is a must we are put together at the family planning, the pregnancy first and then the pregnancy to continue you are there together and then doctors when they come to explain to us and then it is a must, they will ask us questions. The way they will explain like the way I came when I tested first, my blood level was at 9.8 g/dl, so they told me, "Woman, you are required to eat well the blood for addition is not good, it is you to take vegetables, eat things for blood". You see I got that benefit and when I left here on that day, I was bleeding, that beetroot juice, spinach I boil it alone or I eat it with food, I, so when I was told these tests I have seen the benefits it came to 11.7 g/dl'.* [Mother11]

Importantly, mothers attending ANC sessions received reminders about recognising and responding to danger signs during their pregnancy. These reminders emphasised the importance of seeking prompt care in specific situations.

> *'…If you feel dizzy or bleeding come quickly…we are usually educated…when you feel your belly is paining and the day has not reached, you come, when you see blood come, when you are dizzy or have a headache, you come. They tell us'.* [Mother12]

6.4.6 Sources of information on ANC

This subtheme explored the sources of information accessed by pregnant women. They drew insights from a diverse range of channels, including guidance and advice from their mothers, midwives, friends and neighbours, the support of community health volunteers and even online resources via the Internet. Midwives also emphasised the significance of matriarchal roles in the dissemination of pregnancy-related information. Older women, such as mothers and mothers-in-law, played a crucial role in sharing knowledge with pregnant mothers, acting as influential figures who encouraged early ANC attendance.

> *'…we also give these mothers…we also empower them, the older mothers so that they can also go and share the information...they can also be the influencers of these mothers coming early'.* [RM6]

Midwives reported that neighbours who with prior pregnancy experiences held significant influence and served as sources of information for pregnant mothers.

> *'…at least a neighbour who she has had an experience of delivery maybe she has passed through there, so they tell one another'.* [RM1]

Midwives also noted that women received ANC information from various other sources, including media outlets.

> *'…sometimes there is information through the media, they are told to go to the clinic, so you also empower them to listen for such from different types of sources'.* [RM1]

The midwives also highlighted the vital role of community elders in information sharing and mobilisation for early ANC attendance.

> *'…the elders in mobilising the clients and sensitising them and showing them the importance of coming to the clinic and assessing the health services and also involving the antenatal women through the 10 households [Nyumba kumi]some come early because they have already received the messages because they we have a lot of information that is being disseminated around and the importance of going to the clinic early so they come*

basing on what they heard the importance of coming to the clinic early and so they come to the clinic'. [RM3]

The midwives acknowledged the invaluable contribution of community health volunteers in the community. These volunteers played a pivotal role in disseminating health information and mobilising pregnant women for early ANC attendance.

'...community health volunteers disseminate the messages to the pregnant women in their community units, so they mobilise the pregnant women to give them information concerning the early attendance of the ANC'. [RM3]

Similar to the midwives, participating mothers also recognised the pivotal role of matriarchal figures, including their own mothers and mothers-in-law, as essential sources of information during pregnancy. These older women significantly influenced the mothers' attitudes and decisions regarding healthcare practices. However, there were conflicting perspectives, with mothers-in-law sometimes questioning the necessity of hospital visits, whereas the church community emphasised the benefits of attending clinics.

'...That information I knew it from my mother'. [Mother17]

'...it's like my mother-in-law say that they have already delivered and they didn't go to the hospital so they don't see the importance, "going to the hospital has what importance?" and I said that I don't know because this was my first pregnancy, but you can sit with the others in church and they say "when you go to the clinic there are injections that can help the baby, there is medication to add blood and through those talks I loved to go", and they say if you go it is fine and if you don't go it is also okay. So I told my husband it is better to go, and he said okay. The first pregnancy is when we started at 4 months. So, when I went to the hospital is when I got the education now and I see the importance of going to the hospital'. [Mother12]

Mothers also noted the significant influence of their friends in determining the timing of their ANC attendance. For example, one mother recounted how her friend advised her to begin ANC in the fourth or fifth month of pregnancy.

'…It like you hear your friend can be pregnant and tells you, "You can even go on the fourth month, fifth month"'. [Mother20]

Mothers also turned to the Internet as a source of pregnancy-related information. For example, one mother explained that she searched for signs and symptoms of early pregnancy online.

'…First, before I went to the hospital, there is a time I was feeling breast, my nipple was painful, so I was wondering what is making me this way, so I started to Google, signs of early pregnancy…I used to Google everything and anything about pregnancy so that I know if I am pregnant'. [Mother6]

Many mothers highlighted the significance of ANC outreach services provided in schools, particularly services related to vaccination and promoting safe pregnancy practices.

…There at home mostly they come to the schools they come with vaccines of children, or they come with things of pregnancy'. [Mother12]

Moreover, many mothers recognised the vital role of well-trained community health volunteers who conducted outreach services in their villages. These volunteers visited the community to disseminate essential information.

'…The community health volunteers can visit when they have gone to be educated, from there they call the villagers and educated them the way they have been taught'. [Mother19]

In summary, the sources of information about ANC were diverse and multifaceted, encompassing an array of outlets from which pregnant women drew insights. These sources included guidance from their mothers, healthcare professionals, friends and neighbours, the supportive role of well-trained community health volunteers and even online resources via the Internet. The impact of these sources on the timing and initiation of ANC varied, as women often grappled with conflicting perspectives, cultural influences, and their own understanding of pregnancy-related issues.

6.5 Theme three: System and structural factors

This theme centred around system and structural factors provided an extensive lens through which to examine the intricacies of midwives' and mothers' encounters with accessing and engaging in ANC services. It explored a range of subthemes, encompassing resource availability, financial limitations, geographical accessibility, internal healthcare system barriers and the distinctive challenges arising from the COVID-19 pandemic. Together, these factors significantly influenced how women accessed and used ANC services, which highlighted the multifaceted nature of the healthcare system's role in maternal and child healthcare.

6.5.1 Transport and distance to ANC clinic

The subtheme covering transportation and distance to ANC services provided a critical lens to examine the various barriers faced by pregnant women in reaching healthcare facilities for essential prenatal care. Access to ANC is a fundamental component of maternal and child health, as it allows early detection, prevention, and management of pregnancy-related complications. However, geographical factors, financial constraints and the availability of reliable transportation can significantly impact the use of ANC services. This subtheme described the complex challenges that pregnant woman faced in reaching healthcare facilities, thereby highlighting the economic, environmental, and structural barriers that hindered timely and consistent ANC attendance.

Midwives highlighted the unwavering commitment of many women to prioritising ANC services. These women were determined to secure the necessary funds, even if it required walking to the clinic, all driven by their deep understanding of the importance of the service.

> *'…they are able even to walk, so it doesn't matter whether you have, or you don't have once you know the importance of going to that clinic you will go even at your home…So, she will go and look for that 50 shillings or 100 shillings because she knows the importance of the services that she is going to be offered for herself and her unborn baby….'* [RM1]

Midwives acknowledged that some women faced challenges in accessing ANC clinics because of both financial constraints and the considerable distances they had to cover.

Economic hardship made it difficult for these women to afford transportation costs, which added up to a significant amount for every visit. Moreover, given their pregnant state, walking long distances to the facility was physically demanding and often not feasible.

> *'…so, if one does not have fare to come to the hospital, like 100 shillings coming, 100 shillings going back to home, then it can be a hindrance…sometimes it could be due to distance you know, like coming to the hospital, and maybe you are from a far distance'.* [RM6]

> *'…So, transport to them from their homes to the facility, especially those who are who are pregnant, they find it difficult to walk. So, it is a challenge to them'.* [RM5]

Furthermore, midwives mentioned that women living far from the clinic and facing financial constraints often hesitated to begin ANC visits early because they knew they would need to make frequent trips, incurring additional transportation costs.

> *'…there are some who come from far. So, one says If I start the clinic early and I keep frequenting maybe the distance is 150 shillings, or 100 from your place to the facility you would rather wait'.* [RM3]

The midwives believed that the construction of most ANC facilities near communities should have improved access for women. However, they noted that some women still had to travel long distances to reach the clinics.

> *'…but now most of the facilities there have been constructed near the people. Somebody tell you I walk more than 10 kilometres to get services the least maybe we can say maybe 3 kilometres, 4 kilometres, so most of health facilities have been constructed near the communities'.* [RM5]

The midwives also provided valuable advice to pregnant women, encouraging them to save money for ANC clinic visits and emphasising the importance of these visits. They used relatable examples to illustrate the need for financial planning. They likened the situation to making choices about daily meals, suggesting that just as they may choose economical options such as Omena (a type of fish), they should consider walking to the clinic if money was scarce.

'…Even at your home I normally tell them, you cannot eat meat on daily basis, can you? So sometimes you have to go for Omena, it is the same, if there is money come, if there isn't and you are able to walk, can you walk to the clinic?' [RM1]

The midwives proposed practical solutions to address financial constraints by recommending the implementation of organised transportation services for pregnant mothers, which would significantly enhance ANC attendance.

'…transport…Well according to the economy, for the mother to use 50 shillings in order to reach this place, maybe it's a lot for her…It would be better if the transport will be organised for them to be just taken and dropped to the clinic and going back, it will help a lot'. [RM9]

The mothers' experiences aligned with the midwives' observations regarding the positive impact of close proximity to the hospital on ANC attendance. One mother shared her perspective, emphasising that she opted to visit the facility because of its convenient location, which eliminated the need for transportation fares to and from the facility because it was nearby.

'…I came here because it is near for me, because of the fare. For the one who doesn't have money, there are some clinics that are near that don't need money so they can just walk'. [Mother19]

Other mothers shared their challenges related to the distance from healthcare facilities and the costs associated with transportation.

'…Like, where I come from it is very far from here'. [Mother13]

'…There are others that are overburdened that can't walk, you hear and then at home there is no 50 shillings to get a motorbike, you see, there she cannot come to the clinic and say that she will come to the clinic the following week, if I can, I will go so that can miss…you don't have money for the motorbike. For some, coming this way, it can cost me fare, the fare is 400 or 500 shillings when coming here'. [Mother4]

Another participant expressed the difficulty of reaching the hospital because of pregnancy fatigue, which left her with no means of transportation.

'…other times you think reaching the hospital is far, so how will I reach there? And as you know about pregnancy, there is getting tired'. [Mother18]

As highlighted by the midwives, some mothers were hesitant to initiate ANC early because of the frequent clinic visits that would increase their financial burden.

'…It's because when you start early you spend a lot of time here. When you come here, a date is written for you to come back, and the months will be many. You will come here many times…the ticket, 200/- coming and going so if you start at 5 months or 4 months will be remaining for delivery'. [Mother17]

In rural areas, some mothers revealed that the combination of poverty and the distance to the clinics presented significant challenges for women. In such cases, the scarcity of available vehicles in these areas meant that they had to rely on motorcycles for transportation, which was still often beyond their financial means.

'…she is married but now she doesn't have money, she is poor. It is far. There are places like…there isn't any clinic at all and from there to here just coming is like 200 to 250 shillings that is the motorbike and there's is no vehicle like Nairobi where you pay 20 shillings to reach somewhere, it's only the motorcycle so it is a bit challenging for them to come to the clinics…transport and scarcity of hospitals is a very big problem'. [Mother13]

The women also voiced concerns about the condition of the roads, which were often not well-maintained. Environmental factors, such as road conditions, could pose additional challenges for pregnant women seeking access to ANC services, especially during adverse weather conditions.

'…like many times there is rain…Like it takes 2 hours 30 minutes to 3 hours because it is far and then the road is usually not that good because of the potholes.' [Mother1]

The absence of funds for transportation can have dire consequences for pregnancy outcomes, potentially preventing women with complications from seeking urgent medical care. This was exemplified by one mother who faced a harrowing experience where she had to wait for her husband to provide transportation while she endured severe bleeding throughout the week.

> *'…from Monday to Friday that is when I was bleeding, so I went on Friday to the hospital because I did not even have strength, I did not have fare because it is far, I waited for my husband to send me money I went to the hospital'.* [Mother10]

Moreover, the shortage of funds for transportation served as a significant barrier to women giving birth in healthcare facilities, and they sometimes resorted to delivering at home.

> *'…then where they stay may be far so that leaving there, she may not have…eating is a problem, will she get fare for a motorbike for bringing her and taking her back? She will not have. Sometimes it might be a challenge for her to come to the clinic eventually she delivers at home. There are big challenges in life'.* [Mother2]

In summary, transportation-related barriers played a crucial role in pregnant women's access to ANC services. The findings revealed that financial constraints, long distances to healthcare facilities and the unavailability of reliable and affordable transportation options hindered women's initiation and attendance of ANC. Some women endured substantial financial burdens when they started ANC early and had to make frequent trips to the clinic, leading them to delay initiation. These financial challenges impacted access to ANC and also had serious consequences, forcing some women to give birth at home, potentially compromising their health and that of their babies.

6.5.2 Health system factors influencing access and attendance.

This subtheme explored the critical aspects of healthcare systems and services that played a pivotal role in shaping the quality, accessibility, and effectiveness of ANC. These factors encompassed a range of elements in the healthcare ecosystem, such as infrastructure, availability of skilled midwives, resources, policies, and the overall organisation of healthcare services.

6.5.2.1 Inadequate infrastructure and supplies

The inadequacy of infrastructure and supplies in the context of ANC highlighted substantial concerns within the healthcare system. Midwives reported shortages of critical resources, including drugs, lab reagents and ANC booklets, which hindered their ability to provide comprehensive care and led to client referrals to other facilities. Particularly, the midwives

highlighted the disruptive effect of stock outs in April, which resulted in a significant decline in client numbers from over 200 women to 84.

> *'…it comes to the essential drug maybe that what you want and they are not there, you keep referring them somewhere they don't feel good, but we want to say that there is a time that we have done well on both, we have been doing well on the ANC services but now, like the months of April we seriously had stock outs and in fact that is why we are seeing 84 from over 200 when it comes to ANC'.* [RM3]

The absence of ANC booklets created further challenges as women had to purchase exercise books to compensate, essentially restarting the documentation process.

> *'…we don't have the ANC booklets, they buy exercise books, so you start writing from the zero'.* [RM6]

Consistent with the midwives' sentiments, one mother expressed dissatisfaction with government hospitals where essential tests and medicines were often unavailable, forcing pregnant women to obtain prescriptions and buy medications from external sources causing inconvenience.

> *'…I am told some facilities they don't have those things for testing, sometimes you are told you are being referred somewhere to go and do the testing of blood, you see, you don't get everything here…That is why I hate government hospitals, at times you come here you are sick, you are told there is no medicine. You are told get a prescription go buy outside'.* [Mother15]

Similarly, women shared their concerns about the irregular availability of resources, specifically ANC booklets. In such cases, expectant mothers found themselves in a position where they had to purchase these books out of necessity.

> *'…the other pregnancy was free but this one they said there are no books, so we buy'.* [Mother8]

> *'…I was told that books have ended so I bought this one. They write for you the way you see they have written like this; they fill for you like this'.* [Mother2]

6.5.2.2 Human resources: inadequate staffing

This subtheme explored the concerns expressed by both midwives and expectant mothers regarding the shortage of healthcare staff in health facilities. Inadequate staffing impacted various aspects of ANC services, including the overall quality of care, waiting times and the experiences of pregnant women seeking these crucial services. Midwives emphasised how staff shortages in healthcare facilities had a significant impact on the quality of care provided to pregnant women seeking ANC services. It was reported that one midwife was left to manage a large number of pregnant women, resulting in extensive queues and potential challenges in delivering timely and comprehensive care.

> *'…it is just the shortage, the number, the queue was big, and you are there alone, so what do you do? You just work and you will just see some of them leaving they will tell you, "We are hungry". I tell them go and eat if you will be able to come back come, if you won't be able to come, lets meet tomorrow. Yeah. They will leave their books there and they will come the following day. And you continue'.* [RM2]

Furthermore, the midwives acknowledged that staffing levels were often limited and were determined by specific quotas, which in turn proved insufficient to deliver comprehensive care.

> *'…I can say, we are doing our best, but you know, quality depends on the rationale, so in this case, some services are compromised. So, you see here in this case, we compromise (complete health assessment not done) because we squeeze a lot so that we can serve the total population'.* [RM6]

The midwives highlighted a significant issue related to the shortage of staff and its impact on ANC clinics. In particular, they noted how long queues and extended waiting times deterred women from attending these clinics as they had other responsibilities.

> *'…Another thing is experience, the first experience, some of them maybe the workload and the number of staff, there is shortage of staff, and the workload is high, so somebody will come here and stay over 6 hours, so she won't come, because of that. She is needed someone and maybe she has other children who need her, she won't come because of that'.* [RM1]

For women who did manage to attend ANC clinics, midwives observed that some persevered despite the challenges posed by staff shortages. These women were motivated by their strong desire to acquire the ANC booklet, which is essential for the delivery process.

> *'Staff shortage, in the sense that we are few so you find that one staff can serve two rooms. You are serving ANC at the same time you are serving another room, so there can be delays, in terms of waiting time so maybe, I am not sure, but maybe, they could be having such thoughts that if I go, I can be kept waiting so I better wait until such a time when I am almost giving birth so that I can be given a book to go to maternity'.* [RM6]

The midwives highlighted that staff shortages were largely attributed to a slow hiring process for replacing midwives on leave and those who had retired. They described there had been delays in addressing these vacancies, leading to a prolonged staff shortages in their department. Despite promises of recruitment in the future, the shortages remained unaddressed for an extended period, with some midwives waiting for over 7 years for new hires to fill the gaps. This extended period of understaffing added to the strain on the existing healthcare professionals.

> *'…We have people who went to school, they were not replaced, and others are dying, and not replaced. So up to now, they are just but promising us that, when recruitment will be done, they will consider this department, but it has taken quite some time…there is shortage of which I don't deny there is shortage but now you will address that thing for I don't know how long, more than 7 years and nothing has been done'.* [RM2]

> *'…we had one nurse who died, and another one was, another was retired on medical grounds, in fact, two since then have retired but there is no replacement'.* [RM6]

Similarly, mothers expressed concerns about the insufficient staffing and overcrowding at healthcare facilities. The overcrowding and the strain on the limited healthcare staff resulted in challenges in receiving timely and comprehensive care, as the staff commitment was stretched thin by the overwhelming workloads.

> *'...you will get the midwife is alone. There are children who are sick, older people who are in pain, people who are pregnant so to get that commitment of being attended to is not there because this person is only one and can get tired'.* [Mother1]

In summary, inadequate staffing in healthcare facilities emerged as a critical issue impacting the quality and accessibility of ANC services. Both midwives and expectant mothers raised concerns about the shortage of healthcare personnel. Midwives reported long queues, delayed care and increased waiting times because of insufficient staff, which discouraged some pregnant women from attending ANC clinics. Mothers highlighted that the workload and overcrowding strained the limited staff, affecting the quality of care they received. This issue was exacerbated by the slow hiring process to replace midwives on leave or those who had retired, leaving healthcare facilities understaffed for extended periods. The consensus among both midwives and mothers was that addressing staffing shortages was crucial to improving the ANC experience and ensuring timely and comprehensive care for expectant mothers.

6.5.2.3 Industrial strikes

This subtheme explored the significant challenge faced by the ANC services, where midwives' strikes paralysed the healthcare system, affecting both the availability and continuity of care. The experiences and perspectives of both midwives and expectant mothers during such labour actions were captured. The midwives' strike was reported as a barrier as the services were paralysed, which left the pregnant mothers to seek care in private hospitals (for those who could afford to pay) or stay home and wait until usual services resumed, as stated by most of the mothers. Two midwives alluded to the fact that when the strikes were on, pregnant mothers stayed at home as ANC services were not offered. Industrial strikes in the healthcare sector have a major impact on ANC services. Pregnant women are left with limited options because services come to a halt during strikes. The insights from participating midwives shed light on the stark reality for pregnant women staying at home because of the disruption in ANC services.

> *'…when there was this strike which was going on, they had to stay at home'.* [RM2]

> *'…with the nurses' strike, the services were paralysed, totally. So, mothers were not attending'.* [RM6]

During strikes, some pregnant women opted for ANC services at alternative healthcare facilities. However, when the strike concluded, many returned to government hospitals. Although this flexibility allowed expectant mothers to receive care, it may lead to missed opportunities for those who lacked the financial means to attend private facilities.

'…some of these industrial actions like strike…they assume when we went on strike the health facility was closed. They are coming with the books from those private clinics, and they just tell you me I am used to coming to this hospital I was there because of the strike but now when I heard that you are back, I decided to come back here'. [RM3]

'…By the way it really affected because when there is no health worker there is no service, the client will just come and go back home, so sometimes you will find they have gone to the private…so many went to the private hospitals'. [RM7]

The midwives noticed a surge in the number of mothers seeking ANC services after the strike ended. This suggested that many mothers waited until government services were restored.

'…when the strike was over now, they had to come in numbers, in big numbers. In fact, we used to get big numbers'. [RM2]

Moreover, expectant mothers who temporarily sought care in private clinics during the government hospital strikes typically returned to government facilities once the strikes had concluded. The primary reason for this transition was the difference in cost between private and public healthcare.

'…When they come to a facility you look at the previous clinic; so, you check previously where she said she went to private…but now because the strike has ended, you know in a private hospital, you know there is paying, so when the strike is over she will come at least where she can access those services without paying anything'. [RM7]

Regrettably, some pregnant women chose to forgo attending ANC clinics during the strikes, leading to them missing out on essential prenatal services. Midwives shared their observations that following extended strikes, certain women presented for hospital deliveries without having attended ANC clinics throughout their pregnancies.

'…So you will find others now there is strike they say "even us let us go on strike" you will find them at that time when you come to check previously you are the one who last attended to them, so if the strike it is going for 3 months, you will find she came in last

year in October so you will find the strike has ended and even her that is when now she has come, yes'. [RM7]

'…some will stay home if we go on strike for 6 months whatever the months, they will stay and actually that is the challenge that we had when we came back, there were so many non-clinic attendances who came for delivery. You had gone on strike, so that one really affected negatively on the attendance for pregnant women because most of them never went for the ANC'. [RM3]

Some pregnant women reported that during healthcare strikes, they opted to attend private clinics, especially when they felt unwell. These women expressed that they felt compelled to visit private clinics when government hospital staff were on strike, often because of concerns about their health and the lack of alternative options.

'…I went to a private, there were doctors who had gone on strike at that time…the doctors are not coming back and me I feel there is a problem that is disturbing me…When I was in my seventh month, it was when the doctors returned to work, I went to a dispensary for my clinic'. [Mother2]

'…what pushed me to this this private hospital it was when those doctors went on strike. That time so I had to go to a hospital and there was no one in the hospital so I decided to go to a private hospital'. [Mother13]

However, some mothers struggled to get finances to attend private clinics. One mother explained her willingness to attend but because of the strike, she had to wait until she got finances, which led to late initiation of the ANC visit at 6 months into the pregnancy; after the strike, she continued to come to ANC.

'…I struggled like that until it reached 6 months that is when I got that money, I went to the private and that's when I started my clinic…It was on the third month; the doctors had not yet reported to work. They were on strike, so until the sixth month I got the money then I went to start the clinic with that 6 month. When I was in my seventh month, it was when the doctors returned to work, I went to a dispensary for my clinic'. [Mother4]

The subtheme covering industrial strikes and ANC access highlighted the challenges and barriers faced by pregnant women when healthcare workers went on strike, causing disruptions to ANC services. During such strikes, the services in government hospitals are paralysed, leaving pregnant women with limited options. Many mothers reported staying at home during strikes and being unable to access ANC services; some opted for private clinics if they could afford them. The lack of ANC services during strikes led to delayed attendance and in some cases, missed opportunities for ANC visits. Some women struggled to afford private healthcare, which forced them to postpone ANC attendance until they had the means or until the strikes ended. The strikes negatively impacted continuity of care, resulting in delayed or missed ANC visits, which was concerning for the health and well-being of both the mothers and their unborn children.

6.5.2.4 Long waiting time/ANC clinic wait times.

This subtheme explored the challenges surrounding the waiting times and delays experienced by both midwives and expectant mothers during ANC appointments. In many healthcare facilities, ANC services are characterised by prolonged queues, lengthy waiting periods and extended delays, which can impact the quality of care and the overall patient experience. This subtheme discussed the factors contributing to these delays, the consequences for pregnant women and healthcare providers and the implications for ANC attendance and maternal health. It shed light on the intricate dynamics and challenges associated with ensuring timely and efficient ANC services, ultimately highlighting the need for improved practices and resources in addressing this critical aspect of maternal healthcare. Participating midwives described the challenging reality of ANC clinic wait times, as experienced and candidly described by one of the midwives. They highlighted the considerable impact of a high patient load on the waiting times during ANC appointments, particularly during the first visit.

> *'…I want to be frank about the visits to the hospital, and the population is quite high (patients are many), so the waiting time can be quite high, especially the first visit. The first visit because you have to attend the ANC profile and everything, so she will take quite some time, compared to the revisits the revisit is only about palpation…But for the first visit is quite tiresome for them'.* [RM9]

Furthermore, midwives emphasised that the initial visits contributed significantly to prolonged wait times because of the numerous procedures involved. These procedures encompassed comprehensive health assessments, educational sessions, laboratory tests, HIV counselling and testing, and necessary referrals to gynaecologists for women at high risk.

> *'…there is a lot done in first ANC because when they come they will be done for the health assessment and education when they finish we usually have the laboratory, waiting minutes, HIV counselling and testing; even there is waiting time, she is not alone remembering, after that one, they come back, they do whatever the services required for the ANC (weight, blood pressure, palpation) to finish up. When they finish, they go back to the laboratory to take the results if there is a scan. There is a waiting there as you wait for results, according to the findings maybe she has issues; you will refer to client to the responsible person maybe to the to the obstetrician/gynaecologist, there are the previous scars, so that she can go and book. So at least there is some hours there, I can't really approximate because it depends on the mother not all the clients will have the same problems, there are those ones that you will have to follow like those ones with bad obstetric history, previous scars, so she must go step by step until she finishes'.* [RM7]

Midwives recognised that the lengthy wait times at ANC clinics unfortunately deterred women from attending these crucial appointments, causing some to postpone their initial visits. This concern for extended waiting times significantly influenced women's decision to delay their clinic attendance until a later stage of pregnancy.

> *'…so, there can be delays, in terms of waiting time so maybe, they could be having such thoughts that if I go, I can be kept waiting so I better wait until such a time when I am almost giving birth'.* [RM6]

Some midwives further emphasised the impact of staff shortages and high workloads on these prolonged wait times.

> *'…there is shortage of staff, and the workload is high, so somebody will come here and stay over 6 hours, so she won't come back because of that'.* [RM1]

The midwives acknowledged that they were transparent with pregnant women about the potential delays when only one midwife was on duty. Despite these forewarnings, mothers sometimes waited an entire day to receive care, which could discourage them from returning for subsequent visits.

> *'…You just tell them in the morning…I'm just alone. So, you have to be patient today…and then here we have so many clients…so the waiting time was very long…... waiting time for sure can also chase our client. Coming here and waiting the whole day...'* [RM8]

The mothers also noted the extensive number of procedures that required queuing at various offices within the healthcare facility. Despite arriving early in the morning, they often left much later.

> *'…it took a long time because I arrived at 7 a.m. and I finished at 1 p.m.'.* [Mother3]

> *'…the doctor writes that you go get tested for this and this. He writes for someone else so a lot of time you will take there because when you reach the lab it is not you alone so you sit while waiting, you wait for the line if it is at moving at the bench you will wait to move until it reaches you, you go you are removed. You go to another bench, you are removed blood you come and sit, you wait for the results and come to the doctor. When you reached the doctor's, he is with another one that came before you so it will make you wait it is line by line, from this line to this line so it is a line until you finish'.* [Mother2]

In addition, they highlighted the extensive screening services conducted during the first ANC visit, which significantly contributed to the extended waiting times.

> *'…The first one usually takes long because you have to go to the lab for urine test, you test for blood group, you wait for the results so that you take to the doctor, and then the doctor takes the book then you go to get tested, maybe you be sent to the scanning, it is not like coming to the normal clinic. When you reach you give the book, they look if the baby is moving, they measure the baby to know it is of how many metres like that already you have finished to, so the first day usually takes long'.* [Mother4]

Some mothers expressed their reluctance to attend ANC appointments, citing the long waiting times as a major deterrent. They believed that the delay in clinics caused them to arrive late for other activities; however, their babies were healthy, which led them to question the importance of the clinic visit.

> *'…Some usually say that the clinic is not important…because you delay your time, you come and get on the line, you wait for the midwife, you get late, and the baby is okay'.* [Mother14]

> *'…I have come early so that I leave early so that I go finish my work, and then they have delayed me, that is what I see as big challenge to any person'.* [Mother2]

In summary, the issue of long waiting times in ANC clinics was a significant concern that affected both midwives and expectant mothers. The midwives acknowledged the challenges associated with high patient volumes, particularly during the first ANC visit, which involved an extensive set of procedures and assessments. These waiting times often deterred women from seeking ANC services promptly, leading to delays in their care. Some women, influenced by past experiences of prolonged waiting, postponed their ANC visits, potentially compromising their health and the health of their babies. The understaffing and high workload in healthcare facilities further exacerbated this problem, with mothers spending extended hours in clinics. Despite some efforts by midwives to attend to as many clients as possible, the waiting times remained a significant concern for both healthcare providers and mothers.

6.5.2.5 Mother and child booklet (ANC book)

The mother and child booklet, often referred to as the ANC book, held significant importance in the context of ANC. The insights shared by midwives showed this booklet was highly valued and served multiple crucial purposes. It was not only a requirement for ANC attendance but also a vital form of identification at the labour ward during delivery.

> *'…because that antenatal book it has all the developmental milestones for the baby, the danger signs, the nutrition part of it and the graph…the graph for weight, heights, so that they can also be able to identify whether the baby is doing well or deteriorating so it's very important book'.* [RM6]

Given the critical role of the ANC book during the process of delivery, midwives noted a compelling pattern among pregnant women, whereby many women made a concerted effort to attend clinics early in their pregnancies to obtain this booklet. The underlying reason was the fear of being turned away during delivery if they did not have this essential document on hand. The ANC book essentially became a safeguard for expectant mothers, a guarantee of access to the labour ward when the time came.

> *'…so, they will come early just to get those books and go to the maternity…because when they go to maternity they have to be asked where you attended the clinic...I have my book I attended the clinic…they only fear to be chased away if you don't have the booklet, if you didn't attend the ANC'.* [RM8]

Another midwife emphasised that the mother and child booklet held significant allure for pregnant women. This allure was not solely because it documented their ANC journey but also because it simplified the documentation process, with both the mother's and baby's records in a single book. This consolidation not only streamlined record-keeping but ensured that the necessary information was readily available during delivery. Consequently, the ANC book was a symbolic ticket for expectant mothers, assuring them that they would be accommodated in the labour ward, regardless of their ANC attendance history.

> *'…we have the mother child booklet that is another attraction…because they know it will be theirs and the baby they don't have to get something separate book for the baby their record is in one book…what I know with our clients somebody can afford to attend the clinic but not the revisit as they are making the booklet as an identification for delivery…like a ticket to them, so long as even if it is just one visit and she has this booklet'.* [RM3]

Participating mothers recognised the critical importance of the ANC book as a comprehensive record during the ANC and delivery process. They emphasised that the book served as a vital repository of essential information, such as the results of various tests, including HIV status, any complications that arose during pregnancy and crucial details about their blood levels.

'…If you don't have a book then you should get a midwife who has a good heart, it would be work for him because if the baby is delivered and he wants to test your blood so that he knows how it is or maybe know what disease you had…for him it will be difficult to determine all those. It is good if he has the book and knows what you went through or had a problem during the pregnancy. Maybe your blood level is low or not enough or you have a problem. If you are infected it is usually hard for someone to come and touch your baby like that. That is why we are advised to go to the clinic and during delivery you go to the hospital so when your book is read someone will know what kind of assistance you need'. [Mother19]

Consistent with the perspectives of the midwives, the mothers in this study also emphasised the multifaceted role of the ANC book. The book held records of their ANC, and served as a vital means of identification and continuity of care from the early stages of the clinic to the crucial moments of childbirth.

'…I started the first day of clinic, sometimes they give books for the clinic'. [Mother12]

'…I saw the book…I still see that it is the one you use until when you deliver it is that one, when you bring the baby to the clinic, the book is the same one'. [Mother5]

The mothers expressed their apprehension about the possibility of being denied hospital delivery if they did not possess their ANC book. They strongly conveyed this concern, emphasising that not having the ANC book could potentially lead to rejection during the admission process for childbirth.

'…If you don't come for the clinic, you will not be accepted. When you arrive here, you must present your clinic book they open it and look if you were coming because there are tests for testing HIV and what and what so if you don't come to the clinic for delivery, when you come here you are told to go back'. [Mother1]

In summary, the ANC book emerged as an indispensable component of ANC and maternal healthcare in the context of this study. The insights provided by both midwives and expectant mothers shed light on the multifaceted role of this booklet. It acted as a means of identification during hospital admissions, a comprehensive record of essential tests, an educational resource for

mothers and a tool for ensuring continuity of care. Perhaps most significantly, it served as a guarantee of proper healthcare during labour and delivery. The fear of being turned away from the hospital without this booklet highlighted its importance. This study emphasised the ANC book's significance, not just as a piece of documentation, but as a symbol of the expectations, rights and reassurance of quality healthcare for expectant mothers.

6.5.3 Incivility: respectful maternal care

This subtheme covered the dynamic relationship between midwives and expectant mothers during their interactions within the antenatal clinic. Drawing insights from participants' narratives, this section shed light on the dynamics and quality of these interactions as reported by both midwives and pregnant women. The focus revolved around the manner in which midwives and expectant mothers engaged when seeking ANC services. Midwives readily acknowledged that some women had faced mistreatment and rudeness from their colleagues in the profession. These negative encounters discouraged women from regularly attending antenatal clinics.

> *'…When a mother goes to the clinic, she is being mistreated by the midwives are rude, so such complaints, I have heard about such complaints. But if the health provider is a, has a negative attitude, for sure they will just go back to the community'.* [RM2]

Furthermore, the midwives expressed concerns about the timing of pregnant women's visits to the healthcare facilities. They noted that many expectant mothers tended to delay their visits and only seek care when they believed it was absolutely necessary. The midwives attributed this behaviour to the fear and apprehension some pregnant women have towards healthcare workers, particularly because of perceived harshness and negative attitudes. As a result, these women were often reluctant to seek ANC, which can ultimately hinder timely and consistent attendance at healthcare institutions. These midwives also emphasised that the attitude of healthcare workers played a pivotal role in influencing pregnant women's decisions regarding when and whether to seek care.

> *'…they fear the health workers, is it the impression on how the health workers how they respond to them, they have the mentality that health workers are harsh so it takes them a lot of energy to come to the facility, so people will opt to come to when they are really in*

need otherwise most of them would disregard the coming to the facility. So, health worker's attitude is one of the factors which would hinder people from coming to the institution'. [RM10]

The midwives also acknowledged that some pregnant women approached their antenatal clinic visits with a pre-existing negative attitude. This negativity often stemmed from previous unfriendly experiences or hearing from other mothers about their encounters with midwives who displayed negative attitudes. Midwives recognised that a single unfavourable interaction with a healthcare worker may deter a pregnant woman from seeking care. They noted that some women tended to generalise their negative perceptions, assuming that all healthcare workers shared the same unpleasant traits. However, there were encouraging instances when these expectant mothers were pleasantly surprised by the quality of care they received, leading to a change in their perceptions.

> *'…Or maybe the healthcare worker had an issue with that mother and so sometimes she might refuse to come just because she had an issue with the previous healthcare worker...So they tend to think all of us are the same, so they will say, those people are all like that they will tell you that way that is how they are. So, she will tell another one and another one, so they go share…somebody has a negative attitude before they even come to you. So, the moment she comes to you, I have had such an experience, so somebody comes to you, you attend to her so well, by the time you finish she tells you I was told this and this about you, but you are not like that'.* [RM1]

Participating mothers also highlighted the significant impact of midwives' attitudes on their decision to attend ANC appointments. This sentiment was shared by many women, who expressed their fear of specific midwives and their harsh communication styles. These negative perceptions about healthcare workers often discouraged them from seeking care, and some chose to avoid healthcare facilities where they anticipated poor treatment.

> *'…There is my friend who used to come and told me, "There is another midwife who has a bad attitude she is talking to people the way she wants". You see after you talk to someone, like for me if you talk to me badly, I won't come back it is better I go elsewhere,*

but someone says, "that doctor I fear going to her or even going to see her because she will talk to me badly". You see that is the reason most of them don't come to the hospitals. So, they say, "that midwife is still there, I won't go there he will talk badly to me". [Mother6]

Unfortunately, mothers who had no alternative healthcare options were compelled to return to the clinics and endure harsh treatment.

'…I am coming here because I don't have otherwise, but if I had an option, I wouldn't have come here. Because people are not being treated nicely but it is not all people who are treating people in a rude way like now…Now she was all over shouting at me'. [Mother5]

One mother shared her perspective on healthcare professionals working in government hospitals, suggesting that some might have been pushed into their careers for external reasons rather than personal passion. In her view, individuals who entered a career because of external pressures may lack genuine interest and compassion, which could lead to rude and impolite behaviour.

'…There is a lot, I think these nurses and doctors, others are just forced to such kind of careers…If you have passion in doing something, you will love what you normally do, but if you are forced that is when you start behaving rudely, so most of the people complain a lot when they come to government hospitals because they think that the nurses are not so polite'. [Mother15]

Participants highlighted that pregnant women often felt powerless and fearful about speaking up about their concerns, even when they knew they should. This fear significantly impacted their overall experience and willingness to seek regular ANC. The mothers' accounts revealed instances of aggression, rudeness, and conflicts with healthcare providers, creating a negative atmosphere that could deter them from accessing timely and consistent ANC.

'…They tell us to maintain our cool, not to argue, and to let them do their job. As a result, you must endure the discomfort until they are finished…This our hospital, it is like a behaviour these midwives are aggressive, what you will be told is to cooperate, "mother you don't listen it is like this like this". It is not that someone is not listening

sometimes if you think like that you keep quiet because them, they know than you, will you compete with someone and they are the ones helping you, it will make you keep quiet'. [Mother1]

Some mothers recounted instances of hostile encounters with midwives, noting that at times, midwives would raise their voices or exhibit violent behaviour, creating a hostile atmosphere in the healthcare facility. This environment was perceived as a waste of time, especially when the mother believed her baby was healthy.

'…you find that someone has angered him, but he is still angry. His answer might be harsh My book was thrown, and I said, "if throwing my book is a free work…I have followed you so that you can attend to me. If you don't want to attend to me, who do you want me to go to attend to me?"' [Mother19]

'...they will shout at you'. [Mother4]

'*…Like those…like midwives are violent, when you come, they waste your time, and the baby is okay'.* [Mother14]

Furthermore, another mother shared instances where midwives engaged in arguments with pregnant mothers, specifically targeting those who had delayed attending antenatal clinics. This behaviour, she explained, often involved midwives questioning the reasons for the delay and could lead to confrontations. She added that some women faced criticism and verbal abuse if they arrived late for their clinic appointments, which further emphasised the strained interactions between healthcare providers and expectant mothers during the ANC process.

'…the midwives start quarrelling with you…"Why is it that some delay until the seventh month and has not come to the clinic" so they refuse and say, "I will not go…" because if you delay to come to the clinic later you are abused by the doctors…You will be quarrelled at if you come late for the clinic'. [Mother5]

In summary, the interactions between midwives and pregnant women were often marked by negative attitudes, rudeness and in some instances, aggression. Mothers expressed their fear of seeking ANC care because of the perceived harshness of midwives. The midwives themselves

acknowledged that some of their colleagues mistreated pregnant women, which discouraged ANC attendance. In some cases, midwives were described as being abrupt and insensitive, creating a negative atmosphere within healthcare facilities. This incivility y affected the emotional well-being of pregnant women and also hindered their willingness to seek timely and regular ANC. Pregnant women felt disempowered and afraid to speak up, even when they knew they were being treated unfairly. These experiences of incivility could potentially deter women from accessing essential maternal healthcare services, ultimately posing risks to their well-being and that of their unborn children.

6.5.4 Kenyan Government FMS policy

The subtheme focused on the Kenyan government's FMS policy shed light on a crucial healthcare initiative aimed at improving maternal and child health in the country. Kenya's commitment to providing cost-free maternal services had significant implications for reducing maternal and neonatal mortality rates. This subtheme explored the impact and effectiveness of this government policy, examining how it influenced the use of ANC services by expectant mothers. The provision of FMS, particularly through initiatives such as 'Linda Mama', served as a fundamental strategy to ensure equitable access to essential healthcare during pregnancy and childbirth. This subtheme explored the experiences and perceptions of both midwives and pregnant women in the context of these free services, offering insights into the effectiveness of the programme and the challenges that persist in ensuring comprehensive maternal care.

The midwives elaborated on the significant role of the Kenyan government's FMS policy, which operates as a cost reduction strategy through the NHIF via Linda Mama. This policy was designed to provide comprehensive coverage for pregnant mothers, encompassing various aspects of maternal healthcare. It includes ANC, delivery (whether through caesarean section or natural birth) and postnatal care for up to 3 months.

> *'…We have a Linda Mama which is like the National Hospital Insurance fund (NHIF), catering for all women from pregnancy up to...until 6 weeks post-delivery, so if its ANC profile stands for it, like for free because the government is catering for it. Delivery whether it's caesarean, or normal, SVD is also free. So, we can't say that the cost is hindering them from coming to the hospital'.* [RM6]

'…There isn't any cost. They are using Linda Mama. The Linda Mama, it used not to be there, they used to pay, they are no longer paying now, so the Linda Mama is assisting them but not fully'. [RM1]

'…They just have the Linda Mama thing which takes care of everything, for them it is to just come…ANC is free, delivery is free everything is free…even those who deliver through CS (caesarean section) it is free. So long as they have the Linda Mama it will take care of it'. [RM3]

'...services are free because they have the Linda Mama, the Linda Mama caters for everything for the ANC mother until she gives birth, and the baby reaches 3 months'. [RM7]

The midwives noted that the introduction of the Linda Mama programme had a substantial impact on the use of ANC services. They observed that this initiative led to a notable increase in the uptake of ANC services, resulting in early initiation and consistent attendance by pregnant mothers. Linda Mama played a pivotal role in encouraging expectant mothers to start their ANC visits early and maintain their regular attendance.

'*…Linda Mama…has helped our mothers to come and start early and to maintain their visits'.* [RM8]

'…currently the uptake of the ANC visits is quite high because we have Linda Mama, it caters for everything. When a woman comes for ANC clinic, every check-up is being catered for by Linda Mama, so the uptake is just high. The only obligation they have is to avail yourself'. [RM9]

The midwives noted that they took the initiative to inform pregnant mothers about the availability of FMS, particularly through the Linda Mama programme. This communication was aimed at addressing the concerns and fears these women might have regarding potential costs associated with ANC and other maternity services. However, despite their efforts in informing the mothers, midwives noted that there was still a lack of knowledge among some expectant mothers about these free services.

'…we also inform them about the issue of Linda Mama so that they know their fears of the expenses for the things they need to cater for…some people do not know about the Linda Mama issue, so they still believe when they come here, they will be asked to cater for the services…So, it is until the mother comes then she will know that I am not paying anything but before they come, they have the assumption that they are supposed to pay for the services'. [RM10]

The midwives clarified that there were limits to the FMS offered under Linda Mama. While the Linda Mama programme may be considered comprehensive, it did not cover the cost of obstetric scans during the first trimester of pregnancy despite these scans being essential for monitoring the health and development of the foetus.

'…The only costs that they do pay it is only at the obstetric scan, but the other services are free because they have the Linda Mama, the Linda Mama caters for everything for the ANC mother until she gives birth, and the baby reaches 3 months'. [RM7]

'…No, excluding the scan, only the scan yeah, they don't cover the scan but other services, all the services until the child is 3 months post-delivery 3 months, they cover everything, even the medication including the mother. So that one it has really improved our services of these mothers'. [RM8]

The mothers emphasised that they had successfully used the Linda Mama programme to access FMS. They reported positive experiences, highlighting that they did not have to bear any costs for their ANC.

'…Because you have NHIF…after finishing with everything all the tests, is when I have gone for Linda Mama and upon reaching there, they have told me, "Do you have Linda Mama…", they asked me if I have NHIF…but everything has already been taken care of…I did not pay anything'. [Mother15]

'…like mine because it had been written on top there cleared by Linda Mama, so when I went there, they haven't asked me for anything, I haven't paid for anything since I came...' [Mother6]

Mothers often received information about the Linda Mama programme from other pregnant women or healthcare service providers, which emphasised the role of peer-to-peer communication and healthcare professionals in spreading awareness about the programme.

> *'Like me, since I have carried my pregnancy I will go and sit next to another pregnant woman, I tell her, "The hospital is no asking money...when you go…take Linda Mama only it helps on this and this, but me when I took Linda Mama, it helped me…'* [Mother2]

> '*...I got that Linda Mama...there was a lady who wanted to deliver she told me, "When you want to deliver, it will help you"'.* [Mother10]

Unfortunately, not all women were aware of the availability of free services through the Linda Mama programme. Some only discovered this when they arrived at the ANC clinic.

> *'…And then there is that Linda Mama, I don't know, it has been written in the papers, I don't know what it is'.* [Mother5]

> *'…I do not know Linda Mama. I heard it from people talking so I had paid for the clinic'.* [Mother8]

Furthermore, although the women appreciated the services offered by Linda Mama, they also recognised its limitations. It did not cover certain essential services such as obstetric scans.

> *'…Linda Mama will pay for delivery; you deliver for free…but getting scanned what and what it does not cater…Linda Mama, I have told you it does not cater, it does not cater to get scanned'.* [Mother1]

Mothers also suggested that Linda Mama could consider covering the cost of transportation for pregnant women who attend ANC clinics.

> *'…Maybe they say Linda Mama to give us transport, they give us transport a little, it will help us...'* [Mother1]

In summary, the Kenyan government's FMS policy, particularly through the Linda Mama programme, represented a vital step towards improving maternal and child health outcomes. The

initiative successfully eliminated many financial barriers that previously deterred pregnant women from accessing ANC services. The insights from both midwives and mothers revealed that this policy led to increased ANC attendance and early initiation, which is crucial for monitoring the health of both mother and baby. However, challenges such as limited awareness of the programme and gaps in coverage for specific services (e.g. scans) persisted. This subtheme highlighted the importance of such government initiatives in promoting maternal and child health and serves access and attendance.

6.5.5 Impact of the COVID-19 pandemic on ANC services

The impact of the COVID-19 pandemic on ANC services was a critical subtheme that revealed the challenges faced by both midwives and pregnant mothers in the context of this global health crisis. This subtheme shed light on the consequences of the pandemic, including disruptions in ANC attendance, fear of transmission and the changes in behaviours and attitudes towards protective measures such as mask-wearing, sanitisation, and social distancing. The sudden emergence of the pandemic took both midwives and pregnant women by surprise, creating widespread apprehension and concerns within the healthcare system. As a result, ANC attendance saw a significant decline during the initial phase of the pandemic. Clinics even closed their doors temporarily as a precautionary measure to reduce the risk for viral transmission.

> *'…it has really affected, because initially, when we had the corona, you know it came by surprise, so there was that fear in the health care system and mothers also feared coming to the hospital…they didn't attend and for that period of corona, we used to see the ANC…in fact we closed down for like a month or so. So, they used to come very few, because of the fear of corona. They didn't come, yes, they didn't come, so it affected the attendance'.* [RM6]

> *'There is nobody who doesn't fear COVID-19, everyone fears COVID-19'.* [RM1]

> *'…They will just tell you COVID or something. They will just tell you something. "Aah this COVID issue, I was not in pain, then I thought it is better I stay home because there is COVID". So you are not in any pain, she says "No, I am not in pain, I am very much ok". So now we try to address about the haemoglobin level, we try to talk about the*

danger signs so that she can see the importance of coming to the ANC, it is not about COVID, but it's about taking good care of the pregnancy'. [RM2]

The midwives highlighted that the COVID-19 pandemic had a substantial impact on the attendance of pregnant women seeking ANC services. They noted a significant drop in ANC attendance during certain months, particularly between March and July. The decline in attendance was attributed to various factors, including fear of COVID-19 infection and the relocation of patients with COVID-19 to specific healthcare facilities. As a result, some pregnant women opted to seek care at dispensaries or private clinics to minimise the perceived risk for exposure to the virus.

'...It has been low especially last year, for now this year it has improved not compared to last year, during those months of March, April, May, June, July, the attendance was low. Sometimes we can attend even over, the revisits we can get even over 600, and for new clients we can get even around 300. But it went up to 100 or even some months less than 100. So, it affected'. [RM1]

'...some women would come late, and others they would not come completely especially that most of the COVID patients were held at Kilifi County Hospital, so I think most of them used to go to the dispensaries, so they run from the bigger facilities because there is where the COVID people are so they would go to the dispensaries, to the private clinics or to the nearby dispensaries that is what I think. Briefly in a nutshell the attendance was down'. [RM10]

The midwives openly acknowledged the significant challenges posed by the COVID-19 pandemic, not only to healthcare facilities but for the staff. Their awareness and understanding of the impact of the virus were reflected in the precautions and changes they had to implement within the healthcare system. They shared their experiences during regular staff meetings, emphasising that COVID-19 was not something to be taken lightly, and the virus had directly affected members of their own team.

'...We have been a meeting every Wednesday all the staff and those are the things we always, remind ourselves, COVID is not our friend, we have others who have suffered

from COVID. We had a friend of mine whom we are working together. He tested four times all positives last month, late last month is when he tested negative now, we allowed him to comeback despite that when he came, he took his leave. And these days I would say COVID-19 is people are getting used to it not like the way it used to be from the beginning of someone who is COVID-19, nobody wants to even see you these days you can get to clinical features. And without even going for testing even herbal treatment people do it in their houses and they get well, and life continues otherwise COVID-19 has become a challenge to the health workers'. [RM5]

The midwives shared their experiences during the onset of the COVID-19 pandemic, expressing feelings of anxiety and uncertainty. They described how this fear extended to both healthcare workers and pregnant women who were reluctant to visit health facilities because of concerns about potential infection. These apprehensions were exacerbated by the inability to fully implement recommended safety measures in the facility. In particular, social distancing was challenging to enforce given the high patient volume and the nature of healthcare services, including close interactions during physical examinations and palpations.

'...I think it's our fear also the health workers and the fear of the mothers, so there are mothers when you ask them, they are saying that they were seeing in the TVs that they should avoid somewhere is so crowded, like this hospital almost everyday crowd, is a lot of people. So, they have that fear, that fear for going somewhere which is so crowded and moving from somewhere to somewhere'. [RM8]

'...Also, to us there was that fear also to go and attend to everybody...I mean you cannot avoid to be close to this mother. Because during palpation during physical examination, also us we had that fear to attend'. [RM8]

Furthermore, midwives faced significant challenges in their efforts to maintain COVID-19 measures at the healthcare facility. They highlighted difficulties in enforcing face mask requirements and although they encouraged pregnant women to sit 1 or 2 metres apart, the practicalities of the healthcare setting, particularly the high patient volume, made it difficult to enforce social distancing effectively.

'…And some mothers didn't use to come with masks, now this thing, uhm, government policy, we felt that it was wise if these mothers could also come with their masks. Sometimes you could tell mothers, sit 1 or 2 metres apart, they could not, because of the congestion here, especially on Mondays, if you come, you would find that it is congested a lot. So, it affected us because we hear that we contract the disease from our workplace'. [RM6]

The midwives were apprehensive of caring for pregnant women with COVID-19 symptoms. They highlighted the overwhelming anxiety they experienced when encountering a mother with COVID-19 symptoms, specifically severe respiratory distress. The midwives reported that they often treated such cases with extreme caution, considering the affected women as potential COVID-19 cases, despite limited knowledge on how to handle such situations. This was compounded by the lack of adequate training and counselling provided to the midwives, leaving them ill-prepared to address these scenarios.

'*…There was that fear, it was difficult at first, just that fear of the unknown. When a mother comes in and like, she has difficulty in breathing, you just treat her like a suspect…At least, at first, we didn't have the knowledge, and we didn't know how to handle such things…I have not been counselled at all'.* [RM9]

'…we have also received patients with query COVID 19, pregnant mothers some of them in labour with query COVID 19, so they are taken for isolation; some of them are tested and they turn positive, so as a midwife when you see your client has been affected, maybe it is a client that you admitted and you are the first one to attend to her, so you start suspecting you have COVID 19, so in a way you are affected. Because even your fate you don't know because before you suspected that mother you interacted with her. And before you took that mother for isolation, it is you who took her there and by the end of it all you have to go and deliver her there even with the PPEs (personal protective equipment) but again how sure you are with the PPEs you are 100% protected. So, in a way we were affected as midwives'. [RM10]

Midwives raised significant concerns about the shortage of personal protective equipment (PPE) in their healthcare facility, which sometimes forced them to make difficult decisions regarding

the care of pregnant women such as refusing care. These shortages impacted their ability to provide comprehensive care while ensuring their safety and that of the mothers.

> *'…Like us we are not provided with any PPEs, we are given the mask only and sometimes they are there or sometimes you are given very few masks, and you are supposed to attend to the client. So, you have to outweigh the advantages and the disadvantages, so if you see you are at risk, why should you risk your life? You tell the client go home, I have no mask, come another time, yeah. It is not that you are panicking but you know your rights because if you don't know your right then who is going to know about it and in this case, you are supposed to know, are you safe first before you attend to the client'.* [RM1]

> *'…because if you go home, if you are asked, why didn't you work, I didn't have a mask or I didn't have equipment. I cannot work without a mask; how did you expect me to do. It is not my wish, provide me with the equipment then I work, if you don't provide me with the equipment how do I work, I am risking my life, I am risking even your life and others, so it takes care of myself, I take care of you and I take care of others'.* [RM1]

The midwives in the healthcare facility described the mental stress they encountered during the COVID-19 pandemic. They recounted the challenges they faced, such as the absence of formal counselling or support mechanisms. Instead, they turned to faith and relied on each other to manage their anxieties and fears. Colleagues provided mutual support, which boosted morale and helped prevent extended sick leave. However, one midwife noted the absence of mental health support during the pandemic, leaving staff to cope independently. Moreover, the midwives discussed the stress of providing care to pregnant women, particularly when monitoring foetal health and attending deliveries, which required close contact with the mothers and heightened concerns about COVID-19 exposure.

> *'…Mentally you feel a bit disturbed, but now when you talk to another as colleagues you encourage each other, if you see your colleague is now being stressed up, you try to talk to that colleague of yours so that you assist and tomorrow he or she will be at the working station working, otherwise if you don't then she will fall sick and she will stay at*

home like 2 to 3 weeks and now the cycle will continue…but in the ward, there was a problem there, but all in all we thank God we only lost one of our own nurses'. [RM2]

'…our mental being was not taken care of, we lived with our fears and anxieties until we were out of it. I don't remember any instance of where we were maybe taken through counselling or...we were left on our own'. [RM10]

'…For us, unless you take your own personal initiative, you say I want to be tested because of a certain reason then you will be tested, but for those that are allocated those places they are tested routinely. So, you see it is stressful because you have to work your own way out…So, it affected us, you can imagine a mother in labour, you have to monitor the foetal heart so frequently and monitoring involves coming very close to the mother and when it comes to delivery you can't be away you have to be there all through labour and delivery and you have your family and yourself, so you are affected'. [RM10]

As the COVID-19 pandemic progressed, midwives noticed a reduction in fear and anxiety surrounding the virus. With the consistent observance of guidelines and the implementation of preventive measures, the transmission of the virus was successfully reduced. As a result, a sense of normality was gradually restored, and women began attending ANC services more regularly. The midwives emphasised the importance of adhering to safety measures and guidelines, which led to increased awareness and compliance among pregnant women. Over time, the initial fear and panic associated with COVID-19 waned, and people became accustomed to the new health and safety practices. This shift in behaviour and mindset contributed to a return to regular healthcare routines.

'…I think now the anxiety is over, because COVID is there and we are fighting with it, just as it comes. So, if you think about COVID too much you will be stressing yourself and you will also be stressing your clients for nothing. So, we just observe the measures, the guidelines that should be practiced to prevent whatever we are supposed to do, we do it, accurately, correctly and try as much as possible to prevent the spread. Like the way we normally try to prevent the spread of other communicable diseases even this one God will help us'. [RM2]

'…Now it's normal. yeah, so there's nothing to it is the mean and nobody will hear them talking about corona even mask they come when they are there, so you tell the mother put on your mask. So, they just putting it here when they are in the hospital when they leave there, they remove it, and then go there on the way. So, the first time there was that fear, there was not that there was that reduction of these mothers coming who are coming back to the time to time to come and now its normal life has gone back to normal. We are no longer in pandemic it finished long ago here in Kilifi'. [RM8]

'…So, but as the time went by that panicking effect people tend to get used to the situation and also get used to the use of masks, the use of washing hands, sanitising, so they became aware. So, until when you tell them to wash their hands, they know even there is no need of telling them to wash. Because they just know when you reach the gate you will just wash, when you are going for the services, you are not supposed to do this. Initially they were not aware of that but now they are. So, it is easier'. [RM1]

Mothers who attended ANC services shared their concerns regarding the congestion at healthcare facilities and the fear of potential exposure to COVID-19. They described the public hospital as being particularly crowded, making it easier for the virus to spread. Participants expressed doubts about the consistent adherence to safety measures, including mask-wearing and sanitisation. They noted that private hospitals had fewer people and allowed for more flexible appointment times, reducing the risk for exposure to the virus. The fear of contracting COVID-19 while pregnant and potentially passing it to their unborn child added an extra layer of anxiety for these mothers.

'…and then another thing is being scared of coming to the hospital because the hospital has many people so when we come is when you can carry corona very well'. [Mother1]

'…this hospital is very congested; it has many people so being contracted with this virus is very easy unlike private hospitals because finding many people in private hospitals is very rare. You will just go there any time, be it night, be it very early in the morning, you will just go to a private hospital but in hospital, in public hospital like this there are sometimes set like, the pregnant come at 8 a.m. to 9 a.m., when you miss the time, you go back home. So, you find many people there so not everyone will wear the mask, not

everyone will sanitise and so that is a very big challenge, yeah, and an easy way for someone to contract COVID…there are no sanitisers anywhere'. [Mother13]

'…it has instilled fear because it is something that if I get infected I scared that my child may be infected I don't know if it is possible or not but that it is a must I have the worry because if I would have sat with someone who has corona, when they have infected me and the baby is inside of me, I am the one carrying it so I will have the worry that I don't know if it will have got or what or is it me alone'. [Mother16]

Some mothers recognised the importance of these measures and adapted to wearing masks, using sanitiser and practicing regular handwashing as a means to protect themselves from COVID-19 transmission. They acknowledged the presence of the pandemic, the necessity of these preventive steps and the convenience of finding sanitising stations at various locations, such as healthcare facilities.

'…I have seen the importance of protecting myself because I have woken up and I have looked in the handbag I saw that I don't even have a mask, I came until the gate there, before I entered I saw it was important because of this pandemic, I get a mask, I have a sanitiser in the bag, if I sit and get back, I sanitise. There is an importance. I have seen because when you enter somewhere you leave there is sanitiser if you enter somewhere like lab there is sanitiser at the Linda Mama there is the sanitiser before you go there you wash hands first, so I have seen'. [Mother16]

'…There is some measure now, there is the corona pandemic we are protecting ourselves with masks but when you come, we are attended to well and you go back home as long as you protect yourself with a mask'. [Mother4]

Conversely, there were women who expressed scepticism about the existence of the disease. For them, COVID-19 was not a reality because they had not personally witnessed any sick patients. They emphasised their trust in God and downplayed the fear associated with the virus, emphasising their faith.

'Me I do not believe that there's corona…I hear but they are not shown'. [Mother10]

'…Something like that I have not thought about. In my life I have not thought about that because I wear my mask and I believe God is everything. I wear my mask because it is a law that has been put and we have to adhere to it, but I believe in God, I believe in God, and I don't see the hospital that has many people there's corona oooh I don't know what. I know anywhere someone can get corona and not necessarily at the hospital or where because all those who die are not those who go to the hospital even at home, they are found but I believe in God and not that kind of fear that has made me delay coming here. I haven't thought anything about that'. [Mother18]

Some women revealed that they faced challenges with consistently wearing masks because of discomfort and the sensation of restricted breathing. They explained that although they understood the importance of mask-wearing, they sometimes found it difficult to breathe comfortably while wearing a mask. This discomfort led them to lower their masks at times, especially when in crowded healthcare facilities.

'…let's say, this pregnancy I like wearing mask but sometimes I feel not breathing well so many times you find me here. I love wearing it because I meet many people at the hospital, and I don't know how everyone has come but any minute you are here you feel a lack of oxygen so I can breathe fast so I lower it down. It gives me worry because I can get something that I don't know who, what but you just say God how will it be'. [Mother2]

Furthermore, some women noted that although they found mask-wearing uncomfortable and experienced difficulty breathing, they adhered to these measures because they recognised the importance of following the law and the benefits of protecting themselves. They acknowledged the strict enforcement of mask-wearing in public spaces, even if it posed challenges for them.

'…When you enter you see the state of wearing a mask is very strict even me, I had been forced, I had covered my mouth only and I was told to pull up to my nose. It's a problem but that's how it is, and I just pull it up even if I can't breathe because that is the law. These people care about us because what you are cautioned about is what can help you. If you are told to pull up your mask until the nose so that we start the discussion…

..you have to adhere to because that is what protects you. That is what protects you. That is something very important I have seen they care'. [Mother18]

Pregnant mothers expressed their reluctance to visit healthcare clinics during the COVID-19 pandemic. They also cited instances where they arrived at the clinic only to find it closed, which further discouraged them from seeking healthcare services. The fear and uncertainty surrounding the pandemic meant many expectant mothers stayed at home and avoid healthcare facilities. The impact of the pandemic was felt not only in the context of ANC but also in various aspects of daily life, including the closure of schools and the collective efforts to protect themselves and their children from the perceived threat of COVID-19.

'…The corona pandemic I had the baby that right now I am pregnant you would go to the hospital, and you find no doctors at the clinic, so we were staying at home because there was no clinic and anything, so we didn't see it as a problem not going to the hospital. Even he left those…he didn't finish because of corona…corona was being announced on the radio that it is a dangerous disease, we protect ourselves, we stay at home, we protect our babies, schools stopped because of this now we follow it up that our children…it is us even the hospitals we were not going'. [Mother12]

Some mothers shared how the COVID-19 pandemic had a substantial impact on their household income. Many families were struggling financially with the reduced income and economic challenges brought about by the pandemic. In addition to the financial strain, private clinics had raised their fees, making it even more challenging for women to seek ANC. As a result, pregnant women often deferred seeking medical attention until they faced severe issues, highlighting the financial burden and uncertainty brought about by the pandemic. The increased cost of healthcare services and the financial strain on households played a significant role in shaping their decisions about when to seek medical care during their pregnancies.

'...it has become difficult because the one who leaves money to use there at home you know it is not left like the way it is started. When you ask him, he tells you, "There is no money, corona this one, there is no money even at work there is no money, you know right now there is corona". …

…So that income that he leaves at home it is little so that little you manage, that is the challenge as in the income since corona came it has been low'. [Mother1]

'…The pandemic is there but this time and that time it was very tricky because at that time is when I got pregnant and then there was doctor and then private had increased the fee and going to private is money so at that time you were to pray to God to help you so that you are not in pain or that pregnancy does not get a problem enough to make you to go to the hospital because when you go to the hospital it is money and money you are supposed to have…There is a time I felt like coming but I come, because of what reason? You will be tired, the day has reached and then you calculate about walking, you can't'. [Mother4]

Similar to the midwives' views on the return to normality, mothers also observed that as the pandemic progressed, there was less fear and anxiety. They mentioned that they had become accustomed to the situation over time, as humans tend to adapt to new circumstances. Some emphasised that they were no longer as scared as before and attributed this change to adopting safety measures such as regular handwashing and mask-wearing. They also acknowledged that they had become used to these precautions, and as a result, the fear of COVID-19 had diminished. The topic of COVID-19 was no longer as prevalent in discussions, indicating a shift towards normality in their lives.

'…I am even used to, initially I was fearful but now I am used to, you know human beings it reaches a place you are used to. You say the way it will be it is like that if I will be infected and then die it will be already my day has reached, who is to live forever is who? Everyone will die so it will be my journey has reached. Nowadays I am not scared again like before'. [Mother1]

'…it is something we are used to already…As long as, we wash our hands, wear mask'. [Mother8]

'…People are no longer talking about corona again…I do not see it being discussed a lot about corona; it is not like earlier on'. [Mother5]

In summary, the subtheme covering the impact of COVID-19 on ANC services highlighted the multifaceted challenges that arose in the wake of the pandemic. The insights from midwives and expectant mothers described how the fear of COVID-19, the disruption of services and the struggles with prevention measures affected ANC attendance and care. While initially they were fearful and uncertain, as time passed, a sense of normality gradually returned. Some mothers recognised the importance of protective measures, such as mask-wearing and sanitisation, to reduce the risk for COVID-19 transmission. However, challenges persisted, including discomfort because of mask-wearing and difficulty breathing. The next chapter presents findings in form of case studies from the acute care setting.

CHAPTER 7: CASE STUDIES

Introduction

Findings from pregnant women in acute care

The previous chapter investigated the experiences of accessing and attending ANC from the perspectives of midwives and mothers. This chapter explores the experiences of pregnant women that were admitted to acute care facilities, with a specific focus on the challenges they encountered when attempting to access ANC services. Understanding these experiences is crucial in addressing access barriers to maternal healthcare and enhancing the overall prevention of maternal morbidity and mortality. Significant findings from this study are presented the in form of case studies of pregnant mothers who were admitted with complications, referred to as near misses, in the acute care setting. Interviews with these women sought to understand their opinions and perspectives regarding their recently experienced near miss events, particularly the factors that influenced their ANC access and attendance. This exploration is instrumental in advancing knowledge of the intricate web of factors impacting maternal healthcare decisions and their implications for maternal and neonatal health.

These findings are aligned with the Neuman model, which is a comprehensive framework that offers valuable insights into individuals' responses to stressors and the subsequent impact on their health- and help-seeking behaviours. As discussed in Chapter 3, this model encompasses the physiological aspects of care as well as the broader environmental and interpersonal factors that influence prenatal care experiences. It seamlessly aligned with the primary objective of this study, which was to explore and understand the experiences of both midwives and pregnant women in accessing and attending ANC in the unique context of Kilifi, Kenya. To the researcher's knowledge, no published study has explored women's perceptions of risk following admission to an acute care setting for conditions that were potentially life-threatening for the mother and her unborn child.

The collected data offer a deep understanding of factors contributing to help-seeking or lack of help-seeking before an actual near miss for maternal or foetal mortality. The interviews were conducted on the day of discharge and provided insights into how the mother and her partner reacted/reflected on the near miss and how that could raise awareness and change future help-

seeking behaviour. These data offered the researcher an opportunity to triangulate content gained from interviews with midwives and mothers who attended ANC.

This chapter presents empirical findings that shed light on the perspectives of pregnant mothers who were admitted with near miss complications in the acute care setting. These mothers represent a diverse group; some had previously attended ANC, whereas others had not. Five women (Table 7) consented to participate in this part of the study and shared their experiences during interviews. It is worth noting that these participants had recently gone through life-threatening events, which may have influenced their responses and understanding of the importance of ANC visits. Their opinions and insights are valuable and contribute to a richer understanding of the complex factors shaping maternal healthcare decisions in Kilifi, Kenya.

Table 7: Demographic characteristics of women the acute care setting

Mother No.	**Gravida (G)/parity (P)**	**Age, years**	**Gestation**	**Marital Status**	**Education**	**Occupation**	**No. visits**	**Reason for admission**
Case 1	G3P2	35	32 weeks	Married	Class 8	Business	0	Pre-eclampsia
Case 2	G2P1	21	37 weeks	Married	Form 4	Housewife	2	Vaginal bleeding Antepartum haemorrhage/placenta praevia
Case 3	G6P2	26	36 weeks	Married	None	Farmer	3	Cervical incompetence
Case 4	G1P0	19	39 weeks	Married	Class 8	Business	1	Vaginal bleeding and foul-smelling discharge
Case 5	G6P5	30	28 weeks	Married	Class 8	Tailor	0	Preterm labour/lower abdominal pains with UTI

Experiences of ANC access and attendance among pregnant women in acute care

Mother case study 1 (MC1)

The first case study involves a 35-year-old G3P2 mother who had not attended ANC at 32 gestational weeks and was brought to the hospital by her spouse because of severe tachycardia and unrelenting headaches. She received a diagnosis of preeclampsia, which is a potentially life-threatening condition for both the mother and her unborn child. This case illustrated the complex interplay of internal and external factors that influenced ANC access.

Barriers to ANC attendance

This mother recounted her experience during her first pregnancy, where she faced fatigue during the initial 2 months. She sought medical advice and was encouraged to initiate ANC visits. She described her situation as follows.

> *'My first pregnancy, it didn't give me any problems and it's just that when I get pregnant the first and second month, I energy ends so I came to see the doctor who told me that I should start my clinic. I started my clinic, and I continued well, when I came to the doctor, I was treated well, I started recovering well and I didn't have any problem and I carried the pregnancy well'.*

During her current pregnancy, she faced delays in initiating her ANC visits because of financial constraints. She explained that she lacked the funds for transportation, which led to her continuously postponing her visits, hoping that her husband would provide the necessary money.

> *'…I had no money to pay for transport and was waiting for my husband to give me and I kept postponing…'*

Furthermore, she emphasised that her previous pregnancy had been uneventful, and she had not encountered any complications. However, when it came time for delivery, she faced challenges with accessing transportation, which ultimately led to her giving birth at home.

> *'…I didn't have any problems and I carried the pregnancy well but when I was going to deliver, I started my contractions. I looked for transport, but it was not available…'*

She also shared the difficulties she encountered when trying to attend ANC because of her mother-in-law's influence and perspective. Her mother-in-law was from a rural area, and had a tradition of delivering her own children at home and did not perceive the necessity of seeking healthcare facility services.

> *'…mothers-in-law stay in the interior part of the village; they don't know what clinic is. She says, "all my children have been delivered at home…you will not go. You will not go"'.*

In addition, she had also received mixed messages from community members, who had reiterated that if she had no problems she could deliver at home. Others encouraged her to find money for transport as ANC was important to for her health and the baby's.

> *'They may ask, and others may advise them well. It's the advice for people. You can follow others and say, "I would like to deliver", the others say, "ah if you don't have a problem, you just remain". There are others who will tell you that it is important to go so look for the fare for your baby and you. That is how you find some who come to the clinic'.*

She also shared her concerns about her interactions with healthcare providers, indicating that her experiences had not always been cordial. She expressed apprehension about trainees attending to her without a supervising doctor, fearing they might unintentionally harm the baby.

> *'…my stomach was painful. They can come like five of them and surround you at the bed. When you sleep a certain way, you feel okay and for example if you sleep like this for long, you find everyone will touch you your stomach they say that the baby is not kicking, and the others say they feel the baby is kicking. If the doctor comes, he hears. You find sometimes they can hurt a baby these trainees if they will not have…so every trainee must have a doctor, if they are three then two are to be doctors'.*

In summary, this mother's experiences highlighted the critical importance of timely and consistent ANC attendance during pregnancy. Internal factors such as her previous uncomplicated pregnancy and lack of awareness regarding potential complications contributed to her delayed ANC initiation. Her financial constraints further exacerbated the situation. She also faced external influences,

notably from her mother-in-law and varying advice from her community, which added to the complexity of her decision-making process.

Mother case study 2 (MC2)

The second case study presents a mother who was a 21-year-old G2P1. She had started attending ANC at 28 weeks of gestation and had two visits before her admission. This mother came to the hospital unaccompanied with complaints of bleeding and ruptured membranes at 37 weeks of gestation. The diagnosis was placenta previa grade II based on a scan report, which was the cause of antepartum haemorrhage a potential cause of maternal and newborn mortality.

This mother reflected on her experience during her first pregnancy, which occurred when she was unmarried and 16 years old. She described feeling emotionally distressed and unsupported during this period, as her young age led to psychological torment. She elaborated that because of her age and the circumstances surrounding her pregnancy, she faced considerable challenges. Her family's reaction compounded her difficulties as they viewed her pregnancy as a grave transgression. Consequently, she was compelled to leave her family home and live with her sister, although her sister's treatment was far from ideal, which made the situation even more challenging for her.

> *'…First one due it was my first pregnancy, and I was a little bit underage. Yeah, I was underage, I was 16 years. I was 15 when I got pregnant, and the journey wasn't easy because I was young, so I was tortured psychologically so I was…I didn't have such support because my family just saw like I done…I have committed a very big sin, so I was away from home. I went and…I went to live with my sister, and she didn't treat me that well, so aaah, it was a bit challenging. Very challenging':*

She acknowledged receiving education on pregnancy risks during ANC, which emphasised the importance of seeking care in cases of bleeding. She described the educational resources available, including charts and visual aids, that were used to convey critical information about pregnancy complications. She mentioned that visual aids, such as pictures, were used to illustrate warning signs even for those who may be illiterate. The midwife's role in further explaining and elaborating on these important details was also noted.

'…there are some charts there and you are told, "if you see for example, bleeding come immediately to hospital" …for those illiterates you are shown some pictures. "When you see this, then it is a bad sign" …plus, the midwife explains to us…'

She emphasised the benefits of attending ANC and highlighted the advantages of regular monitoring. These included tracking her weight and blood pressure, which provided essential health insights. Attending ANC visits offered her assurance regarding her baby's well-being, meaning that any potential issues would be identified and addressed promptly. In addition, she appreciated the medications provided during these visits, which served to support her health and the healthy development of her baby.

'Yes, because I get to know my weight every month if I have added weight, if I have lost weight, I will know through ANC, I'll know my blood pressure, I'll know if my baby is doing good. Yeah. I will not be just assuming the baby is fine, the baby is playing but when I come, or in reality I don't feel anything so it's very beneficial, very, very, and plus there are this medication that people are given, these for blood, for folic, for reducing humidity is very important'.

She also opened up about her present pregnancy experience, highlighting that she initiated ANC earlier than she had originally planned. She believed the ideal time to commence ANC was around 4–5 months into pregnancy. However, she faced unexpected circumstances as she began experiencing spotting and pain when she was just 3 months pregnant. These symptoms compelled her to start her ANC earlier than she had intended as they prompted her to seek medical attention.

'My current pregnancy now, so this one was a bit challenging too, because I was experiencing some drops of blood while I was still pregnant when it was like 3 months. So, it, it led me to start my ANC earlier. Yeah. So, I started earlier because I saw blood and I was in pain hence I went to the hospital'.

'I think the best time, the best time to start clinic is 4 months, 5 months. That's the best time to start clinic, yeah'.

She expressed her belief that it was not essential for her husband to accompany her to every clinic visit and noted that his presence could lead to a loss of income because of time taken off from work. Instead, she felt confident in her ability to communicate the information received at the clinic to her husband.

> *'...I felt that it wasn't necessary because, um, he has to work, he has to get money. I have to eat, yes. So if we just roam around going to the clinic back and forth…when will he be looking for that money, yeah, so I didn't say that it was necessary, but what I was being told, I just came back straight and told him, "I have been told A, B, C, D, you should, you should do A ,B, C, D. This is what should be done, and this is what should not be done"'.*

In summary, this case study shed light on the complexities surrounding ANC access and the impact of external factors on a woman's pregnancy journey. As a 21-year-old mother with her second pregnancy, she had faced challenges related to her young age during her first pregnancy at age 16 years. She recounted the psychological torment and lack of support she had experienced, both from her family and her sister with whom she lived during that challenging period. This emphasised the need for comprehensive support systems, especially for young and unmarried mothers, to ensure their well-being and access to essential healthcare services.

Despite the initial hardships she experienced, this mother displayed an understanding of the importance of ANC. She recognised the value of the educational resources available during ANC visits, including charts and visual aids, to educate women about pregnancy risks. This reflected the vital role of healthcare providers in empowering pregnant women with knowledge about potential complications and the necessary actions to take. Overall, this case study provided valuable insights into the multifaceted nature of ANC access, the importance of comprehensive support systems and the role of healthcare providers in educating and empowering pregnant women to make informed decisions about their maternal health and the well-being of their babies.

Mother case study 3 (MC3)

This case study discusses a 26-year-old G6P2 mother admitted to acute care for cervical incompetence and infection. Given her history of three pregnancy losses, she had gone to the

hospital in her first month of pregnancy following a positive home test and started ANC at 16 weeks of gestation. She had four ANC visits before her admission at 36 gestational weeks. This mother had two living children but had lost three pregnancies because of what she referred to as a 'weak and delicate uterus'. In all three of those pregnancies, she had delivered in the hospital at 26–28 weeks and the babies had died the same day. She had been brought to the hospital by her husband after being reviewed by an obstetrician in a high-risk clinic during a normal ANC visit. The obstetrician gave her a referral for admission because of her previous history of pregnancy loss and premature labour.

She recounted her ANC visit patterns, and indicated that for her first three pregnancies, she began attending at 4 months when she felt relatively healthy. However, after experiencing two pregnancy losses, she adjusted her approach. In her fourth pregnancy, she initiated ANC visits at 2 months and continued into the third month, where she encountered restrictions because of her high-risk status. This change in her prenatal care behaviour was influenced by her previous pregnancy losses. Given her high-risk profile, she was later referred to Malindi for further investigations.

> *'The first clinic I started clinic when I was 4 months, I was not feeling any issues, the second pregnancy I also started with 4 months, for the third one I was told that it is not even a must because already I wanted going on the fourth month, but this one that I have, two children, the fourth pregnancy I started on the second month and when I reached the third month they tied me, the fifth pregnancy also I started on the second month also and on the third month they tied me and I was continuing with the clinic'.*
>
> *'…my uterus has a problem, I appreciate coming to ANC because three pregnancies have been lost, but coming to the clinic and the doctors have said that my uterus is delicate.'*

This mother initially delayed seeking care at the clinic, which was influenced by her mother-in-law's perspective and her own previous experiences of successfully delivering her babies without attending ANC clinics. She held the belief that ANC was not necessary because of these past experiences. However, a significant turning point occurred after she lost three babies in previous pregnancies.

These experiences transformed her health-seeking behaviour, and emphasised the importance of attending ANC. The perceived risk of losing her current pregnancy and the potential benefits of hospital care became clear motivators for her to attend ANC. She realised the significance of seeking professional care, as expressed in her words, '*I saw the importance of coming to the clinic*'. This change in perspective and her willingness to take proactive steps in her current pregnancy reflected a shift in her health-seeking behaviour.

> '*Mother-in-law said that I have got pregnancy and I didn't go to the clinic again I delivered well and I said that your time is different as we go there we are told by others that it is important clinic, it is important to come to the clinic but our parents say, "we didn't go, it is not a must", but me, when I got the challenges, I saw the importance of coming to the clinic. Right now, I am coming to the clinic'.*

> *'…because the first, second and third pregnancy, I was told by mother in-law and other people it is not a must to come to hospital for antenatal care and I am not getting children; they died, and for me, I saw it is better to take a step so it will not make me be late and I came early to the hospital and they have helped me, I appreciate and I hope I will get a baby…'*

During her first pregnancy, this mother acknowledged that she initially had no knowledge of ANC. She shared that some members of her community had successfully delivered their babies without hospital visits, leading her to question the necessity of going to the clinic. However, her attitude began to change when she engaged in discussions with fellow church members who emphasised the potential benefits of attending ANC. She learned that clinic visits provided access to vaccinations and medications that could benefit both the mother and the baby.

> *'They say that they have already delivered and they didn't go to the hospital so they don't see the importance, "going to the hospital has what importance?" and I said that I don't know because I had the first pregnancy, but you can sit with the others in church and they say when you go to the clinic there are injections that can help the baby, there is medication to add blood, and through those talks I love to go and they say if you go it is fine and if you don't go it is also okay. So, I tell my husband it is better to go, and he said okay. The first pregnancy is when we stared at 4 months. So, when I went to the hospital is when I got the education now and saw the importance of going to the hospital'.*

She acknowledged that her husband was supportive of her ANC and had willingly agreed to accompany her to the clinic. Despite his willingness to be present, he was asked to leave the clinic, and she had to relay the information to him. Her husband, after being sent away, felt discouraged to accompany her in other visits.

> *'I am told and then I tell him. When I tell him and then he says, "were we supposed to go together", eeh, and then he said we go, even that I have been here, it is that he has been sent away but in the evening he could have come again it is the way he was sent away and he was told, "it is not a place you be together with your wife, be outside", and that is why he said that he will not come but he usually like to come to the hospital'.*

Furthermore, given her referral for further investigations, she had to travel to another clinic, incurring additional transportation expenses.

> *'Where I am from is called Bogoni, when I alight at Bogoni I board the motorcycle where I am going is for 50/-, I leave there and go to the stage, from the stage I reach here it is 100, from stage until here because I don't walk a lot, stage until here is 100/- it is also 50/- so it is 50/-, 100/-, 200/- already, I have not come back, I board a motorbike 200/- again for coming back, It is quite costly but we know that we will get something so we don't have a problem with it'.*

She further explained that because of her high-risk pregnancy, she had to pay an additional fee of 600 shillings for each scan. She expressed her disappointment that the government programme, Linda Mama, did not cover the costs of these scans.

> *'...the level of blood it is me, lab 600/- to get the scan, you cater for it no wonder we ask this Linda Mama, and it helps you to deliver, that is what can make you come out but now you can't be helped by Linda Mama. When you are sent for scanning you cater for yourself'.*

In summary, this case study shed light on the complex journey of a woman navigating pregnancy after experiencing multiple losses. Despite initially being discouraged from seeking ANC by her mother-in-law and facing the tragic loss of three pregnancies, this mother ultimately recognised the importance of attending the clinic for her current pregnancy.

Her decision was influenced by her personal experiences and the advice of fellow church members, who highlighted the potential benefits of medical care. Her supportive husband played a pivotal role in accompanying her to the clinic, even though he was later asked to leave, which reflected the couple's commitment to the health of both the mother and her unborn child. In addition, the financial challenges associated with referrals and scans underscored the complex barriers faced by expectant mothers in accessing specialised healthcare. Overall, this case emphasised the significance of individual experiences, community support and spousal involvement in shaping maternal health-seeking behaviour, especially when facing high-risk pregnancies.

Mother case study 4 (MC4)

This case study involved a 19-year-old primigravida (G1P0) who reported various health issues during her pregnancy. Although she had visited the hospital on multiple occasions since the beginning of her pregnancy, it remained unclear whether she had attended any formal ANC sessions. At 39 gestational weeks, she presented at hospital with complaints of fainting, lower abdominal pains and bleeding. She was subsequently diagnosed with antepartum haemorrhage, a condition carrying significant risks for both maternal and neonatal health.

During her recent hospital admission, the mother shared a distressing account of her health condition. She had been experiencing continuous bleeding for an entire week, which had raised concerns about her well-being. However, a combination of fatigue and financial constraints that limited her access to transportation meant she was unable to seek medical assistance promptly.

> *'...I slept when I woke up in the morning, I was passing a lot of blood, and I removed some pieces of blood...I said that the baby had come out already…I felt like I had lost the pregnancy…my husband thought I had done an abortion… "you have removed the pregnancy"'.*
>
> *'...from Monday to Friday that is when I was bleeding, so I went on Friday to the hospital I did not go Saturday passed, Sunday passed I went on Monday because I did not even have strength, I do not have fare because it is far I waited for my husband to send me money I went to the hospital, when I went to the hospital I told the doctor that*

yesterday I fell and I bled and he said, "you were bleeding, why don't you show symptoms that you were bleeding?"'

This mother explained that when she initially noticed the bleeding, she believed it was just a discharge of impure blood. However, her husband, upon discovering her condition, became increasingly alarmed and suspected that she had intentionally terminated the pregnancy. He questioned her about the pregnancy, expressing doubt about its existence, to which she adamantly asserted that the pregnancy was intact.

'...My husband came and said, "why are you bleeding?" I told him it is dirt, "and that pregnancy do you, have it?" I told him that I have it. "You are lying, you removed it". I told him "I have not removed the pregnancy". When it reached at night a lot of blood came out, Martin now was angry and said that I had removed the pregnancy, "you have removed the pregnancy". I told him that I have not removed the pregnancy, "you are talking for me, I have not removed the pregnancy. It is blood on its own that is coming out. It is dirt." He said, "you have removed the pregnancy" until we went to the hospital when we reached the hospital, the bleeding stopped'.

This patient's journey in seeking medical assistance was marked by a series of hospital visits that failed to provide a resolution to her health issues. Her determination to find a solution led her to various healthcare facilities, including Majomboni, Malindi, Kakooni and a hospital near Vingoni, yet her complaints persisted. Frustrated and desperate for answers, she ultimately turned to a witch doctor in search of an explanation and remedy for her condition. Throughout her ordeal, she remained uncertain about whether she had ever attended formal ANC visits.

'I had gone to the hospital at Majomboni, I went to Malindi to be scanned and I was seen not to have anything I went to Kakooni I went to another hospital called it is near Vingoni and then I went to another hospital Kwa "Upanga" and then I went to the hospital and that was my last, so I was going to the clinic every day, I asked the doctor, "what is paining me?" and he said that I do not have anything, it is something from there...at home. "Things from home"'.

Her life before marriage was marred by significant challenges, including intimate partner violence (IPV), which had a profound impact on her well-being. The physical abuse she endured left her with visible injuries, and she decided that she could no longer endure such treatment. In response to the abuse and turmoil in her life, she made the difficult decision to run away from home, seeking refuge with her current spouse.

> *'I said that I am not going to be married, I was beaten until I swelled on my hand, I swelled here, I swelled here I was beaten at 5, I slept, in the morning I woke up and went my way, to this one he was staying at Ramis I went there, they looked for me until they knew where I was, they came and said, "let's go home!" I told him, "I do not want, if you want to kill me, kill me but I am not going". They struggled there and they said that a police officer will be called. Every day we were staying up in the forests, staying there in the forest we don't know lunch, we don't know breakfast we don't know supper where it is…"*

After seeking medical attention for her abdominal pain, she received an ANC book, which was intended to facilitate her access to essential prenatal care services. However, her mother-in-law, a prominent figure in her life, discouraged her from attending ANC visits, advising her to avoid the clinic. This maternal figure held a traditional perspective and appeared to oppose the idea of ANC, which created a dilemma for the young mother.

> *'Because I had that…the belly was disturbing me a lot so I told this one that I have come with, "the belly is disturbing me" so my husband's brother gave out money and I said, "take her to the hospital she be scanned", I was taken to the hospital and I was scanned and I was seen not to have anything, we went to the hospital and I was given a book and I was told to go to the clinic, mother was saying, "leave the book for the clinic, don't go to the clinic"'.*

Frustrated by her persistent health issues, her husband and mother-in-law decided to consult a traditional healer, commonly known as a witch doctor. This alternative approach led to the application of traditional remedies, including the use of medicinal oils and special water mixtures aimed at alleviating her abdominal discomfort. The combination of traditional medicine and the

influence of her mother-in-law posed a significant challenge to her engagement with formal healthcare services, including ANC.

> *'I was applied for oil, I was given water so when my belly is paining and I apply that water the belly calms down, when I drink water that mother came inside there and took the oil and mixed by herself, I do not know inside there, she took water she poured and put other ones'.*

This mother acknowledged that her community held various beliefs and superstitions related to pregnancy, including ideas about witchcraft, food taboos and religious practices. She explained that she had heard people suggest that pregnant individuals should consume sour foods, engage in peculiar activities like staying in the toilet and smelling its odours, and at times, they even discussed witchcraft in the context of pregnancy. Moreover, she admitted to blending these traditional beliefs with religious practices.

> *'I heard that when someone has a pregnancy, they eat things that are sour, they like staying in the toilet, some stay in the toilet they smell the smell of the toilet and others…Even when I am asking about the days for someone to deliver…they speak other things about witchcraft only'.*

> *'I do not see any benefit I just see I am going the way it is supposed to be until I told my husband I am not going again as in I am doing like I am being forced'.*

> *'…When I had dizziness and I fell down…we went to the pastor I was prayed for, I was given oil, I was given water I was okay and not falling again. I was doing my work and then I fell again I was taken to a witchdoctor now…as I reached there, they said that your mother is a witch…'*
> *'...I am not being bewitched, it is not her…if you believe God, you will see me getting okay but when you believe in a human being you will continue to believe a human being and you will say I am being bewitched by your mother'.*

Unfortunately, she admitted to not seeing any benefits in attending ANC and described having negative experiences with healthcare workers. She felt that her visits to the clinic did not provide any advantages and even expressed a sense of being coerced into attending. She also recounted

instances where she had negative interactions with healthcare providers, feeling that her concerns were not adequately addressed. She shared her frustration about not being thoroughly examined during her clinic visits, with healthcare workers often deferring tests and consultations for another day, leaving her without answers.

> *'...I do not see any benefit I just see I am going the way it is supposed to be until I told my husband I am not going again as in I am doing like I am being forced'.*
> *'I asked, I tell the doctor, "Why is that when I come here, I am not tested this and this", he says, "time! The others want to enter, those questions another day". Another time when I go the doctor has changed, another one comes, and when you ask they say another day and another day is another one, when you tell him, he does not bother, he does not have time as in you are attended to there, you are given medication and you go home, there are no other things that you are done for'.*
> *'There is a time I fell, and I went to the hospital I told the doctor that I fell and got hurt. He said, "go to the hospital private hospital with money they test you"'*

In summary, this case study involved a 19-year-old primigravida who presented at 39 gestational weeks with a range of health issues, including abdominal pain, dizziness, bleeding, and fatigue. Despite multiple hospital visits, it remained unclear whether she had attended ANC before this admission. The case highlighted the interplay of cultural beliefs, healthcare system interactions and personal experiences in shaping her healthcare-seeking behaviour. Her journey involved consulting a traditional healer when conventional medical care did not provide the desired relief, reflecting the influence of traditional and cultural beliefs within her community. Negative experiences with healthcare providers and deferred tests also underscored the challenges patients may face when accessing healthcare services. This case emphasised the importance of culturally sensitive healthcare and understanding the multifaceted factors influencing healthcare access and patient experiences during pregnancy and childbirth.

Mother case study 5 (MC5)

This case study presents a 30-year-old G6P5 mother who arrived at the clinic without any prior ANC at 28 weeks of gestation. Her admission was prompted by severe abdominal pain persisting for a week, raising concerns about the possibility of preterm delivery.

Although she acknowledged the importance of ANC, she had faced a delay in initiating care for this pregnancy because of financial constraints.

This mother recognised the benefits of ANC and highlighted its importance in ensuring her well-being and that of her unborn child. She conveyed a proactive attitude towards ANC, emphasising that early initiation could help detect and address any potential complications and ensure the best possible health for her baby.

> *'…I feel it is the right thing to do, to come to the clinic because if I get any complications, I wouldn't want to harm the unborn baby…also take care of your personal health…I don't see if it's good to be fearful that's why I see it is good to start clinic early, know how my unborn child is doing'.*

This mother expressed her desire to initiate ANC earlier, recognising its significance, but she faced financial constraints that hindered her from doing so. She noted the cost of acquiring the ANC book and the expenses associated with transportation to the hospital. In addition, she highlighted the challenge of accessing healthcare facilities because of the distance from her home, particularly when pregnant and prone to fatigue. She suggested the need for free ANC books and more accessible healthcare options to address these barriers.

> *'...Me I want to start my clinic, but I have not got the money to buy the book, that is the first thing. I have not gotten the money to buy a book and the book when you ask other people, they don't tell you right, they tell you it is 250 or they tell you 300, they tell you I don't know is how much hence you stay with delay because you don't have money. With a thing like that, I see they could give free books something of that sort and other times you think reaching the hospital is far so how will you reach and as you know about pregnancy, there is getting tired. As of now I am from Kalimapoa, to here is 150/- to reach here or you can find a kind-hearted person who can drop you with 100/- so you find such things are a little challenging'.*

This mother received financial support from her husband to attend ANC, but the main priority was ensuring there was enough food for the family. Although her husband allowed her to attend ANC and provided the necessary financial support, he was not willing to accompany her to the

clinic. He believed that the primary reason for attending ANC was to undergo HIV testing, and he felt that there was no need for him to be tested as he trusted his own health status.

> *'…when I asked for permission to visit the clinic, he said that it is okay, he gave me money and said he does not have HIV and he trusts himself…I tested for HIV then I showed him the results…For my husband, when you tell him about matters to deal with the clinic, he is very caring about health'.*

She further elaborated on the influence of her mother-in-law in family decision-making and emphasised that family dynamics played a crucial role in these matters. In some family setups, the rules may dictate that permission must be sought from the mother-in-law, and her decision holds significant weight. If she refuses permission, it is a definitive no-go; even if a woman's mother supported her decision, disregarding the mother-in-law's stance could lead to the husband being called at work to account for his wife's actions.

> *'It depends with how the family set-up is and if the rules are with the mother-in-law, if the child is at work it is a must you ask for permission from her, and if she says no it is a no, if the mother says you can't go then go because if you go before she allows your husband will be called at work and you will give a reason'.*

She also expressed her frustration with the ANC services, recounting an instance where, despite arriving early at the clinic with her husband, she was unable to be seen. The clinic's policy was to only attend to the first 10 people, and when she arrived, the quota had already been filled. This unexpected turn of events left her disappointed, as she had come with a specific purpose in mind but was told to return the next day because she was late.

> *'It hadn't reached 7 a.m. I was told that when people reach 10 that's it. I came in very early with my husband but on reaching there, I found people had come in early on my side already reached 10 and I was told to come back. My husband had left so I had to call him and inform him that I have been told to come back tomorrow, for what purpose because I was late. This really breaks someone's heart as you came in early with a purpose of but now you are returned back home again'.*

She also observed a disparity in how quickly pregnant women were attended to, depending on whether they were accompanied by their husbands. In her experience at the General Hospital, she noticed that women who came with their husbands received quicker attention, possibly to accommodate the husband's schedule and allow them to continue with their tasks. In contrast, women who arrived alone had to wait longer for their turn.

> *'You see someone coming in with their husband and at the General, when someone comes in with the husband they are attended to fast. You have come with your husband, you will enter first and you who has come alone, you remain there because you the one who has come with the husband, you are attended to fast so that the husband can go and do his errands but for the other ones who have come without husbands, you will remain there until the one who came with the husband, he finishes, goes home then you will be attended to, but here I didn't see'.*

In summary, this case shed further light on the experiences and challenges faced by pregnant women in accessing ANC services. Although this mother recognised the importance of ANC, she encountered significant obstacles, including financial constraints, lack of clear information on ANC book costs and transportation challenges. Her husband was supportive of her health but did not see the need to accompany her to the clinic as he misunderstood the primary purpose of ANC visits. The influence of extended family members, such as the mother-in-law, played a pivotal role in decision-making, which further complicated the process. Moreover, the frustrations encountered during clinic visits, such as long waiting times and disparities in service based on marital status, highlighted the need for improvements in the healthcare system to ensure equitable access and efficient care for all pregnant women.

Summary

In conclusion, the examined case studies offered valuable insights into the complex factors influencing maternal healthcare decisions, which could be categorised as intrapersonal, interpersonal, or extra-personal. The relationships among these factors, particularly the interplay between interpersonal aspects such as fear and beliefs, and interpersonal and extra-personal factors such as family influence, financial constraints, and cultural perceptions, significantly impacted pregnant women's access to and attendance of ANC.

These narratives highlighted the pivotal role of education, exposure and family support in altering health-seeking behaviours among expectant mothers. Overcoming barriers such as fear, misconceptions and financial constraints requires tailored interventions that address both individual beliefs and external influences. The Neuman system model proves instrumental in understanding these intricate dynamics and emphasises the importance of a holistic approach that considers the psychological, sociocultural, and economic factors that shape maternal healthcare decisions.

To enhance ANC access and attendance, interventions must encompass comprehensive education, promote spousal involvement, challenge cultural misconceptions, and address financial barriers. By adopting this comprehensive approach, we can better ensure the well-being of both mothers and their unborn children, fostering a healthier and more supportive environment for maternal healthcare decisions. The collective experiences and lessons from these cases further highlight the need for holistic care that recognises the multifaceted nature of maternal health, thereby contributing to improved pregnancy outcomes and the overall well-being of expectant mothers. The next chapter is the discussion of the research findings.

CHAPTER 8: DISCUSSION OF THE FINDINGS

This chapter discusses the findings of this study in the context of existing contemporary literature concerning factors that impacted the help-seeking behaviour of women attending ANC in Kenya and addresses the study's limitations. This study aimed to explore the experiences of midwives and pregnant mothers in relation to ANC access and attendance in Kenya. The primary objective was to describe women's temporal analysis in evaluating their 'need' and capacity to attend ANC. The 'need' was interpreted as the WHO's minimal requirement for ANC attendance, which is four visits.

This study identified the enablers and barriers related to ANC access and attendance, some of which aligned well with the literature review findings. What was absent from the literature was a theoretical framework to guide improvements in ANC attendance. This chapter presents a structured model for understanding the three themes that emerged from participants' narratives: individual factors and perceptions; sociocultural and economic influences; and system and structural factors. A structured model is introduced that categorises the identified themes into three overarching categories reflecting these themes (individual factors and perceptions, socio-cultural and economic influences and system and structural factors). This categorisation was based on the Neuman system model, which identifies intrapersonal, interpersonal, and extra-personal factors as essential components for understanding the intricate dynamics that influence ANC decisions.

New findings revealed in this study included the temporal decision-making made by mothers as they sought to evaluate aspects of their lives that may compete with their desire to attend ANC. Mothers demonstrated varying levels of concern regarding the potential risks for maternal mortality. Those with a clearer appreciation of these risks tended to exert more influence over factors that could potentially delay their ANC attendance. The new theoretical model outlined in this chapter built on the Neuman system model and offers a way to organise the myriad factors that either facilitated or hindered a woman's temporal assessment of the necessity to seek ANC in a timely manner. The chapter concludes with several recommendations for further research.

Research findings

In this study, data analysis showed that early attendance is affected by complex factors which were categorized based on the Betty Neuman systems model: intrapersonal, interpersonal, and extra-personal. Consistent with the literature review, ANC access and quality of service provision issues deterred women from attendance, including uncivil behaviour by midwives, poor attitudes of staff towards the women's experience, long waiting times, inadequate transport, and lack of finances for transport (Kyei-Nimakoh, Carolan-Olah, & McCann, 2017; Mason et al., 2015).

However, this study also brought to light the critical role of the temporality of women's individual decision-making and autonomy in influencing their ANC attendance. This aspect could act as an enabler for ANC use. Although previous studies may not have extensively reported on this factor, the present findings suggested that it may be a driver of behavioural change. Women's assertiveness and their ability to demand the care they need, as well as how it should be provided to them, have potential to enhance ANC attendance by empowering them to take charge of their health-seeking behaviour.

Intrapersonal factors

In the present study, the literature review conducted in chapter 4 established there was a significant gap in the literature particularly the absence of a theoretical framework explaining the intrapersonal cognitive processes used by women to evaluate the need for ANC and the risks (personal and foetal) associated with not attending ANC. Intrapersonal factors relate to the thought processes that occur within the individual and influence that person's behaviour (Lawson, 2021). Intrapersonal factors can include a sense of shame, inadequacy, lack of locus of control and undermined autonomy (e.g. coercive control) (Carney, Gallo, Espinoza, Yataco, & Miller-Graff, 2023; David, Gelberg, & Suchman, 2012; Osamor & Grady, 2016; Sumankuuro, Crockett, & Wang, 2018). These factors are fundamental to the individual and influence their intent and decisions in relation to health-seeking behaviour.

Intrapersonal factors are closely linked to temporality in decision-making. Although there is a dearth of research in the area of risk perception for pregnant women, this was the focus of a recent study (published after the literature review was conducted for this study) (Berkowitz & Mann, 2023).

The study reported that women in this study had healthy lifestyles, did not consider themselves at risk and normalized their decisions on seeking care reported as ignorance by the midwives. This concurs with the present findings which showed that pregnant women believed that pregnancy was a normal and natural occurrence for every woman in her lifetime. This was seen as ignorance and a lack of knowledge on the importance of antenatal care for preventive services and screening for follow-up for both her and the unborn baby. This was also reported by multiparas owing to the previous experiences of uneventful pregnancies and childbirth which were successful. Similarly, to a study in Cameroon women were reported to perceive pregnancy as a healthy condition and placed a low value on ANC (Warri & George, 2020). Therefore, the perceived need for health services is attached to illness and complications and is based on the tradition and myths when there were no health facilities in the past. Pregnant women still believed that home delivery was safe as the older people in their community had shared their experiences as having been uneventful without complications.

This study highlighted three intrapersonal approaches to risk assessment that could be linked to timely ANC attendance, non-attendance, or late attendance. The Neuman model content is focused on women's stressors, as a potential risk factor for developing a condition or illness. Intrapersonal thought processes that led to the idea that ANC was necessary were evident among women who were risk averse and those women that had an overt obstetric problem (e.g. vaginal bleeding). Risk aversion stemmed from an understanding of factors contributing to maternal mortality. This finding concurred with a previous study that found ANC was sought to relieve discomfort during pregnancy (Munguambe et al., 2016). Risk aversion was evident in many mothers' desires to be given 'the purple book', which is a record of ANC visits and maternal and foetal health. This was a key motivator among women who wanted to do the right thing by themselves and their unborn child. Furthermore, women were afraid to arrive at the delivery ward without that document because midwives would strongly chastise them (Mason et al., 2015).

Many women who understood the risks for maternal mortality were reluctant to attend ANC because interpersonal factors suppressed their concerns for personal safety (e.g. mothers were persuaded by family members that ANC was not necessary). These factors are discussed in detail in the relevant section below. This meant that risk perception and anticipation was a reason women made an intentional decision to seek early ANC in the first trimester.

This behaviour constituted risk aversion, where an individual perception of a risk may have consequences and this expectation motivated that person to seek care (Anafi & Mprah, 2022; Ferrer & Klein, 2015). This was consistent with a study that found women's knowledge of pregnancy complications was associated with maternal health-seeking behaviours, whereby knowledgeable women were more likely to seek ANC than their counterparts without such knowledge (Kifle et al., 2017). Another study showed that pregnant women with knowledge of complications used ANC in the first trimester (Kpienbaareh et al., 2022).

Intrapersonal thought processes that led to the idea that ANC was not necessary were most evident among younger mothers who perceived that pregnancy was either a natural event (i.e. no problems anticipated) or that had little understanding of factors related to maternal mortality. In addition, this view was shared by some older mothers, who were multigravida and had had at least one trouble-free pregnancy. This was revealed in a systematic review where women delayed initiation of ANC and believed it was not necessary because they were healthy and had had uneventful experiences with previous pregnancies (Downe, Finlayson, et al., 2019; Riang'a et al., 2018). Intrapersonal thought processes could also lead to the idea that ANC could be postponed until obstetric problems arose. Mothers in this category often held the view that ANC attendance was necessary, but this need was played-off against the inconvenience of having to attend (e.g. extra-personal factors such as transport availability, cost and time spent away from daily routines) and family or social obligations (interpersonal factors). Other researchers reported inconveniences as a reason for delays in the initiation of ANC (Jacobs et al., 2018; Munguambe et al., 2016; Qureshi et al., 2016).

An analysis of participants' views in this study revealed that many women had limited autonomy and power to make decisions because of cultural norms that were deeply rooted in the patriarchal society. Lack of autonomy among women was expressed as the position of African women who depend on the authority of men's social role of controlling behaviour. The findings suggested that some pregnant mothers may be willing to seek care but failed to do so because of the existence of male-dominated power structures. Similarly, a study from Pakistan reported that one participant had not been allowed to visit the hospital if her husband was not home, even in the case of an emergency (Naz, Muhammad, Ahmad, & Ali, 2021).

However, recognising disparities among those that are marginalised in terms of access to health services and empowering women with health information and income-earning opportunities may improve their ability to seek ANC (UNICEF, 2019).

This study revealed that the intrapersonal factor of higher literacy level enabled ANC attendance by women, as such women had knowledge on the importance of ANC. This was consistent with other studies that reported illiteracy was associated with late ANC initiation and irregular subsequent visits (Basha, 2019; Dereje Kifle et al., 2017; Muhwava, Morojele, & London, 2016; Pell et al., 2013). Other studies from Zambia and Ghana found that a higher education level among pregnant women meant they were more likely to initiate ANC during the first trimester and attend at least four ANC visits (Manyeh et al., 2020; Muyunda et al., 2016). This suggested that literacy level influenced women's temporal analysis, which impacted decision-making among women and increased their degree of autonomy to seek care. Even with barriers in healthcare facilities, educated women were assertive enough to face the midwives and overcome the fear caused by negative attitudes, disrespect, and abuse, and seek care.

This study also indicated that women's information needs was an important part of ANC use. Health education was given by midwives to women in groups and on a one-to-one basis using pictures and stories, and this knowledge was thought to encourage women to attend ANC as it facilitated further engagement. However, women reported other sources of information, including their family, traditional birth attendants, the Internet, and peers, which at times reflected misinformation about the timing and importance of ANC. For example, if the person giving information had previous experience of home delivery with good outcomes, they often discouraged the mother from attending a health facility. The literature review indicated that health education during pregnancy was an important part of ANC and was associated with improved outcomes (Herval et al.2019). Researchers have found that health education was an important motivator for ANC use, which highlighted the importance of health education as a way of improving ANC attendance (Gamberini, Angeli, & Ambrosino, 2022; Simkhada et al., 2008). In another study from Ethiopia, women's health-seeking behaviour depended on their ability to identify danger signs and complications to make decisions on the timing of ANC (Yosef & Tesfaye, 2021).

The assumption was that if women were informed about the timing, number of visits, danger signs and importance of ANC in protecting them from morbidity and mortality, there could be behaviour change in their decision-making and health-seeking (Kruk et al., 2016). The present study also suggested that if women obtained relevant information and participated in health education, it may improve ANC attendance and health outcomes as they would be aware of the implications of not attending ANC.

In summary, the interplay of intrapersonal factors and women's thought processes significantly influenced ANC attendance. These findings underscored the importance of risk perception, knowledge and health education in shaping women's decision-making and ultimately improving ANC attendance. To enhance ANC use, interventions should focus on improving women's knowledge, providing accurate health information, and addressing misconceptions that can act as barriers to seeking timely and regular ANC.

Interpersonal factors

Interpersonal factors relate to kinship, family, and the wider community. In this study the majority of the women were married. Some married women had husbands who had multiple wives; in such cases, husbands had the power to rank their wives in order of importance. The most profound temporality was between the woman and her husband. Women internalised seeking health services, but it was their husband, the family and community that determined if they should seek ANC. Coupled with the husband's social control was his control over family finances. Within the context of this study in Kenya, patriarchal influences and power imbalances are evident. The prevalent social norm in sub-Saharan Africa highlights the husband's control over family decision-making. Consequently, when a woman attends antenatal care (ANC) against her husband's wishes, she is deviating from established social norms.

This study revealed there were other people who acted as influencers in relation to women's ANC access and attendance, and that the family (husband, mother-in-law) and wider community played critical roles in either encouraging or discouraging the use of ANC. This finding was triangulated with data from midwives' interviews. Most midwives said that women relied on their spouse and mother-in-law for permission and finances before seeking ANC.

These findings concurred with a study from Zambia, where it was found that interpersonal relationships delayed care-seeking and access during pregnancy as the husband was the ultimate provider of permission for a woman to attend ANC (Kaiser et al., 2019).

Financial constraints were another key barrier to ANC attendance, particularly when a woman's husband was unemployed and unable to provide for the family. This barrier was evident despite ANC being provided free of charge in Kenya. The extraneous factors were the cost of transport or the opportunity cost of removing the mother from her daily duties (including preparing her husband's meals, housework, elder/childcare and unpaid labour). Women's decisions to seek maternal healthcare were strongly influenced by the values and opinions of their husbands, mothers-in-law, and other family members (Ganle et al., 2015; Sumankuuro et al., 2019). Many studies highlighted the much-debated question of the role of the mother-in-law in influencing women's decisions to seek ANC, which could either be positive or negative but was mostly negative (Downe et al., 2019; Simkhada et al., 2010). Previous studies highlighted a lack of autonomy for women in terms of self-choice and control over her life choices, which meant decisions were controlled by others and her willingness to seek care was not considered, ultimately leading to late or no ANC attendance. Interpersonal factors relating to kinship can positively influence and support a woman's decision to seek ANC in a timely manner. The influencers identified in this study were not only family members, but neighbours and other community members. These diverse people had an impact on the health-seeking intentions of a pregnant woman as she is viewed as the responsibility of the community. Therefore, it is important to involve the wider community in any communication intended to encourage behavioural change.

In this study, male involvement in ANC was embraced. Midwives reported that they fast tracked mothers who came with partners as an incentive by giving them priority in being served. This was contrary to a study that reported that men who accompanied women to ANC faced ridicule and were perceived to be in a territory dominated by women (Gibore et al., 2019). Furthermore, other studies noted that this practice was 'dishonourable', because traditionally this was defined as women's work and therefore stigmatised (Maluka et al., 2020; Mkandawire & Hendriks, 2018).

However, some mothers reported that men were not ready to accompany them and did not ask their husbands to accompany them to ANC because it was a woman's affair, and they were busy. Unlike the midwives, they were not aware they could be fast-tracked by attending with their husbands and thought coming with their husbands was a waste of valuable time when they should be working (Ongolly & Bukachi, 2019). This finding was contrary to a recent study from Tanzania that reported high male involvement in ANC (Mapunda et al; 2022). Therefore, involving men in ANC may be an important strategy for achieving optimal ANC attendance, especially if they feel accepted in the clinic, and may encourage them to support their wives both physically and financially.

A sensitive issue that was broached by some women in this study was the experience of intimate partner violence; this was associated with poor ANC attendance, which was similar to findings reported in other studies (Bahati et al., 2021; Martin et al., 2019). This indicated that it is important for healthcare professionals to screen women for intimate partner violence, which can lead to low ANC attendance. However, a major concern is that women may not disclose such violence to midwives unless there are observable physical injuries, although emotional and mental distress often remain unnoticed. This finding was consistent with other studies that found women were rarely screened for intimate partner violence during ANC visits, despite some women recounting at least one form of violence during pregnancy that may affect their ANC attendance (Bahati et al., 2021; Hatcher et al., 2019; Martin et al., 2019). It is assumed that midwives are able to identify affected women and offer support. However, this may require specific training on screening women and appropriate interventions for intimate partner violence. Considering such strategies could help to improve ANC attendance and pregnancy outcomes.

The interpersonal relationship between the pregnant woman and the midwife was the second most profound temporality. Predominately, mothers outlined poor relationships with midwives, and this was supported when triangulated with the opinions of midwives. Respectful maternal care is recommended by the WHO for positive pregnancy outcomes (WHO, 2016). However, this study provided evidence of disrespect and abuse from midwives to mothers, and the communication between midwives and mothers included incidences of negative attitude, rudeness, and aggressive behaviour.

Some midwives were reported to be uncivil towards women, which resulted in women attending for one visit to obtain the ANC book to avoid reprimand if they presented without it in the labour ward; however, they failed to attend follow-up visits, as reported by other researchers (Munguambe et al., 2016; Pell et al., 2013).

This study indicated that midwives were sometimes rude to the mothers, which included verbal abuse and poor communication. This factor was also reported by other authors as affecting health-seeking behaviour among pregnant women in public facilities (Abuya et al., 2015; Miltenburg, van Pelt, Meguid, & Sundby, 2018; Oluoch-Aridi et al., 2018; Warri & George, 2020). A Ugandan study on respectful maternal healthcare showed that respectful maternity care had a role in promoting pregnant women's motivation to seek maternal healthcare (Ackers et al., 2018). In another study from Nigeria, social and psychological barriers that included midwives' negative attitudes towards pregnant women and abuse were cited as barriers to seeking ANC (Nwankwo & Ezenwaka, 2020). This finding was also consistent with an Ethiopian study focused on respectful ANC that found almost half of the participating mothers experienced disrespect and abuse when receiving care (Adane, Bante, & Wassihun, 2021). Similarly, a systematic review of respectful maternity interventions found a majority of the women had experienced a form of abuse (Namusonge & Ngachra, 2021).

Participating midwives reported a perception that mothers felt they were disrespected by them. There was abundant literature confirming a long history of mothers experiencing fear and feeling uneasy when interacting with healthcare professionals (Bradley et al., 2019; Ibrahim et al., 2022; Miltenburg et al., 2018; Orpin et al., 2018). This suggested poor communication between midwives and mothers may instil fear in women, which will mean they do not attend ANC early to avoid visiting the clinic many times and minimise interactions with healthcare workers who are not welcoming unless they present with a problem. In the same context, some women reported having been treated rudely and with disrespect when seeking care or having observed other women being mistreated by midwives. This was consistent with a study conducted in Kenya where midwives reported observing other colleagues abuse women and also at one point having abused a woman themselves (Afulani et al., 2020). That study recommended changing the culture of health system-related stressors to strengthen and empower healthcare professionals, which is likely to reduce abuse (Afulani et al., 2020).

These findings have implications for the clinical setting given that the interpersonal relationship between mothers and midwives appeared to fall below the necessary requirements stipulated in the guidelines from the Kenyan MOH, which were adopted from the WHO guidelines for positive pregnancy experiences. These guidelines promote an active connection between ANC clients and midwives. Therefore, it may be ‘all in the woman’s mind’ to decide to seek care depending on her personal encounters with midwives, which can change her thoughts when she tries to avoid stressors caused by rude behaviour in the health facility leading to delays in seeking ANC.

Extra-personal factors

Extra-personal factors encompass external elements that are beyond an individual's control and play a significant role in shaping their ANC-seeking behaviour. These factors, such as health system barriers, travel distance and external stressors, have a profound impact on a woman's decision to seek ANC. Health system barriers such as staff shortages, inadequate resources and long waiting time were some of the extra-personal factors identified in this study. Participating mothers reported they sometimes had to wait for over 6 hours to be attended. This long waiting time meant that women who had a family to feed and work to do could not just 'drop everything' for ANC. Therefore, the women in this study admitted to initiating ANC late or failing to come because of competing tasks such a taking care of other children and loss of daily wages needed to feed the family. This was consistent with a systematic review focused on access barriers to obstetric care at health facilities in sub-Saharan Africa (Kyei-Nimakoh et al., 2017) that found a key barrier to attendance was long waiting times at health facilities. This was also supported by a study from Mozambique on clients' experiences in ANC, which found that indirect costs of seeking care were increased by long waiting times that meant mothers were unable to attend to family responsibilities (Steenland et al., 2019).

The long waiting times in this study were reported to be due to the high number of clients compared with the number of midwives, who complained of staff shortages and lack of replacement of retired colleagues. An implication of these findings is that mothers may not look forward to ANC, which may manifest in less-than-optimal visits and late initiation (less time in contact with midwives) because there were few midwives with minimal time for clients, which may lead to suboptimal care after long waiting hours. Based on the findings of this study, waiting times should be addressed as a way to improve ANC attendance; for example, outreach clinics could help to decongest the workload in health facilities related to women coming for routine ANC services.

This study identified a variety of extra-personal stressors that were outside women's decision-making and control and affected their health-seeking behaviour in relation to ANC. In particular, long travel distances acted as a barrier to using ANC services. The majority of women in this study reporting having to travel long distances to the health facility, which caused inconvenience and stress because it was difficult to walk such distances, a lot of time was needed for travel, and

they lacked transport money for the journey (if transport was available). Often, the only transport available was via motorbike, which is a dangerous mode of travel to use during pregnancy. The present findings also indicated that some pregnant women may never present themselves to ANC, and others came late or when they had an emergency condition warranting hospital care. Previous researchers indicated that in poor resource settings such as Kenya, Tanzania and Mozambique, long distances to a health facility and lack of transportation affected the time of ANC initiation and subsequent visits (Konje et al., 2018; Munguambe et al., 2016; Pell et al., 2013). Similarly, this study found that women avoided having to attend too many ANC visits to reduce the number of journeys they had to make given the indirect personal and direct transport costs. The distance to facility also meant that some women spent the entire day visiting the clinic, leading to lost labour. Therefore, geographical distances and travel times and associated cost implications acted as barriers to early ANC initiation and maintaining routine visits in this context. Consequently, women may opt to initiate ANC when they are near delivery or attend only once without revisits.

Although Kenya has a FMS policy, which should be associated with increased ANC attendance, the indirect personal costs as identified in this study may explain why pregnant women may not seek care as expected despite free services (Orangi et al., 2021). The present findings highlighted that free services did not always translate into the use of ANC, as this may depend on various intrapersonal (individual) factors. However, many pregnant women that are willing to attend ANC but unable to pay for the services may benefit from the initiative. The present findings revealed that close proximity to the facility was an enabler of ANC access and encouraged attendance. This was similar to previous studies that found among pregnant women, living within the WHO-recommended 5 km distance to the facility was associated with higher chances of use of ANC services given that there were no cost implications and little time spent on travel (Simkhada et al., 2008; Tanou, Kishida, & Kamiya, 2021).

This study was conducted during the COVID-19 pandemic, which impacted maternal healthcare provision worldwide. Participants in this study reported the restrictions associated with the pandemic had an impact on and resulted in risk aversion among pregnant women because of fear of infection, which may have led to delayed initiation and low ANC attendance, psychological distress, fear, preference for home births and care-seeking choices.

This finding concurred with a study that reported that the pandemic affected women's ability to access ANC and led to delayed initiation with women beginning ANC in the second trimester (Landrian et al., 2022). However, when normality was restored, women started returning to the clinic and following COVID-19 prevention guidelines through the use of social distancing, face masks and hygiene measures. This study recommends that to support preparation for future crises, stakeholders should ensure policies are available to guide how ANC care is available and accessible to pregnant women without exposing them to unnecessary risk.

This study shed light on the profound impact the pandemic had on maternal healthcare provision locally, which echoed that reported worldwide. Pandemic-induced restrictions created a ripple effect, meaning pregnant women had to grapple with myriad challenges, including delayed initiation of ANC, reduced ANC attendance, psychological distress, fear, and a shift in birth preferences towards home births (Pallangyo et al., 2020). An underlying concern was the heightened risk for infection, which prompted pregnant women to make choices about seeking care based on their safety. These findings resonated with another study that reported the pandemic's disruptive influence on ANC access, causing women to initiate care later, often well into their second trimester (Landrian et al., 2022). The pandemic engendered a climate of uncertainty and trepidation among pregnant women, amplifying their fears of exposure to the virus within healthcare facilities. However, as the situation returned to a semblance of normality, women began to return to ANC clinics, albeit cautiously. They adhered to COVID-19 prevention guidelines, which included measures such as social distancing, mask-wearing and improved hygiene practices. This cautious return was indicative of the resilience and adaptability of both healthcare providers and expectant mothers in the face of unprecedented challenges.

It is therefore imperative that healthcare stakeholders prepare for future crises by developing and implementing well-defined policies that ensure the availability and accessibility of ANC for pregnant women without subjecting them to unnecessary risks. The pandemic highlighted the importance of maintaining essential maternal health services during emergencies and has shown the need for comprehensive preparedness plans to safeguard the health and well-being of expectant mothers and their infants.

These policies should strike a balance between providing essential care and protecting the health of both healthcare providers and patients in crisis situations and ensure that maternal healthcare remains a top priority even in the face of unforeseen challenges.

Ultimately, the extra-personal factors identified in this study emphasised the interconnectedness of healthcare system factors, geographic accessibility, economic considerations, and emergency preparedness. By addressing these factors comprehensively, we can create an environment where women can access and receive ANC without unnecessary barriers, ultimately contributing to improved maternal and child health outcomes.

Recommendations

The recommendations that emerged from the findings of this study are presented as suggestions that can be drawn on when developing and improving implementation strategies based on existing guidelines, clinical practice, and policies. The recommendations also identify opportunities for further research. Despite the stated limitations of the content analysis method, this study provided sufficient evidence and triangulation in the data analysis to validate the theoretical application of a) temporal assessment of risk for mother and her unborn child (intrapersonal), b) personal autonomy (interpersonal) and c) health service accessibility (extra-personal). This builds on the Neuman model as a means of guiding the development of coordinated strategies to improve ANC attendance. To-date, no previous literature has been effectively used to create initiatives/protocols or policies that have ostensibly improved ANC attendance and consequently reduced the incidence of maternal mortality in sub-Saharan Africa. A previous study highlighted that 'Despite a number of improvements, there remains both a high maternal mortality rate and limitations to maternal health care' (Atake, 2021).

The value of constructing a theoretical framework that adds to a previous health professional model of care (Neuman model) is that a means of applying theory into practice clearly exists. Nurse education and practice uses the Neuman model, and it can easily be applied to midwifery practice in the developing world. A greater understanding of temporal decision making, and women's stressors may engender empathy among midwives, thereby heightening their appreciation of the stressors endured by mothers in their temporal analysis on the need to attend/not attend ANC. Empathy is required to overcome or supress the current and long-standing incivility displayed by some midwives in sub-Saharan Africa.

The addition of midwifery-driven theory to the Neuman model can be applied as strategies to improve practice. The following recommendations were made based on the study findings.

- Midwives need to evaluate each women's temporality (decision-making at a particular time) relative to intrapersonal, interpersonal, and extra-personal stressors.
- Public health agencies should develop decision-making information based on intrapersonal, interpersonal, and extra-personal stressors. For example, if a woman's husband/partner is constraining her ANC attendance, then arguments may be provided for him to see the personal benefits of pregnant women attending ANC.

- Public health agencies should create information to re-shape societal norms held by males, so they are more empathetic to the needs of pregnant women (this approach has been successful in developed countries in terms of no tolerance of sexual harassment of women in the workplace).
- Greater emphasis should be placed on including the father in specific aspects of ANC that relate to him (benefits/rewards).

Recommendations for policy and practice

1. The WHO policy recommendations for positive experience in maternal healthcare provision remain to be realised in the context of this study. This study suggested that the Kenya MOH should create a strategy focused on training and mentoring midwives on interpersonal skills to improve their attitudes when providing care to pregnant mothers. This will address disrespect and abuse in maternal health provision, which is a barrier to service use. Poor communication by midwives could lead to fear of the midwives and avoidance of subsequent visits to the health facility. This study suggested that improving midwife-client communication may help to ensure the provision of acceptable quality health services.
2. Midwives should repattern their behaviour as to how they conduct themselves when interacting with pregnant women and aim to provide dignified and respectful care to enhance positive pregnancy experience during ANC visits. Midwives should enhance respect for patient values, preparedness and expressed needs through individualised care and involvement of the family as desired. In addition, introducing a rewards system for consistent attendance and extending flexible clinic hours, including weekends and Sundays, to accommodate various work schedules to encourage mothers to attend antenatal care appointments.
3. There is need to institutionalise community-based quality health services and programmes per the WHO guidelines. The MOH should develop a programme to ensure that all midwives attending to pregnant women undergo routine counselling sessions through a psychologist to improve their attitudes towards these women.
4. Based on the study findings, promotion of early and regular attendance of ANC is needed through improving women's knowledge about the risks associated with late visits, which denies pregnant mothers the opportunity to receive information and necessary

investigations for early detection and management of complications. Empowering women to make decisions about their appointment schedules presents a patient-centred approach, offering autonomy and personalization in the ANC access and attendance. Additionally, integrating mobile technology for information dissemination, such as appointment reminders and educational information through SMS or dedicated applications, may enhance communication and engagement during perinatal period.

5. The primary healthcare services can be provided in the form of outreach/mobile services to rural areas so they are closer to pregnant mothers, which may reduce transport costs, time wasted while travelling and lost workdays because of long waiting times in the facility. This could also ease the congestion witnessed in many government facilities. This could be achieved through maternity open days for pregnant women, following up women for revisits through phone calls and using community health volunteers for defaulter tracing and follow-up in collaboration with the facility midwives. Community health volunteers could also mobilise pregnant women so that when the mobile ANC clinic arrives in remote areas, pregnant women can attend. Additionally, offering free or subsidized transport services to and from antenatal care clinics can minimize logistical challenges for pregnant women.
6. Healthcare facilities serving the communities should have a follow-up mechanism through community-based solutions and engagement to reach the number of pregnant women in that community, help in dissemination of information on health-seeking and improve knowledge on perceptions of risk during pregnancy. This may reduce late/no ANC visits, improve early detection of diseases and increase the opportunity for advice and necessary investigations to promote regular attendance. Furthermore, adequate knowledge about risks in pregnancy may change the health-seeking behaviour among pregnant women who may then intentionally choose to attend ANC and opt for delivery with a skilled health provider.
7. Policymakers, stakeholders and the MOH should create awareness via maternal health programmes that emphasise the importance of skilled ANC, which could be expanded and intensified to rural areas. A potential means of communication is through community strategy focal people and the use of technology such as mobile text messages and media to reach to more people.

8. Dissemination of Linda Mama programme awareness is needed through national campaigns and maternal health programmes, which should be expanded and strengthened in rural areas. It may also be necessary to register mothers for the NHIF to ensure cost reduction is continued. Mobilising resources for obstetric ultrasound and specialist consultation for pregnant women may also be helpful.
9. Health promoters and educators should include the minimum and maximum ANC contacts pregnant women are supposed to have based on the WHO recommendations in their education and promotion sessions. ANC visits for different age groups could also be scheduled on different days to encourage older and younger women to attend ANC without fear of stigma and intimidation.
10. The study suggests the significance of health education programs aimed at influential family members such as the mother-in-law, husband, and community leaders/members. These programs should create awareness about the importance of Antenatal Care (ANC) services and encourage the involvement of husbands. In addition, incentives should be implemented to motivate husbands to participate in ANC, particularly those who are assumed to be busy and the primary breadwinners. This would help avoid delays and ensure that men are also involved in the process.
11. As this study was conducted during a pandemic, it is recommended that a long-term disaster management plan for healthcare is developed with guidelines that protect the vulnerable groups, such as pregnant women and newborns, by having the midwives offer maternal health services in the communities to minimise exposure to unnecessary risks during pandemics. This study suggests it is necessary to strengthen community health linkages through collaboration with partners such as UNICEF and other informal social networks.
12. Based on the study findings, the study proposes encouragement of early Antenatal Care (ANC) attendance at clinics among pregnant women, by raising awareness through community campaigns and offering health education sessions to highlight the importance of early ANC visits and the range of ANC services provision. Additionally, including incentives such as vouchers, refreshments, free transport, and flexible clinic hours, including weekends to allow women to decide autonomously on their appointment times.

Further research

Further studies could explore the use of co-design research in intervention studies that promote culturally acceptable solutions to barriers to ANC attendance among pregnant women in Kenya. Where possible, use of online platforms (e.g. mobile) to provide pregnant women with information regarding the importance of ANC in reducing maternal mortality could be explored.

Through this study dissemination through targeted publications in peer reviewed journals, conducting workshops to share insights in antenatal care, and collaborations with key stakeholders in Kenya's Ministry of health to ensure practical impact in antenatal care access and attendance. Through these forums, the study's findings will be integrated into policy and practice to bring positive changes within maternal healthcare in Kenya.

Strengths and Limitations

The present researcher was aware of some criticism of the method chosen for this study when developing the research question. The researcher used her actual professional practice experience and reflexivity of her profession (Kenya RM) to extend concepts beyond the current literature for example, the literature review revealed that there was no holistic approach to exploring the factors affecting women's decision to access ANC. In this study, a holistic framework was used to steer the systematic search of the literature.

The study utilized qualitative descriptive design and although it provides experience and reflexive approach, certain limitations in its application were acknowledged. The limitations of included those related to translation of transcripts in which there may be borrowing, omissions and additions. The interviews with the 20 mothers were all conducted in Kiswahili. The researcher is familiar with both English and Kiswahili, as they are both nationally recognised languages and taught in schools. Therefore, she conducted the interviews herself, and made and coded the transcriptions in Swahili to retain the original meanings. She then performed the translation equivalent of the original content and noted the literal meanings. For example, '*mwenye*' can be loosely translated as 'the owner'. However, the cultural meaning was the 'spouse/husband'. Another example was '*pita pita sana*', literally meaning 'passing passing a lot', but the meaning in the cultural context was 'too many visits. Therefore, understanding the local meaning in that culture was important to unearth the meaning of participants' statements. Although collecting data alone in this study was a limitation, the journey of becoming immersed in the data and understanding every detail was a good experience and helped in making decisions about going back to participants to share the findings and collect any further information they felt had not been well captured in the initial data collection.

Another limitation in this study was the single use of semi-structured interviews for data collection from research participants. Hence, no data were collected through focus group discussions, which could have added value by allowing participants to share experiences collectively. While not a major limitation, integrating this method of data collection might have captured group opinions from individuals with shared beliefs. These insights could have served as valuable additional resources, enriching the evidence for midwives and other stakeholders in maternal health in Kenya.

A major strength of this study was that it captured both healthcare professionals' and pregnant mothers' perspectives regarding ANC access and attendance. The study predominantly focused on the views and experiences of ANC access and attendance from midwives supplying the care and pregnant mothers who were able to access care. However, those who were unable (e.g. less-privileged mothers) to access ANC and remained at home were excluded. Although, this limitation is unlikely to have affected the findings of this study, further studies could include pregnant women at home who had never attended ANC and would deliver at home or with a traditional birth attendant.

CHAPTER 9: CONCLUSION OF THE STUDY

Restating the research topic

Maternal mortality remains unacceptably high in sub-Saharan Africa. ANC is protective against maternal mortality. To date, actions by midwives and government health authorities have not improved ANC attendance in Kenya, and consequently maternal mortality has not declined in most regions. Furthermore, there have been few attempts to synthesise the evidence base for the purpose of constructing a framework that can be used to direct interventions that inform communities and empower women to routinely benefit from ANC. Pregnant women's voices on the topic of their temporal decision-making with regard to ANC attendance have rarely been studied, and consequently understanding of the factors that influence their risk averse thoughts and actions (attending ANC) remains poor. However, these thoughts and actions are fundamental to making a cultural change in Kenay and sub-Saharan Africa more broadly towards recognising the rights of women to timely and appropriate maternal care.

Restating the thesis

The researcher postulated that the literature describing barriers and enablers to ANC was not organised in a functional framework that could be understood by those intent on improving ANC attendance. Only one framework was discovered in a preliminary literature search, which was later verified in a systematic search of the literature. This framework was deemed to be inadequate as a driver for improvement. It was hypothesised that women's temporal analysis of the factors determining ANC attendance needed to be more fully understood. The literature review produced content that could be readily organised into a framework that already existed in a model of care for nurses. The Neuman model identified three areas of stressors requiring assessment: intrapersonal, interpersonal and extra-personal factors. There was no foreseeable reason why the Neuman model of care could not be applied to midwifery patients by practicing midwives in sub-Saharan Africa. The Neuman model is generic in that it can be applied to any patient no matter what field of care is required (e.g. palliative care, cardiac care, ophthalmic care).

Using a constructivist approach, the data for this study were collected from multiple interview sources to meet the researcher's focus on increasing the depth by pursuing at least three research elements. Interview data were collected from: a) mothers attending ANC,

b) midwives conducting ANC and c) mothers who had a near-miss and required admission to an obstetric acute care unit. The purpose of accessing data from these three samples was as follows. i) Mothers attending ANC could identify any barriers that they had to overcome to ensure attendance and identify why they may have delayed ANC attendance or had incomplete attendance (less than four visits). ii) Midwives could offer evidence and opinions on any barriers that mothers had to overcome to attend ANC and identify why they may have delayed attendance or had incomplete attendance. iii) Mothers who had a near miss could provide an account of their ANC attendance and reflect on circumstance contributing to their emergency admission.

Verbatim transcripts underwent content analysis and were used to identify the mothers' temporal assessment of risks associated with late or non-attendance of ANC. The content analysis used minimal inference to form three themes that aligned with the Neuman model. The three temporal analysis themes were as follows.

1. Lack of autonomy attributable to the mother's subservience to her husbands' and other family members' opinions on the need for attendance (interpersonal).
2. Lack of assertiveness as exemplified by the subjugation by midwives' incivility (interpersonal).
3. Lack of financial resources to cover costs, both financial and non-financial (extra-personal).

These themes clearly aligned with the stressors in the Neuman model of care where women's temporal assessment of their perceived need to attend ANC was subsumed by interpersonal factors, extra-personal factors, and intrapersonal factors. The application of these themes to the Neuman model offered a minimal inference theoretical framework.

Summarising the main points

Mothers often did not attend ANC or follow the WHO recommendations of at least four visits because the risks for maternal mortality and the safety of the unborn child were surpassed by interpersonal stressors generated by opinions of family members and husbands, the behaviours of midwives and constraints to ANC access. All of these factors may be overcome if public health and community initiatives raise respect and empathy for mothers and their unborn children.

Given that ANC is protective against maternal mortality and many morbidities associated with pregnancy, greater ANC access would reduce the healthcare burden in sub-Saharan Africa, especially in countries such as Kenya where resources remain scarce. Fewer admissions for acute and emergency obstetric care would reduce costs and the burden of care among midwives and other healthcare professionals. There is also a humanitarian need to allow women unfettered access to ANC.

To the researcher's knowledge, this is the first application of the Neuman model to midwifery practice. This achievement is unique and consistent with the recent recommendation of Eri et al. (2020) where it is was acknowledged that 'Overall, scarcity exists regarding theoretical models for midwifery care with explicit epistemological status. Further research is needed in order to develop generic theoretical models.

Stating the significance of the results

Implications of this study for midwives

The findings of this study show that positive pregnancy experiences should be practised in our health facilities given the experiences of women complaining of disrespect and abuse at the hands of midwives. Therefore, midwives should enhance their respect for patient values, preparedness and expressed needs through individualised care and involvement of the family as desired.

Implications of this study for healthcare institutions

The findings of this study highlighted that the FMS policy was implemented in health facilities as a strategy to reach all pregnant women to promote positive outcomes and reduce the burden of maternal and neonatal mortality. However, the researcher argues that this should not be the only focus for improving health outcomes but that there should be strategies to reach women in their communities to understand their temporality in decision-making and the various hindrances such as the indirect costs of transport that deter them from ANC access, even when the services are free.

This study aimed to explore experiences of ANC access and attendance. The results indicate that efforts have been made to improve maternal health services in Kenya by introducing the FMS policy, and that ANC is an important part of maternal healthcare services.

Furthermore, healthcare facilities should look beyond the institution to meet the needs of pregnant women in their communities. This study notes key factors that relate to individual women, along with interpersonal and extra-personal factors that can act as barriers to ANC access and attendance during pregnancy.

Implications for policy makers

Given that ANC is protective against maternal mortality, healthcare stakeholders should consider implementing healthcare linkages that work in communities in which pregnant women can be identified and followed-up to ensure they have skilled maternal care through mobilisation of available resources, including transport and referral linkages. Therefore, the community should be included in meetings where policies are made to present the needs of the community and improve health-seeking behaviour.

Conclusion

ANC is an important part of maternal healthcare services and a humanitarian right. Health-seeking behaviour during pregnancy is affected by numerous factors in the individual women's temporal processes, as influenced by her cultural and socioeconomic environment. The methodology used in this study enhanced the validity of the findings by triangulating data between the literature, practicing midwives and mothers. A limitation of this study was the omission of fathers' temporal analysis, and this is being considered for further research. The transferability of the findings from the Kenyan context to other sub-Saharan African countries and regions is plausible, as the similarities across ethnic cultures and socio-political circumstances are deemed to outweigh the differences. Poverty, lack of education, health resources and the low esteem for women are common factors across sub-Saharan Africa.

A unique finding from this study was the mothers' temporal analysis on whether or not to seek care was an influencer of her decision-making regarding seeking care. The complex, multifaceted and interrelated factors influencing health-seeking behaviour related to ANC access and attendance could be simplified by grouping an assessment of women's intrapersonal, interpersonal, and extra-personal stressors. Identification of these stressors supported by the knowledge of the associated themes generated in this study may act as a guide for midwives' best practice. Pregnant women's risk perception and autonomy are factors that have been rarely discussed in the literature, and policies should be amended to consider the role of pregnant mothers in their decisions about their health and that of their newborns. Although Kenya is still experiencing challenges with ANC access, the country has put more efforts into the provision of FMS for all women, which is encouraging for increasing ANC use. Individual decision temporal dynamics in the social context may be an enabler that can mitigate the complexity of health-seeking behaviour and positively impact maternal health outcomes. Intervention strategies, implementation of specific policies and the use of maternal health services in this setting can be informed by considering the influence of intrapersonal, interpersonal, and extra-personal barriers and enablers.

The recent pandemic and periods of lockdown had a major impact on and created negative emotional stress for pregnant women, causing fear of contagion. The need to maintain restrictive measures was extremely important for the study participants.

COVID-19 presented a new experience for pregnant women and midwives and the process of accepting the ‘new norm’ was complicated by fear and challenges. The COVID-19 pandemic showed how evidence-informed practice for maternal health, especially ANC practices, is inconsistently assessed. The lack of a consensus in the recommendations and public health information suggests that risk aversion regarding the possible effects of COVID-19 outweighed the benefits of ANC in protecting against maternal mortality and morbidity. Therefore, it is important to adjust the guidelines on the provision of ANC based on the lessons learned during the recent COVID-19 pandemic to inform preparations to avoid maternal healthcare crises in future such events. A dissemination plan and reflections on methodology implementation for this study are presented in Appendix 12.

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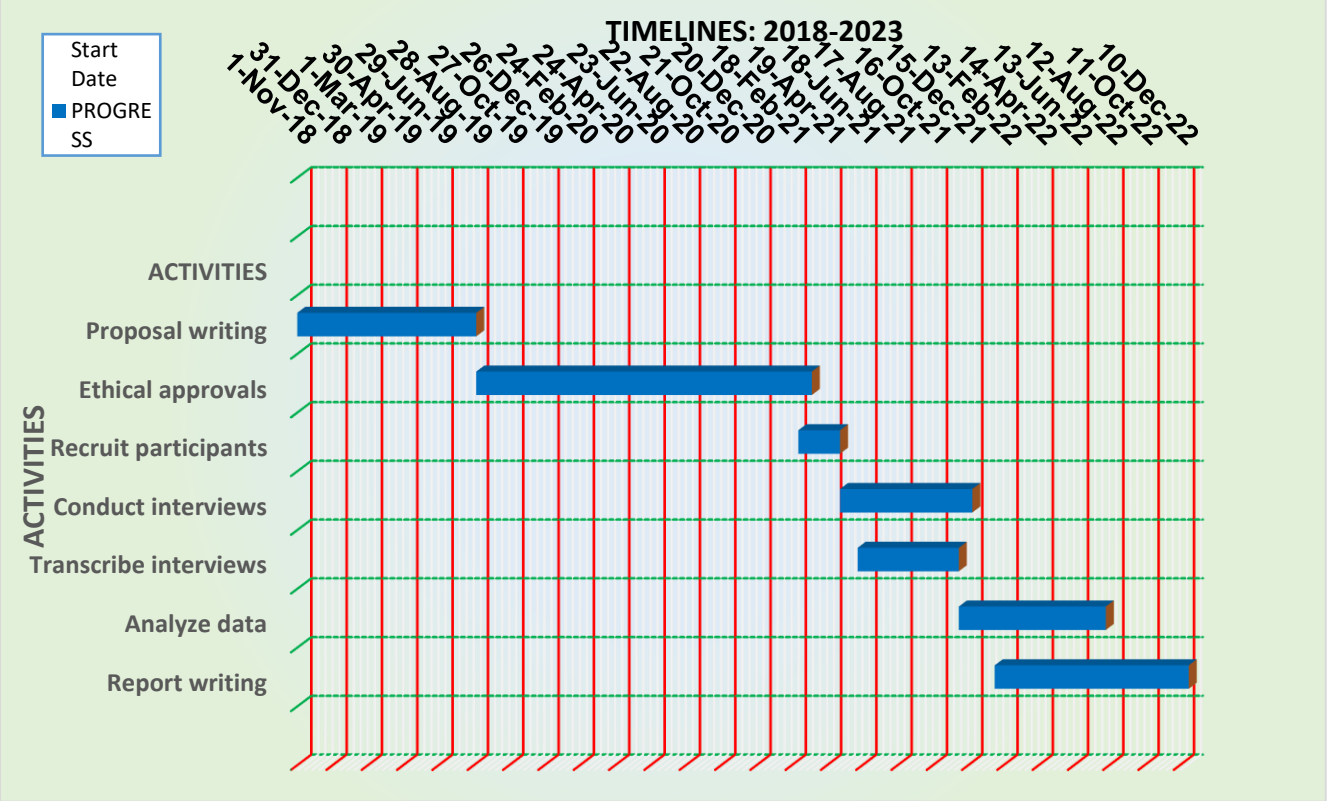
APPEDICES

Appendix 1: Work plan



Appendix 2: Research supervision record

Meeting No.	Date	Who was present in the meeting
1.	1/11/18	Dr Tom Laws &Dr Rose McCarthy
2.	7/11/18	Dr Tom Laws
3.	8/11/18	Dr Rose McCarthy
4.	20/2/19	Dr Tom Laws & Rose McCarthy
5.	26/3/19	Dr Tom Laws & Rose McCarthy
6.	23/5/19	Dr Tom Laws & Rose McCarthy
7.	26/6/19	Dr Tom Laws & Rose McCarthy
8.	2/7/19	Dr Tom Laws & Rose McCarthy
9.	4/7/19	Dr Tom Laws
10.	8/7/19	Dr Tom Laws
11.	10/7/19	Dr Tom Laws
12.	11/7/19	Dr Tom Laws
13.	16/7/19	Dr Tom Laws
14.	17/7/19	Dr Tom Laws
15.	18/7/19	Dr Tom Laws
16.	22/7/19	Dr Tom Laws
17.	25/7/19	Dr Tom Laws & Rose McCarthy
18.	15/8/19	Dr Tom Laws & Rose McCarthy
19.	25/11/19	Dr Tom Laws
20.	17/12/19	Dr Tom Laws
21.	2/1/20	Dr Tom Laws
22.	13/2/20	Dr Tom Laws
23.	15/4/20	Dr Tom Laws
24.	14/5/20	Dr Tom Laws
25.	26/5/20	Dr Tom Laws
26.	2/6/20	Dr Tom Laws
27.	11/6/20	Dr Tom Laws
28.	25/6/20	Dr Tom Laws
29.	2/7/20	Dr Tom Laws
30.	14/7/20	Dr Tom Laws
31.	29/7/20	Dr Tom Laws
32.	12/8/20	Dr Tom Laws
33.	1/9/20	Dr Tom Laws
34.	21/9/20	Dr Tom Laws
35.	24/9/20	Dr Tom Laws
36.	5/10/20	Dr Tom Laws
37.	8/10/20	Dr Tom Laws
38.	3/12/20	Dr Tom Laws
39.	10/12/20	Dr Tom Laws
40.	3/1/21	Dr Tom Laws
41.	7/1/21	Dr Tom Laws
42.	10/1/21	Dr Tom Laws

43.	15/1/21	Dr Tom Laws
44.	4/2/21	Dr Tom Laws
45.	4/3/21	Dr Tom Laws
46.	18/3/21	Dr Tom Laws
47.	25/3/21	Dr Tom Laws
48.	29/4/21	Dr Tom Laws
49.	4/5/21	Dr Tom Laws
50.	6/5/21	Dr Tom Laws
51.	18/5/21	Dr Tom Laws
52.	25/5/21	Dr Tom Laws
53.	31/5/21	Dr Tom Laws
54.	1/6/21	Dr Tom Laws
55.	22/6/21	Dr Tom Laws
56.	27/7/21	Dr Tom Laws
57.	11/8/21	Dr Tom Laws
58.	16/8/21	Dr Tom Laws
59.	19/8/21	Dr Tom Laws
60.	27/8/21	Dr Tom Laws
61.	7/9/21	Dr Tom Laws
62.	13/9/21	Dr Tom Laws
63.	14/9/21	Dr Tom Laws
64.	15/9/21	Dr Tom Laws
65.	16/9/21	Dr Tom Laws
66.	27/9/21	Dr Tom Laws
67.	4/10/21	Dr Tom Laws
68.	5/10/21	Dr Tom Laws
69.	6/10/21	Dr Tom Laws
70.	6/10/21	Dr Tom Laws
71.	7/10/21	Dr Tom Laws
72.	8/10/21	Dr Tom Laws
73.	11/10/21	Dr Tom Laws
74.	20/10/21	Dr Tom Laws
75.	18/11/21	Dr Tom Laws
76.	14/12/21	Dr Tom Laws
77.	11/1/22	Dr Tom Laws
78.	12/1/22	Dr Tom Laws
79.	28/2/22	Dr Tom Laws
80.	11/4/22	Dr Tom Laws
81.	4/5/22	Dr Tom Laws
82.	9/5/22	Dr Tom Laws
83.	12/5/22	Dr Tom Laws
84.	12/7/22	Dr Tom Laws
85.	18/8/22	Dr Tom Laws
86.	22/8/22	Dr Tom Laws
87.	23/8/22	Dr Tom Laws

88.	30/8/22	Dr Tom Laws
89.	2/9/22	Dr Tom Laws
90.	20/10/22	Dr Tom Laws
91.	31/10/22	Dr Tom Laws
92.	1/11/22	Dr Tom Laws
93.	7/12/22	Dr Tom Laws
94.	5/1/23	Dr Tom Laws
95.	7/2/23	Dr Tom Laws
96.	15/2/23	Dr Tom Laws
97.	16/2/23	Dr Tom Laws
98.	6/3/23	Dr Tom Laws
99.	9/3/23	Dr Tom Laws
100.	13/3/23	Dr Tom Laws
101.	15/3/23	Dr Tom Laws

We also had communication in between the planned meeting dates with my supervisors.

Appendix 3: Record of training

Date	Title
10/6/20	Research Methods and Measurement
19/6/20	What to expect for IE Prof P Ormandy
17/6/20	Fundamental ideas quantitative methodology
22/6/20	Quality in Qualitative Research
22/6/20	Introduction to End note
24/6/20	The what, why, when and how of referencing
25/6/20	How to set up your thesis- Dr Tom Laws
25/6/20	Brief overview of quantitative statistics
27/6/20	Basic of Early childhood development what perinatal nurses need to know
30/6/20	Methodology Challenges
1/7/20	NVivo
6/7/20	Managing the doctorate through social distancing
6/7/20	Introduction to Critical and Analytical Skills
8/7/20	Constructivist Grounded Theory
9/7/20	Developing your research during social distancing: outputs, impact and collaboration
15/7/20	Reflexivity in qualitative research
21/7/20	Interpretative phenomenology
29/7/20	Creative approaches to public engagement with research participants who work with people with dementia
21/7/20	Interpretive Phenomenological Analysis
21/7/20	Preparing for Assessments: Viva's, IA, IE and (new) online formats
22/7/20	Quantitative Measurement
23/7/20	Introduction to critical and analytical skills
28/7/20	Teaching in a virtual classroom part two
4/8/20	Writing & Thriving, Writing as Editing & Editing as Writing: Redrafting your writing
4/8/20	An introduction to EndNote X9
6/8/20	Digital Note making
13/8/20	The what, why, when and how of referencing [online workshop]
24/8/20	(Re)flexing our muscles – analysing examples of reflexivity Prof Sue McAndrew
4/11/20	Interpretative Phenomenological Analysis
11/11/20	Your researcher roadmap for Doctoral Success and PGR Welcome and Induction Works.
23/11/20	Word: Formatting your dissertation or thesis - PART 1 of 2 [Online]
24/11/20	Word: Formatting your dissertation or thesis - PART 2 of 2 [Online]
26/11/20	Managing your research data - School of Health and Society
30/11/20	Finding journals and articles [Online]
2/12/20	Preparing for Interim Assessment and Internal Evaluation

2/2/21	Managing your research data - School of Science, Engineering and Environment
9/2/21	Philosophical Stance for Research Methodology
11/2/21	Researcher Development Conference: How to pass the IA, IE & viva assessment
11/2/21	Researcher Development Conference: Failure Forum: ‘A write fail!’
11/2/21	Researcher Development Conference: Giving confident presentations with impact
16/2/21	Philosophical Stance for Research Methodology
23/2/21	Philosophical Stance for Research Methodology
24/2/21	Interpretive Phenomenological Analysis
3/3/21	Grounded Theory
11/3/21	Qualitative
29/4/21	Digital note making
12/5/21	Ethnography
19/5/21	Qualitative methods: challenges in the field
26/5/21	Interpretive Phenomenological Analysis
28/6/21	Philosophical Stance for Research Methodology (PSRM)
21/9/21	"It’s just a survey”: the most abused research design for healthcare professionals!
28/9/21	Viva, IA, IE Assessments - Preparation Workshop
17/11/21	How (not) to do qualitative/ethnographic research
4/11/21	Assistive Technologies Research – challenges and tools to help solve them!
9/11/21	Beyond bracketing: Use of self in search of others' lived experience.
10/11/21	Getting there...the tenacity of our PGR's and how to get to the end of your PhD...
7/12/21	Researching Educational Interventions
9/12/22	PhD Challenges Conversations - with the Doctoral School Director
9/2/22	Observation in Qualitative research
15/2/22	ontological assumptions
7/3/22	Guided Workshop in Using NVivo (Mac users only)
8/3/22	“There is no conflict.” Why the research paradigms are (1) not paradigms & (2) n...
15/3/22	Epistemological Assumptions: What they are and what to do with them
24/3/22	Three Minute Thesis Information Session
26/22	Axiology: where do our values fit?
22/7/22	Critical Writing
5/8/22	Writing & thinking retreat on campus
5/9/22	Applied NVivo
3/10/22	Top Tips for Viva- from very recent experience

Appendix 4: Interview guide

Interviewer: My name is Rose Maina, and I am a PhD student at the University of Salford. Thank you so much for agreeing to participate in this study. Your participation in this interview will make a contribution to my study; I also hope it will be rewarding for you to participate.

Let me tell you more about this study to assist you in understanding what I am doing today. This study is a qualitative research study which means that I will be discussing with you about your experiences during pregnancy in accessing and attending antenatal clinic services. I consider your experience a unique experience to you and valuable to the study.

I assure you that our discussion today will remain confidential and your identification by name will not be known. There is no right or wrong answer because this is only a conversation.

I'm asking you to tell me about your experience, I will ask you about how you have been accessing and attending antenatal care and what has made it easy or hard to do so. I encourage you to feel free to tell me all you have in response to my questions. If there is a question that you do not feel comfortable responding to, feel free to ask me to proceed with the next question. Do you have any questions?

Key questions proposed to the participant	**Probes/subsidiary questions**
1. What are the women's experiences regarding access and attendance of antenatal care?	-Please tell me about your pregnancy [probes] -Could you tell me how you are feeling? -Tell me more about the current pregnancy -Other pregnancies if not first what happened to the previous pregnancy? -Please tell me how you learnt about the ANC clinic? -Tell me why you came to the ANC clinic today?
2. What are the enablers of health seeking behaviour in accessing and attending antenatal services?	-Could you tell me some of the enablers (anything that makes it easy to attend) to your attending and accessing ANC services? -Who encouraged you to come -Who supported you? [probe for various dimensions of support e.g. finances, spiritual etc] -Tell me if you considered not coming here or going elsewhere? -What made you decide to come? -Please tell me how you came here How far do you live from the clinic? How long did it take to reach here? -Tell me about your journey and how easy was it to get here? -How much did you pay for the journey?
3. What are the enablers of help seeking behaviour in accessing and attending to antenatal services?	From whom have you received ANC services? What made you come to the clinic? (bleeding, abdominal pains etc)
4. Who determines whether you come or not come to the ANC clinic?	Could you tell me if you have discussed your pregnancy with your husband, mother in-law? What about other and the family members?

	If yes, how does your husband/family feel about you attending the clinic? -what support have you received during your pregnancy? What do you think about men being involved?
5. What are the barriers to health seeking behaviour in accessing and attending antenatal services?	-Can you tell me some of the barriers (anything that makes it difficult to attend) you are facing in accessing and attending ANC services? [Note-Write down barriers] -Have you ever thought of coming and then hesitating or not doing so? -Given the barriers that you have alluded to why did you come at this time? -For the barriers, you have mentioned what are some of the things you do to cope? How does that make you feel? You also talked about ---- how do you cope with that
6. What are the barriers to help seeking behaviour in accessing and attending antenatal services?	
7. Do you think women are at risk during pregnancy?	-Could you tell me about your feelings about pregnancy? Probe for anxieties -In your opinion what are some of feelings expressed by women have during pregnancy in your community?
8. What are the benefits of antenatal care?	-what do you see as some of the benefits of ANC classes /sessions -What do other women think about ANC classes -What have you observed about women who come for antenatal classes? -Is there anything you would like to share with me about your experiences related to health and help-seeking among pregnant women?
9. What is the impact of COVID 19 on accessing and attending ANC services?	Tell me how COVID -19 has affected you in general. Could you tell me how the COVID-19 pandemic of COVID-19 has affected your ability to access the ANC services? -Decision to attend the ANC visits- could you have come early? -Tell me how you feel about being here during the COVID- 19 pandemic? Probe for safety and other possible worries related to the pandemic if you feel safe being here or you worry about contracting COVID-19? How safe do you feel about your pregnancy in attending ANC services with COVID-19? Information about COVID-19- Knowledge Under normal circumstances how would your pregnancy have evolved over here? What other practices you would normally do were impacted by COVID-19?
Is there anything else you would like to discuss or share with me that I didn't ask you about	

Interview guide for health care professionals

Demographic data

Date	
Age	
Years of Experience	
Years in the department	
Highest level of qualification	

Key questions proposed to participant	**Probes/subsidiary questions**
1.What are the health care professional's views on pregnant women's access to and attendance of antenatal care?	Could you tell me about working with pregnant women in the antenatal care clinic? [Probes] -Can you tell me about your views and opinions about the health seeking behaviour and help-seeking behaviour of pregnant women in accessing antenatal care? -Can you tell me when women come for services? -Probe for reasons for early or late attendance - How can these be leveraged to increase attendance? How does this make you feel about these women who don't come on time?
2. What do you think are the enablers for the women accessing and attending ANC services?	Have you seen instances where women don't attend ANC? -How big do you think the problem is for women not attending ANC -What do you think contributes to that? Have you tried any strategies to assist the women to attend? Have you thought about how frightened these women are? -Fear of being able to come to antenatal care -What do you think the main problem is/ -Do you think they have an understanding to the risk of death to themselves or to unborn child What do you think are the factors that facilitate the women access and attendance to ANC services? Probe [for things that make it easy for the woman to come to the clinic]
3. What do you think are the barriers for the women accessing and attending ANC services?	Probe for cultural barriers, environmental e.g. transport, terrain, lack of socio-economic status, knowledge about ANC -For the barriers that you have mentioned what do you think can be done to help improve utilization? -What is the facility itself doing to encourage women to attend? -How many attendances are considered sufficient? Probe for their own knowledge of latest WHO guidelines re ANC attendance How do you receive current information concerning your service delivery? Are you given CPD to make sure you are updated on information?

	Who track if these are adhered to is there an audit of some kind
4. What is the impact of COVID 19 on accessing and attending ANC services?	-How has the pandemic affected the pregnant women in general? -Could you tell me how the COVID-19 pandemic has affected women's ability to access the ANC services? Probe for how the health facility has addressed this. -Could you tell me some of the observed changes in relation to women ANC health and help seeking behaviour since the pandemic-COVID-19 -Decision to attend the ANC visits- early/late? In your opinion how do women feel about COVID-19? In your opinion what are women's fears/anxieties with respect to COVID-19 - How do the nurses feel about COVID-19 Probe What about the nurses themselves? what are the nurses' fears/anxieties with respect to COVID-19 Probe [tell about PPEs, fear families, training about doffing, mental wellbeing, counselling services to help cope- How has COVID- 19 affected you as a midwife? How has the health facility responded to the pandemic and helped the women to come?
Is there anything else you would like to discuss or share with me that I did not ask about?	

Post Interview Summary

AUDIO FILE NAME_____

PARTICIPANT ID: _____

DATE: _____

INTERVIEWER: _____

LENGTH OF INTERVIEW: _____

LOCATION: _____

Detailed Questions (Interviewer to fill out notes):

1. How did the mother appear to present (comfortable uncomfortable)?
2. Was the woman ready to engage in a conversation? (Nervous at first, reluctant to engage, eager to engage)
3. Items that came up during the interview that should be added to the guide.

Appendix 5: Participant information sheet (Women) – v2 15/12/20

Title of study: Exploring Mothers' experiences of accessing and attending antenatal care in Kilifi/Kenya.

Name of Researcher: Rose Maina

1. Invitation to participate in research study

My name is Rose Maina, I am a midwife, a PhD student at the University of Salford and lecturer at the Aga Khan University School of Nursing and Midwifery in Nairobi.

You are being invited to take part in a research project; "Exploring Mother's experiences of accessing and attending antenatal care in Kilifi/Kenya". Before you decide on whether to take part, it is important for you to understand why the research is being done and what it will involve. Please take time to read the following information carefully before you decide whether or not you wish to take part. You are welcome to discuss this project with others if you wish before you make your decision. Please ask us (R.M.Maina@edu.salford.ac.uk, 0724295804) if there is anything that is not clear or if you would like more information.

2. What is the purpose of the research study?

The purpose of the research study is exploring the mother's experiences of accessing and attending antenatal care in Kenya. This is because antenatal care is important for pregnant women and their babies and can help improve experiences and outcomes of pregnancies. The study is a partial fulfilment of PhD in Midwifery.

3. Why have I been chosen?

I am inviting you to take part in this research because you meet the inclusion criteria that is you are above 18 years and pregnant and coming for the first time in the antenatal clinic or inpatient in the antenatal ward. Your experiences and the reason for making a decision to attend the antenatal clinic is what I need to find out or explore in this study. I believe by you sharing your experience I will better understand your journey in this pregnancy and be aware of the barriers and enablers that came through your decision-making process to seek care.

4. Do I have to take part?

It is up to you to decide whether or not to take part. If you do decide to take part, you will be given this information sheet to keep (and be asked to sign a consent form) and you still can withdraw at any time without giving a reason. This will not affect any benefits you are entitled in any way. If you do withdraw you should, however, note that the University will continue to

process the information you have already provided. It will only do this for research purposes and in an anonymised way and in a way that you cannot be identified.

5. What will happen to you if you take part?

If you choose to participate, I will explain to you about the study in the antenatal clinic and inpatient ward, then I give you a detailed information sheet and afterwards give you a consent form for signing.

You will be allowed to read the participant information sheet, or I will read for you. You will be allowed to ask questions and I will answer them. You will be given time to decide and consult if you want to participate in the study. If you decide to take part and agree to participate in the study, you will be asked to sign the consent form or if preferred use a thumbprint to indicate that you are happy to participate.

If you agree to participate, the researcher will ask you the questions. The interview will take place for 45-60 minutes. During this time, a comfortable place within the health facility but not in the ANC clinic will be available for the interviews. I will ask you some questions that I have prepared, and we shall ask you for a response. You do not need to answer every question. During the interview there will only be another person 1) you requested 2) interpreter. I will audiotape the conversation for me to listen to later and translate to written text. The information will be confidential and only the research team will be able to access it. No one will be identified by name on the tape recorder. I will keep the recording in a locked cupboard and shall be destroyed after the research is finished.

6. Expenses and payments?

There are no payments for participating in the study. Participation in the study will be voluntary and will take place in the antenatal clinic or ward in the hospital.

7. What are the possible disadvantages and risks of taking part?

There are no risks to you if you participate in this research but, if we ask you a question that makes you feel uncomfortable, you can choose not to answer the question. In case you get emotional and psychological discomfort and if this does happen, I will facilitate to refer you back to the nurse/midwives for care and support after explaining to you and a counsellor will be available to support the team and counsel you and also refer appropriately when the need arises. You're choosing to take part or not take part will have no impact on the care and treatment you may receive.

8. What are the possible benefits of taking part?

We cannot promise the study will help you but the information we get from the study will help to increase the understanding of access and attendance of antenatal care. Although it is not anticipated that the study will be therapeutic you may find it useful to talk about your experiences, but we cannot promise that the study will have direct benefits. We are a university and so it is part of our reason for being that we advance knowledge through research as well as through teaching. Your participation in this research helps us to do that.

9. What if there is a problem?

In case an issue occurs, a counsellor working with Kenya Counselling & Psychological Association (KCPA) will be available to provide support.

If you have a concern about any aspect of this study, you should ask to speak to the researcher **[Rose Maina- +254724295804]** who will do their best to answer your questions. If you remain unhappy and wish to complain formally you can do this by contacting the Research Supervisor **[Dr Tom Laws, Telephone number: 0161 295 7372]**. If the matter is still not resolved, please forward your concerns to Professor Andrew Clark, Chair of the Health Research Ethical Approval Panel, Allerton Building, Frederick Road Campus, University of Salford, Salford, M6 6PU. Tel: 0161 295 4109. E: a.clark@salford.ac.uk

10. Will my taking part in the study be kept confidential?

All information which is collected from you during the course of the research will be anonymous, and strictly confidential and your name and address in any information about you which leaves the university will be removed so that no one can recognize you. However, if you reveal anything that may cause you to suspect poor practice, or harm to an individual, we may have to report this.

Further to this:

Your data will be stored safely, specifically:

a. Individual participant research data, such as interview scripts will be anonymous and given a research code, known only to the researcher.
b. A master list identifying participants to the research codes data will be held on a password-protected computer accessed only by the researcher.
c. Hard paper/audio data will be stored in a locked cabinet, within a locked office, accessed only by the researcher.

d. Electronic data will be stored on a password-protected computer known only by the researcher.

- Your data will be used solely for the purposes of this study only.
- Your data will be accessible only by authorized persons such as researchers within the team, supervisors, and regulatory authorities (Kenya Ethics committees and the Kenya National Commission of Science and Technology (NACOSTI).
- Your data will be retained for a maximum of 5 years (after the hand in date) before being safely disposed of.

11. What will happen if I want to stop being part of the study?

You will be free to withdraw from the study at any time. The established relationship between the researcher and participant will be maintained throughout the time of data collection. If you withdraw from the study, all the information and data collected from you to date will continue to be used, however, your name will be removed from all the study files.

12. What will happen to the results of the research study?

The study findings will serve to inform the department of Health, Kenya on antenatal care. The research thesis will also be disseminated through the University of Salford EBSCO database. Dissemination to you all who participate in the study will be done and to the Ministry of health department and County through policy beliefs. Additionally, dissemination through presentations, policy briefs to Kenya National Commission for Science, Technology & Innovation and peer-reviewed journals internationally and in Africa midwifery and obstetrics journals.

13. Who is organizing or sponsoring the research?

The research is sponsored by the University of Salford with financial support from the Aga Khan University.

14. What will I do to mitigate the risk of Covid?

All the participants will be advised that they should keep 2m distance, wear a face mask (if appropriate), and request that they do not participate if they are self-isolating or are experiencing COVID-like symptoms and have to have temperatures checked before an interview. Anyone with a temperature exceeding 37 °C will be referred to the health care provider for monitoring/ treatment.

The researcher will keep the participants' contact details securely for 21 days should they need to be contacted as a result of the research team developing COVID symptoms.

15. Further information and contact details:

Dr Tom Laws,

Programme Lead: MSc Nursing and Module Lead: Research Methods / School of Health & Society, Mary Seacole Building, University of Salford, Manchester M6 6PU

T: +44(0) 0161 295 7372 / m +44(0) 7493644408
t.a.c.laws@salford.ac.uk / www.salford.ac.uk

Counselling services- Vespus Sanguli

Chairperson in Kilifi County, Kenya Counselling & Psychological Association (KCPA)

Telephone: +254721357106 – Email: vespuss1976@gmail.com

National Commission for Science, Technology, and Innovation

Telephone: 0713 788 787 / 0735 404 245

E-mail: dg@nacosti.go.ke / registry@nacosti.go.ke, Website: www.nacosti.go.ke

We take this opportunity to thank you for taking time to read the information sheet.

Date_____

Participant information sheet (Health care professionals) v1 12/3/20

Title of study: Exploring Mothers' experiences of accessing and attending antenatal care in Kilifi/Kenya.

Name of Researcher: Rose Maina

1. Invitation to participate in research study.

My name is Rose, I am a midwife, a PhD student at the University of Salford and lecturer at the Aga Khan University School of Nursing and Midwifery in Nairobi.

You are being invited to take part in a research project; "Exploring Mother's experiences of accessing and attending antenatal care in Kilifi/Kenya". Before you decide on whether to take part, it is important for you to understand why the research is being done and what it will involve. Please take time to read the following information carefully before you decide whether or not you wish to take part. You are welcome to discuss this project with others if you wish before you make your decision. Please ask us (R.M.Maina@edu.salford.ac.uk, -0724295804) if there is anything that is not clear or if you would like more information.

2. What is the purpose of the research study?

The purpose of the research study is exploring the mother's experiences of accessing and attending antenatal care in Kenya. This is because antenatal care is important for pregnant women and their babies and can help to improve experiences and outcomes of pregnancies. I hope to understand your views on what the pregnant women barriers and enablers in access and attendance of antenatal care which may improve maternal outcomes. The study is a partial fulfilment of PhD in Midwifery.

3. Why have I been invited to take part?

I am inviting you to take part in this research because you are a health care professional who is providing care in the antenatal clinic for over 12 months. Your experiences on why women make a decision to attend the antenatal clinic is what I need in this study and also the effect of policy. I believe by you sharing your experience I will better understand pregnant women health and help-seeking behaviour and be aware of factors they encounter to seek care.

4. Do I have to take part?

It is up to you to decide whether or not to take part. If you do decide to take part, you will be given this information sheet to keep (and be asked to sign a consent form) and you still can withdraw at any time without giving a reason. This will not affect any benefits you are entitled in any way. If you do withdraw you should, however, note that the University will continue to process the information you have already provided. It will only do this for research purposes and in an anonymised way and in a way that you cannot be identified.

5. What will happen to you if you take part?

If you choose to participate, I will explain to you about the study in the antenatal clinic and inpatient ward where you work, then I will give you a detailed information sheet and afterwards give you a consent form for signing.

You will be allowed to read the participant information sheet, or I will read for you. You will be allowed to ask questions and I will answer them. You will be given time to decide if you want to participate in the study. If you decide to take part and agree to participate in the study, you will be asked to sign the consent form to indicate that you are happy to participate.

If you agree to participate, the researcher will ask you the questions. The interview will take place for 45-60 minutes. During this time, a comfortable place within the health facility but not in the ANC clinic will be available for the interviews. I will ask you some questions that I have prepared, and we shall ask you for a response. You do not need to answer every question. I will audio tape the conversation for me to listen to later using an audio tape and translate to written text. The information will be confidential and only the research team will be able to access it. No one will be identified by name on the tape recorder. I will keep the recording in a locked cupboard and shall be destroyed after the research is finished.

6. Expenses and payments?

There are no payments for participating in the study. Participation in study will be voluntary and will take place in the antenatal clinic or ward in in the hospital.

7. What are the possible disadvantages and risks of taking part?

There are no risks to you if you participate in this research but, if we ask you a question that makes you feel uncomfortable, you can choose not to answer the question. In case you get emotional and psychological discomfort and if this does happen, I will facilitate to refer you back to the in charge after explaining to you and a counsellor will be available to support the team and counsel you and also refer appropriately when need arises. I do not have any affiliation in this hospital and your data will remain confidential.

8. What are the possible benefits of taking part?

We cannot promise the study will help you but the information we get from the study will help to increase the understanding of access and attendance of antenatal care. Although it is not anticipated that the study will be therapeutic you may find it useful to talk about your experiences, but we cannot promise that the study will have direct benefits. We are a university and so it is part of our reason for being that we advance knowledge through research as well as through teaching. Your participation in this research helps us to do that. You will have access to talk to an experienced midwife during the interview.

9. What if there is a problem?

If you have a concern about any aspect of this study, you should ask to speak to the researcher **[Rose Maina- +254724295804]** who will do their best to answer your questions. If you remain unhappy and wish to complain formally you can do this by contacting the Research Supervisor **[Dr Tom Laws, Telephone number: 0161 295 7372]**. If the matter is still not resolved, please forward your concerns to Professor Andrew Clark, Chair of the Health Research Ethical Approval Panel, Allerton Building, Frederick Road Campus, University of Salford, Salford, M6 6PU. Tel: 0161 295 4109. E: a.clark@salford.ac.uk

10. Will my taking part in the study be kept confidential?

All information which is collected from you during the course of the research will be anonymous, and we shall remove your name and address in any information about you which leaves the university so that no one can recognize you. If you reveal anything that may cause you to suspect poor practice, or harm to an individual, we may have to report this. However, if you do wish to be credited for your contribution, I will be happy to ensure that your name is clearly stated and referenced.

Further to this:

• Your data will be stored safely, specifically:

a. Individual participant research data, such as interview scripts will be anonymous and given a research code, known only to the researcher.
b. A master list identifying participants to the research codes data will be held on a password-protected computer accessed only by the researcher.
c. Hard paper/audio data will be stored in a locked cabinet, within a locked office, accessed only by the researcher.
d. Electronic data will be stored on a password-protected computer known only by the researcher.

• Your data will be used solely for the purposes of this study only.
• Your data will be accessible only by authorized persons such as researchers within the team, supervisors, and regulatory authorities (Kenya Ethics committees and the Kenya National Commission of Science and Technology (NACOSTI).
• Your data will be retained for a maximum of 5 years (after the hand in date) before being safely disposed of.

11. What will happen if I do not carry on with the study?

You will be free to withdraw from the study at any time. The established relationship between the researcher and participant will be maintained throughout the time of data collection. If you withdraw from the study, all the information and data collected from you to date will continue to be used, however, your name will be removed from all the study files.

12. What will happen to the results of the research study?

The study findings will serve to inform the Health department of Kenya on antenatal care. The research thesis will also be disseminated through the University of Salford EBSCO database. Dissemination to you all who participate in the study will be done and to the Ministry of health department and County through policy beliefs. Additionally, dissemination through presentations to Kenya National Commission for Science, Technology & Innovation and publish in peer-reviewed journals internationally and in Africa midwifery and obstetrics journals. Open access

will be preferred to aid in results dissemination which enables midwives and obstetricians to utilize the information.

13. Who is organizing or sponsoring the research?

The research is sponsored by the University of Salford with financial support from the Aga Khan University.

14. Further information and contact details:

Dr Tom Laws,
Programme Lead: MSc Nursing and Module Lead: Research Methods / School of Health & Society, Mary Seacole Building, University of Salford, Manchester M6 6PU
T: +44(0) 0161 295 7372 / m +44(0) 7493644408
t.a.c.laws@salford.ac.uk / www.salford.ac.uk
Counselling services- Vespus Sanguli

Chairperson in Kilifi county, Kenya Counselling & Psychological Association (KCPA)

T: +254721357106 – vespuss1976@gmail.com

National Commission for Science, Technology, and Innovation

Telephone: 0713 788 787 / 0735 404 245

E-mail: dg@nacosti.go.ke / registry@nacosti.go.ke, **Website:** www.nacosti.go.ke

Appendix 6: Consent Form for Maternal health study V2 21/09/2019

Please tick the appropriate boxes

Title of study: Exploring the mothers' experiences on accessing and attending antenatal care in Kilifi, Kenya

Name of Researcher: Rose Maina

Please complete and sign this form after you have read and understood the study information sheet. Read the following statements and select 'Yes' or 'No' in the box on the right-hand side.

1. I confirm that I have read and understand the study information sheet version 1 dated [17/05/2021], for the above study. I have had the opportunity to consider the information and to ask questions which have been answered satisfactorily. Yes ☐ No ☐
2. I understand that my participation is voluntary and that I am free to withdraw at any time, without giving any reason, and without my rights being affected. Yes ☐ No ☐
3. If I do decide to withdraw, I understand that the information I have given, up to the point of withdrawal, will be used in the research. Yes ☐ No ☐
4. I agree to participate by being interviewed by the researcher. Yes ☐ No ☐
5. I understand that my personal details will be kept confidential and will not be revealed to people outside the research team – *However, I am aware that if I reveal* anything related to safeguarding and/or something that is harmful to self or other, the researcher will have to share that information with the appropriate authorities**.** Yes ☐ No ☐
6. I understand that my anonymised data will be used in thesis, in publications, reports, web pages, and other further research outputs. Yes ☐ No ☐
7. I agree to take part in the study: Yes ☐ No ☐

_____	_____	_____
Name of participant	Date	Signature
_____	_____	_____
Name of person taking consent	Date	Signature

Appendix 7: WHO antenatal care recommendations

	The 2016 WHO ANC model for a positive pregnancy experience: recommendations mapped to eight scheduled ANC contacts									
	Type of intervention	Recommendation	Type of recommendation	Eight scheduled ANC contacts							
				1	2	3	4	5	6	7	8
				12 wks	20 wks	26 wks	30 wks	34 wks	36 wks	38 wks	40 wks
Nutritional interventions	**Dietary interventions**	**A.1.1:** Counselling about healthy eating and keeping physically active during pregnancy to prevent excessive weight gain during pregnancy	Recommended	X	X	X	X	X	X	X	X
	Iron and folic acid supplements	**A.2.1:** Daily oral iron and folic acid supplementation with 30 mg to 60 mg of elemental iron and 400 µg (0.4 mg) of folic acid to prevent maternal anaemia, puerperal sepsis, low birth weight, and preterm birth.	Recommended	X	X	X	X	X	X	X	X
	Vitamin A supplements	**A.4:** Vitamin A supplementation in areas where vitamin A deficiency is a severe public health problem, to prevent night blindness.	Context-specific recommendation	X	X	X	X	X	X	X	X
	Restricting caffeine intake	**A.10.1:** For pregnant women with high daily caffeine intake (more than 300 mg per day), lowering daily caffeine intake during pregnancy to reduce the risk of pregnancy loss and low-birth- weight neonates.	Context-specific recommendation	X	X	X	X	X	X	X	X
Maternal and fetal assessment	**Anaemia**	**B.1.1:** Full blood count testing is the recommended method for diagnosing anaemia in pregnancy or haemoglobin testing	Context-specific recommendation	X		X			X		
	Asymptomatic bacteriuria (ASB)	**B.1.2:** Midstream urine culture is the recommended method for diagnosing asymptomatic bacteriuria (ASB) in pregnancy	Context-specific recommendation	X		X		X			
	Intimate partner violence (IPV)	**B.1.3:** Clinical enquiry about the possibility of intimate partner violence (IPV) should be strongly considered at antenatal care visits	Context-specific recommendation	X	X	X	X	X	X	X	X
	Gestational diabetes mellitus (GDM)	**B.1.4:** Hyperglycaemia first detected at any time during pregnancy should be classified as either, gestational diabetes mellitus (GDM) or diabetes mellitus in pregnancy	Recommended	X	X	X	X	X	X	X	X
	Substance use	**B.1.6:** Health-care providers should ask all pregnant women about their use of alcohol and other substances (past and present) as early as possible in the pregnancy and at every antenatal care visit.	Recommended	X	X	X	X	X	X	X	X

	Type of intervention	Recommendation	Type of recommendation	Eight scheduled ANC contacts (wks of gestation)							
				1	2	3	4	5	6	7	8
				12 wks	20 wks	26 wks	30 wks	34 wks	36 wks	38 wks	40 wks
Maternal and fetal assessment	**Human immunodeficiency virus (HIV) and syphilis**	**B.1.7:** In high prevalence settings, provider-initiated testing and counselling (PITC) for HIV should be considered a routine component of the package of care for pregnant women	Recommended	X							
	Tuberculosis (TB)	**B.1.8:** In settings where the tuberculosis (TB) prevalence, systematic screening for active TB should be considered for pregnant women as part of antenatal care	Context-specific recommendation	X							
	Symphysis-fundal height (SFH) measurement	**B.2.2:** Replacing abdominal palpation with symphysis-fundal height (SFH) measurement for the assessment of fetal growth is not recommended to improve perinatal outcomes.	Context-specific recommendation	X	X	X	X	X	X	X	X
	Ultrasound scan	**B.2.4:** One ultrasound scan before 24 weeks of gestation (early ultrasound) is recommended for pregnant women to estimate gestational age, improve detection of fetal anomalies and multiple pregnancies, reduce induction of labour for post-term pregnancy, and improve a woman's pregnancy experience.	Recommended	X	X						
Preventive measures	**Antibiotics for asymptomatic bacteriuria (ASB)**	**C.1:** A seven-day antibiotic regimen is recommended for all pregnant women with asymptomatic bacteriuria (ASB) to prevent persistent bacteriuria, preterm birth and low birth weight.	Recommended	X		X		X			
	Preventive anthelminthic treatment	**C.4:** In endemic areas, preventive anthelminthic treatment is recommended for pregnant women after the first trimester as part of worm infection reduction programmes.	Context-specific recommendation		X						
	Tetanus toxoid vaccination	**C.5:** Tetanus toxoid vaccination is recommended for all pregnant women, depending on previous tetanus vaccination exposure, to prevent neonatal mortality from tetanus.	Recommended	X							
	Malaria prevention: Intermittent preventive treatment in pregnancy (IPTp)	**C.6:** In malaria-endemic areas in Africa, intermittent preventive treatment with sulfadoxine-pyrimethamine (IPTp-SP) is recommended for all pregnant women. Dosing should start in the second trimester, and doses should be given at least one month apart, with the objective of ensuring that at least three doses are received.	Context-specific recommendation	X (13 weeks)	X	X	X		X		X

	Type of intervention	Recommendation	Type of recommendation	Eight scheduled ANC contacts (wks of gestation)							
				1	2	3	4	5	6	7	8
				12 wks	20 wks	26 wks	30wks	34 wks	36 wks	38 wks	40
Interventions for common physiological symptoms	**Nausea and vomiting**	**D.1:** Ginger, chamomile, vitamin B6 and/or acupuncture are recommended for the relief of nausea in early pregnancy	Recommended	X	X	X					
	Heartburn	**D.2:** Advice on diet and lifestyle is recommended to prevent and relieve heartburn in pregnancy. Antacid preparations can be used to women with troublesome symptoms that are not relieved by lifestyle modification.	Recommended	X	X	X	X	X	X	X	X
	Leg cramps	**D.3:** Magnesium, calcium or non-pharmacological treatment options can be used for the relief of leg cramps in pregnancy, based on a woman's preferences and available options.	Recommended	X	X	X	X	X	X	X	X
	Low back and pelvic pain	**D.4:** Regular exercise throughout pregnancy is recommended to prevent low back and pelvic pain. There are a number of different treatment options that can be used, such as physiotherapy, support belts and acupuncture, based on a woman's preferences and available options.	Recommended	X	X	X	X	X	X	X	X
	Constipation	**D.5:** Wheat bran or other fiber supplements can be used to relieve constipation in pregnancy if the condition fails to respond to dietary modification	Recommended	X	X	X	X	X	X	X	X
	Varicose veins and oedema	**D.6:** Non-pharmacological options, such as compression stockings, leg elevation and water immersion, can be used for the management of varicose veins and oedema in pregnancy, based on a woman's preferences and available options.	Recommended	X	X	X	X	X	X	X	X

	Type of intervention	Recommendation	Type of recommendation	Eight scheduled ANC contacts							
				1	2	3	4	5	6	7	8
				12 wks	20 wks	26 wks	30 wks	34 wks	36 wks	38 wks	40 wks
Health systems interventions to improve utilization and quality of ANC	**Woman-held case notes**	**E.1:** It is recommended that each pregnant woman carries her own case notes during pregnancy to improve continuity, quality of care and her pregnancy experience.	Recommended	X	X	X	X	X	X	X	X
	Midwife-led continuity of care	**E.2:** Midwife-led continuity of care models, in which a known midwife or small group of known midwives supports a woman throughout the antenatal, intrapartum and postnatal continuum	Context-specific recommendation	X	X	X	X	X	X	X	X
	Community-based interventions to improve communication and support	**E.4.1: The implementation of community mobilization through facilitated participatory learning and action (PLA) cycles with women's groups is recommended to improve maternal and newborn health,**	Context-specific recommendation	X	X	X	X	X	X	X	X
		E.4.2: Packages of interventions that include household and community mobilization and antenatal home visits to improve antenatal care utilization and perinatal health outcomes, particularly in rural settings with low access to health services.	Context-specific recommendation	X	X	X	X	X	X	X	X
	Task shifting components of antenatal care delivery	**E.5.1: Task shifting the promotion of health-related behaviours for maternal and newborn health**	Recommended	X	X	X	X	X	X	X	X
		E.5.2: Task shifting the distribution of recommended nutritional supplements and intermittent preventive treatment in pregnancy (IPTp) for malaria prevention	Recommended	X	X	X	X	X	X	X	X
	Recruitment and retention of staff in rural and remote areas	**E.6: Policymakers should consider educational, regulatory, financial, and personal and professional support interventions to recruit and retain qualified health workers in rural and remote areas.**	Context-specific recommendation	X	X	X	X	X	X	X	X
	Antenatal care contact schedules	**E.7: Antenatal care models with a minimum of eight contacts are recommended to reduce perinatal mortality and improve women's experience of care.**	Recommended	X	X	X	X	X	X	X	X

Appendix 8: Ethics approval documents

Research, Enterprise and Engagement
Ethical Approval Panel
Doctoral & Research
Support Research and
Knowledge Exchange,
Room 827, Maxwell
Building, University of
Salford,
Manchester
M5 4WT
T +44(0)161 295 2280
www.salford.ac.uk

15 December 2020

Dear Rose,

RE: ETHICS APPLICATION–Ref. 203 – Exploring mothers' experiences in accessing and attending antenatal clinic in Kilifi, Kenya.

Based on the information that you have provided I am pleased to inform you that application Ref. 203 has been approved.

If there are any changes to the project and/or its methodology, then please inform the Panel as soon as possible by contacting Ethics@salford.ac.uk

Yours sincerely,

Professor Andrew Clark
Chair of the Research Ethics Panel

THE AGA KHAN UNIVERSITY

Faculty of Health Sciences
Medical College

Ref: 2020/IERC-137 (v2)
February 15, 2021

Ms. Rose Maina - Faculty and Principal Investigator,
School of Nursing and Midwifery - Aga Khan University, Nairobi, Kenya

Dear Ms. Maina and team,

Re: Exploring mother's experiences of accessing and attending antenatal care in Kilifi/Kenya

The Aga Khan University, Nairobi Institutional Ethics Review Committee (IERC), in receipt of your protocol submitted to the Research Office on January 04, 2021. With reference to the IERC letter Ref: 2020/IERC-137 (v1) dated December 9, 2020, the IERC reviewed and approved this project {*as per attached official stamped protocol - version 2020/IERC-137 (v2)*}. This approval is valid from **February 9, 2021** to **February 8, 2022** and is subject to compliance with the following requirements:

1. The conduct of the study shall be governed at all times by all applicable national and international laws, rules and regulations. IERC guidelines and Aga Khan University Hospital policies shall also apply, and you should notify the committee of any changes that may affect your research project (amendments, deviations and violations)
2. Researchers desiring to initiate research activities during COVID-19 pandemic must comply with the COVID-19 SOPs for Research as well as submit to the Research Office a Request Form to Initiate, Reinstate or Continue Research During COVID-19 Pandemic.
3. Prior to human subject(s) enrolment, you must obtain a research license from the National Commission for Science, Technology and Innovation (NACOSTI) and file the copy with the RO.
4. As applicable, prior to export of biological specimens/data, ensure a Material Transfer Agreement (MTA)/Data Transfer Agreement (DTA), is in place as well as seek shipment authority/permit from the relevant government ministry. Copies of these approvals, should be submitted to the RO for records purpose.
5. All Serious Adverse Events and the interventions undertaken must be reported to the IERC as soon as they occur but not later than 48 hours. The SAE shall also be reported through the AKUHN quality monitoring mechanism(s) at Client Relations Department of the Chief of Staff's Office.
6. All consent forms must be filed in the study binder and where applicable, patient hospital record.
7. Further, you must provide an interim Progress Report Form 60 days before expiration of the validity of this approval and request extension if additional time is required for study completion.
8. You must advise the IERC when this study is complete or discontinued and a final report submitted to the Research Office for record purposes. The hospital management should be notified of manuscripts emanating from this work.

With best wishes,

Professor Stanley Luchters,
Interim Chair - Institutional Ethics Review Committee (IERC)
Aga Khan University, (Kenya)

c.c. Co-Investigators

3rd Parklands Avenue, off Limuru Road, P. O. Box 30270, GPO 00100, Nairobi, Kenya
Telephone: +254 20 366 2187/2190, Fax: +254 20 374 6855

Research permit

REPUBLIC OF KENYA

NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION

Ref No: 558881

Date of Issue: 10/March/2021

RESEARCH LICENSE

This is to Certify that Ms.. Rose Muthoni Maina of University of Salford, has been licensed to conduct research in Kilifi on the topic: Exploring mothers' experiences of accessing and attending antenatal care in Kilifi,Kenya for the period ending : 10/March/2022.

License No: NACOSTI/P/21/9201

558881

Applicant Identification Number

Director General
NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Verification QR Code

NOTE: This is a computer generated License. To verify the authenticity of this document, Scan the QR Code using QR scanner application.

Appendix 9: Approval letter from the Ministry of health Kilifi County

COUNTY GOVERNMENT OF KILIFI

DEPARTMENT OF HEALTH SERVICES

When Replying quote
Email: chmtkilifi@gmail.com
REF: DOM/KLF/RESCH/VOL.1168

P. O. Box 9-80108
Kilifi

Date: 1st April 2021

OFFICE OF THE COUNTY DIRECTOR

Ms. Rose Maina
Faculty and Principal Investigator
Aga khan University
Nairobi / Kenya

RE: DEPARTMENTAL AUTHORIZATION TO CARRY OUT RESEARCH IN KILIFI COUNTY

The Kilifi County Department of Health Services is in receipt of your request to conduct a study, **"Exploring Mothers' Experiences of accessing and attending ante natal care in Kilifi County, Kenya,"** that has received approvals from the University of Salford, Manchester Research Ethics Panel dated 15th December 2020; the Aga Khan University, Nairobi Institutional Ethics Review Committee (IERC) **Ref: /2020/1ERC-137(v.2)**. This is along with the NACOSTI License/P/211/9201 dated 10th March 2021.

The Department is glad to grant you authorization to conduct your study in Kilifi County in line with the ethical considerations stipulated in the approved study protocol, the guidelines on the conduct of research in Kilifi County during COVID-19 pandemic, and within the expiry date of the 2020/1ERC — 137(v.2) of Feb. 14th,2022.

Upon completion of the study, you will be required to share your study findings, conclusion and recommendations with the Department of Health Services, Kilifi County.

Sincerely,

COUNTY DIRECTOR OF HEALTH
KILIFI COUNTY
1st APR 2021
P. O. Box 9 - 80108, KILIFI

Dr.David Mulewa
Director of Medical Services

Cc:

- CECM — Health Services
- Chief Officer Medical & Public Health
- Director of Public Health & Administration

Appendix 10: Request for permission to carry out a study in Kilifi, Kenya

The Research Coordinator,

Department of Health Services,

Kilifi County Government,

2nd September 2020

Dear Sir/Madam,

RE: REQUEST FOR PERMISSION TO CONDUCT RESEARCH IN KILIFI, KENYA

I am a lecturer at Aga Khan University, Nairobi and am currently pursuing my PhD studies at the School of Health and Society University of Salford, Manchester. As part of the requirement to complete my study titled "Exploring mothers' experience in accessing and attending Antenatal clinic in Kilifi. I will need to seek the views and experiences of Health Care Professional's and mothers above 18 years on access and attendance of antenatal clinic in Kilifi.

I will abide by the rules and regulations of the health facilities and ensure that during the research there is continuity of care provision for the mothers in the ANC and acute care setting.

Data collected during this research will remain confidential for 5 years after completion.

Any other further enquiry or information request may be addressed to me.

Rose Maina: r.m.maina@edu.salford.ac.uk; Tel: 0724295804

Yours faithfully

Rose Maina, RN, MScN,

Aga Khan University,

Nairobi.

Email maina.rose@aku.edu

Telephone +254724295804

COUNTY GOVERNMENT OF KILIFI

DEPARTMENT OF HEALTH SERVICES

When Replying quote
Email: chmtkilifi@gmail.com
REF: DOM/KLF/RESCH//VOL.1/16

P. O. Box 9-80108
Kilifi

Date: 18th September 2020

OFFICE OF THE COUNTY DIRECTOR

Rose Muthoni Maina,
Aga Khan University,
Tel- 0724295804

RE: LETTER OF SUPPORT FOR A STUDY ON EXPLORING MOTHER'S EXPERIENCES OF ACCESSING ANDATTENDING ANTENATAL CARE IN KILIFI/KENYA

This letter is in support of the research titled "Exploring mother's experiences of accessing and attending antenatal care in Kilifi/Kenya" to be implemented in Kilifi County Department of Health.

Antenatal Care (ANC)during pregnancy is one of the key contributors to reducing maternal mortality as it provides an opportunity for early detection and management of complications during pregnancy. The Department has made significant strides in improving utilisation of ANC attendance during the first visit. However, the department still experiences a considerable challenge in sustaining the use of ANC during pregnancy after the first visit as evidenced by the low 4th ANC coverage of 51% in 2019.

The evidence obtained from this study will provide critical information for the department that will aid in drawing up strategies for optimising ANC utilisation in the County and overally reduce maternal mortality

The Department of Health Kilifi County thus wishes to offer support for this proposed project through providing a platform for conducting the study as well as sharing the outcomes with stakeholders within and outside the county.

Yours sincerely

COUNTY DIRECTOR OF H...
18 SEP 2...
P. O. Box

Dr. Cecilia Wamalwa
Director of Medical Services
KILIFI COUNTY
DMM/zdm

Cc:

- CECM – Health Services
- Chief Officer Medical & Public Health
- Director of Public Health
- Director of Administration

APPENDIX 11: Dissemination plan

The plan to disseminate the research findings to various audiences is in progress. The research findings will be disseminated to Aga Khan University School of Nursing and Midwifery during the faculty meeting. Abstracts have been written to be submitted to International Confederation of Midwives (ICM) to be held in Italy from 30th June-5th July 2024 and Sigma Theta Tau International (STTI) to be held in San Antonio, Texas, USA on 28-30 November 2024, Midwives Association of Kenya to be held in October 2023 and other conferences will be targeted as opportunity arises. Preparations for articles for submission to peer reviewed journals plan is underway. Finally, the report of key findings will be shared with the health facilities that participated in this study and other key stakeholders in maternal and new-born health.

Methodological reflections

The methodological approach used in this study was good in understanding the factors influencing attendance through the multiple realities from the participants. For this study the study location was chosen because of the prior engagement and working relationships with the health facilities. This was convenient because I knew the timelines of the ethical process in that in Kenya navigating through the ethics approval in a majority of the health facilities can be long and given the limitations in time this made it easier to get approvals. However, the COVID-19 pandemic brought delays which was later to be overcome globally and data was collected although through strict preventive measures because of fear of contagion. The population of study lives in the rural areas which forms the majority of the Kenyan population discussed in chapter 2. Whilst the study participants were from rural areas, the study findings cannot be generalised due to the fact that experiences are socially constructed and therefore different individuals have unique responses. Also, the geographical, social, and economic disparities in access and resources may not represent the rest of the country more so with a devolved government.

Appendix 12: Examples of initial Codes, sub-categories and themes

	Code	Sub-categories	Themes
1	I am not sick. I am feeling well. baby was kicking. I have no problem. My child is ok. I was not in pain. no need to go. previous pregnancy experiences	Belief about pregnancy	Individual factors and perceptions.
	complications danger signs Knowledge awareness fear precious pregnancy	Risk perception	
2	There is information. empower Share information. Awareness Educated Sensitizing Health talks	Information needs	
	Early attendance Late attendance Never attended. Routine appointment Too many visits	Timing/Frequency	
	Birth preparedness Complication readiness pregnancy symptoms When pregnancy matures ANC Services (prevention, promotive, curative)	Knowledge	
3	Decision maker Empowered Has information Self-motivation Personal push Education Iam responsible He will not force you to go. Knowledge	Autonomy	

	Awareness Knowledge	Education	
	Husband Mother-in-law Friends Relatives Religion Sibling Community	Influencers	
	Free maternal health services (Linda mama) Its free No cost No longer paying. ANC is free. Free services	Cost	
	Availability Attraction Important book Identification	Mother and child book	
4	No finances Husband is not working. There is no money Money is for food Poverty I don't have money *Mwenye* refuses	Financial issues	Sociocultural and economic influences
	He does no bring me Rarely see husband Men will still remain Adamant. Men get fatigue. Men get tired	Lack of Male involvement	
	I have not told him He has to go look for food Not supported Husband busy Men don't attend Attendance was low No fare Come from far Difficult to walk No means of transport No money Poor terrain Flooding rivers Overburdened	Transport & Distance	

	Hide the pregnancy No disclosure I can't tell my mom	Secrecy	
	Home delivery *Mwenye syndrome* other responsibilities at home waiting for husband taking care of their children traditions don't allow grandmothers have been delivering in the house Others believe already in *miti shamba (herbs)* I gave birth at home believe the TBAs services are the best	Cultural norms	
	Nurses are rude Negative attitude Fear the healthcare workers Health workers are harsh Aggressive Shouted at My book was thrown Quarrelled Not being attended to	Incivility	
	Long waiting time Delay in getting services Lack of medicine Lack of equipment Staff shortage Workload Strike Illiteracy	Health system challenges	System and structural factors
	a lot of challenges This corona has affected New norm Fear Low attendance We are used to it		COVID-19

Appendix 13: Table Midwives & Mother's Themes and Key Descriptors

Theme: Individual factors	Health care professionals- Registered Midwives [RM]	Mothers
1.Perception of risk-fear due to previous experiences **Descriptor** Presence of illness and danger sign Presence of medical conditions /complications	"…...Yes, they feel because even a mother may come to a clinic, they come to the clinic because they for the antenatal the routine one, but because they perceive a certain risk, so they perceive they are at risk. A mother might come and tell you my baby is not playing he is so quiet, or a mother may come complaining I feel a lot of dizziness, I am bleeding... I think they have that perception…" [RM10] "…. we can say they are aware because they tend to even come before their attendance date …. who had bleeding and reduced foetal movements, also swelling because of the hypertension they came back…" [RM6] "Most of them know that there is a risk. That is when you find a mother just headache, she will just come to the hospital, …" [RM9] …. the fear of losing the baby and the fear of losing even the mother…… we discourage them attending the traditional birth attendants because of complications ……when we talk to them they realize it and they will now tell you their incidents or maybe what they have heard from a neighbouring home, some now get scared and decide I will be going to the hospital for delivery. [RM 2] …. some come because of the previous complication, maybe somebody had hypertension –Pregnancy Induced hypertension in pregnancy… [RM 3]	……. You want to go to clinic but when you think of it, the months are passing another month has passed, the child is continuing to grow and you are not going to start exactly the months are supposed to start the clinic because the clinic for pregnancy you are supposed to start early but you delay because of fear. I will go next month, I will go next month, I will go next month, I will go… you procrastinate because you are scared… [MOTHER 18] …...I have a friend who was, who was operated, she got her 1st born through Caesarean Section so, then that child died so after 6 months she got pregnant so she had that fear… [MOTHER 13] I decided to come to the clinic because I want to know about my health and also for my baby in the stomach, how it is fairing on, so it made me to come to the clinic." [Mother 14] I came to the clinic because I wanted to, to get the... I needed to find out how many months I am first of all to get the necessary drugs that is why, what I am supposed to be to use when I am pregnancy, when I am pregnant, and also just to monitor the pregnancy Itself." [Mother 15] What has brought me to the clinic is to know about the health of my unborn child, is it playing, and for me myself am I fairing on well or how am I [Mother 02] I was losing energy and I was not understanding so I said since I am pregnant it's better to go to hospital

		because I didn't know myself what the problem was. [Mother 20] Nothing prompted me to visit the clinic; I simply felt compelled to do so. [Mother 09] My current pregnancy now, so this one was a bit challenging too, because I was experiencing some drops of blood while I was still pregnant when it was like three months. So it, it led me to start my ANC earlier." [Mother 13]
2.Belief about pregnancy- feeling well **Descriptor** Pregnancy is normal requiring no interventions.	some say, I am not sick, I have no problem, my child is ok and I am ok…. You have no problem, your child is ok, the heart is beating, ok, it is ok you can wait, even me I was like that and no complication happened. [RM 01] They will just tell you COVID or something. They will just tell you something. "Aah this COVID issue, I was not in pain, then I thought it is better I stay away because there is COVID. It is better I stay at home. So you are not in any pain, she says " No, I am not in pain, I am very much ok. So now we try to address about the haemoglobin level, we try to talk about the danger signs so that she can see the importance of coming to the ANC, it is not about COVID, but it's about taking good care of the pregnancy. [RM 02] others just assuming, let me stay here, I am feeling well, why should I go to the clinic [RM 03] when she comes during delivery you ask why didn't you attend the visits, the baby was kicking well. I didn't have any problems. So for her to come to the clinic, she must first have a problem	where I am from they don't start clinics some them say, "there's no need to go. Even if I don't go to the clinic I will still deliver the baby, so I will not go. It is not a must for me to deliver at the hospital and there's no problem. [Mother 19]

	but if everything is fine when she feels the baby kicking everything is fine [RM 9] "…She will rely on somebody, and it will depend also that neighbour might cheat her, so they tell them don't go. You have no problem, your child is ok, the heart is beating, ok, it is ok you can wait, even me I was like that and no complication happened. So they share from the previous experience forgetting that every pregnancy has its own complication." [RM 01]	
Theme: ANC care	**Health care professionals- Registered Midwives [RM]**	**Mothers**
1.Information needs on frequency and timing of ANC for mothers Information on danger signs Information on complications and importance of seeking care.	community health volunteers disseminate the messages to the pregnant women in their community units, so they mobilize the pregnant women to give them information concerning the early attendance of the ANC [RM 03] sometimes there is information through the media, they are told to go to the clinic, so you also empower them to listen for such from different types of sources [RM 01] we also give these mothers…we also empower them, the older mothers so that they can also go and share the information.... they can also be the influencers of these mothers coming early [RM 06]	There at home mostly they come to the schools they come with vaccines of children or they come with things of pregnancy [Mother 12] community health workers, they are there but they are very dormant, and the thing is you have to follow them and some people don't even know there are such people in the community so creating that awareness is also a good idea. [Mother 15] The community health workers can visit when they have gone to be educated, from there they call the villagers and educated them the way they have been taught. [Mother 19] It like you hear your friend can be pregnant and tells you, 'You can even go on the 4th month ,5th month [Mother 20]

	at least a neighbour who she has had an experience of delivery maybe she has passed through there, so they tell one another [RM 01] the elders in mobilizing the clients and sensitizing them and showing them the importance of coming to the clinic and assessing the health services and also involving the antenatal women through the ten households [Nyumba kumi] [RM 3] some come early because they have already received the messages because they we have a lot of information that is being disseminated around and the importance of going to the clinic early so they come basing on what they heard the importance of coming to the clinic early and so they come to the clinic [RM 03]	I used to google everything and anything about pregnancy [Mother 6] That information I knew it from my mother [Mother 17] it's like my mother-in-law say that they have already delivered and they didn't go to the hospital so they don't see the importance , 'going to the hospital has what importance?" and I said that I don't know because this was my first pregnancy but you can sit with the others in church and they say when you go to the clinic there are injections that can help the baby, there is medication to add blood and through those talks I loved to go and they say if you go it is fine and if you don't go it is also okay. So I tell my husband it is better to go and he said okay. the first pregnancy is when we started at 4 months. So when I went to the hospital is when I got the education now and saw the importance of going to the hospital. [Mother 12]
2.Frequency and timing of ANC Reasons for early or late attendance Understanding of the frequency and timing of the visits was important for optimal ANC attendance	so at least nowadays we can find quite a number of them coming during the first trimester [RM 2] not all of them they start at the same time but actually most of them start during the second trimester [RM 5] for those who deliver at home they tend to be rigid enough, such that they come even, they are remaining with one month to deliver, that's the time they come. I tend to think it's because of their past experiences so, but, we	but when I am near the end that is when I would go to clinic because I don't carry the pregnancy with issues … so I said because I am not in pain like that I would go but towards the end [Mother 16] I just told myself that I will be going on my 6th month. Because I don't have any problems [Mother 15] "… In all my pregnancies I started when I was 3 months because you are supposed to get all the injections (Tetanus)

	are encouraging them to come in good time [RM 6] …...I have the experience …. I don't have any problem I don't feel I have any problem so why should i come early…. So sometimes they feel Why should I be coming very early… here we have so many clients, why should I be coming here and queue for hours? And I feel I don't have any problem. [RM 8] however much they come, they do attend their ante natal clinic but they do not attend timely they come mostly in the second trimester, so that coming early attendance of ANC is not good. Bu the uptake like each and every pregnant woman almost, I can say almost all of them they do attend antenatal care. [RM 03] And if you try to ask about the previous pregnancies the time they started, they will just say they are many. I started in the 5th month, I started in the 6th month because they don't want that, the too much visits. So they try to delay a bit. [RM 02]	"...but others go at 8 months, 9 months when they want to deliver, that's when they go to the clinic. Let's say you go to the clinic at 8 or 9 months but you will miss the vaccines. There is medication that you are given to help you on improving the blood, the baby and during delivery the blood has to be the right amount, if you say that you are going to deliver on the 9th month it would be bad because you will not know if the blood is enough and also whether the baby positioned well. You won't know. You will just be carrying and there are many diseases that you will not know if you are okay or not hence you have to go to the hospital so that you are tested rather than carrying the pregnancy thinking you are okay." [Mother 19] It's because when you start early you spend a lot of time here. When you come here, a date is written for you to comeback and the months will be many. You will come here many times…the ticket, 200\= coming and going [Mother 17] **Information received at ANC** "… Sometimes I ask questions, "when you look like this… when someone has reached a certain month like this, how is a baby supposed to be?" With asking my questions then I learn, I feel educated, like that…. We have been told about how we take care of the baby that is inside, what we are supposed to do as mothers. They have explained many things like getting tested. We have received good lessons." [Mother 18] when you come in the morning there is usually talks there you are told you are supposed to start the clinic early so that if there is a problem that come up you will know how your pregnancy is…. So you are advised to come to the clinic earlier on don't wait the

		fourth month, fifth, sixth. There are others who come at the 8th month. She starts this month of 8 when it reaches the 9th month they miss the medicine because there are medications that they are supposed to take, you have missed many things the midwife has taught. [Mother 02] "… When we start clinic, down there it is a must we are put together at the family planning, the pregnancy 1st and then the pregnancy to continue you are there together and then doctors when they come to explain to us and then it is a must they will ask us questions. The way they will explain like the way I came when I tested first my blood level was at 9.8 so they told me, "woman, you are required to eat well the blood for addition is not good, it is you to take vegetables, eat things for blood.' You see I got that benefit and when I left here on that day I was bleeding, that beetroot juice, spinach I boil it alone or I eat it with food, I, so when I was told these tests I have seen the benefits it came to 11.7 [Mother 11] There are women already here who don't love coming to the clinic, they say, "me I will not go to the clinic already when I come on the 8th month and when I go twice I will just deliver." Maybe she sees the difficulty of walking in those clinics, she sees some difficulty. She stays when it reaches the 8th month she knows that when she comes for the 1st visit, 2nd she will come to the maternity to deliver. [Mother 04] **Busy work schedule** The thing that has made me to come today, I wanted to come earlier on but I was busy at work .....it is not all that we get offs some where they work, maybe

		they rest on Sunday, on Sunday the clinic is not open, the clinic is Monday and mostly on Friday. Like today so someone like that you find them, you know some employers you have to ask them for permission so that they allow [Mother 6] it is because my job is so demanding yeah. Whenever I want to come to the clinic, I get held up somewhere and that is why I came after all those weeks [Mother 15] **loss of paid work** I asked and begged her to go to the clinic and she said, "you when you leave work, when you go there, I will cut your salary." [Mother 07]
Information updates on antenatal care for the midwives Descriptor Information obtained through Continuous nursing education	For the trainings for us like me, because I think more it's more of management and our nursing charges officer here who is very equipped with the information and he also is updating us…...sometimes we attend a training…. I attended the one focused on antenatal care training [RM 04] this coming week for updates of ANC. Whereby they'll go, and they will come and implement and give feedback to other members [RM 05] But these days these days is online, you go online, you get a topic you read, you ask the questions, and then they get to the points [RM 08] Some of us were given on Job trainings [RM 10]	

Knowledge on importance of Services offered in ANC		because I get to know my weight every month if I have added weight, if I have lost weight, I will know through ANC, I'll know my blood pressure, I'll know if my baby is doing good. Yeah. I will not be just assuming the baby is fine, the baby is playing but when I come, or in reality I don't feel anything so it's very beneficial, very, very and plus there are these medications that people are given, these for blood, for Folic, for reducing fever Is very important. [Mother 13] I was given medication for worms, we were given tablets for adding blood for the whole month a whole box, I was given again for adding blood [Mother 11] the services whereby when it reaches a certain month you are vaccinated, there is an injection, there are medications that you are supposed to use [Mother 20] every month you are supposed to take these medications; Then there are drugs for worms, And then there's vaccination for tetanus and there's medication for Malaria. [Mother 02] you are given mosquito net the time you are starting the clinic and that time when you come with a baby now, you have delivered. So net you are given twice…At the private you are not given [Mother 16]

Theme: Enablers influencing access and attendance to antenatal care	**HEALTH CARE PROFESSIONALS [REGISTERED MIDWIVES] RM]**	**PREGNANT MOTHERS**
1.Support by family members and community - influencers Descriptor The influencers were both positive and negative in seeking care	**Family** parents take it upon to make sure that the girl comes for the antenatal clinic…. they are being pushed by their parents to come …...they come early [RM 2] the good thing with Muslim they support one another if she's a sister who's pregnant not married you find that she comes with cousins [RM 4] "... You know, especially the prim gravida here in Coast they are very young. Those mothers who are early 20s and late in 18 years, 17 years, even 20-years. So, most of them they are escorted by their mothers and their mother in-laws, so the experience of these mother in-laws and their mothers, they're the one who make them to come early [RM 8] .... personal push for one to attend the clinic, though most of the people do come early, it's normal from the community to say, ah, you should go to the clinic, ...how far are you? 3 months? Ok, you should go to the clinic. Even though they come late, the community has concerns on clinic visits [RM 9] But with those young ladies who are singles. They are with their mothers so their mothers are the one to	They support me when, when I'm down, …you know pregnancies come with their moods, you can just make a phone call …They'll come and do what you need. [Mother 13] I don't have parents both my parents passed away…. everything I go through I have to tell my sister. She is so supportive [Mother 15] For him when you tell him about matters to deal with the clinic, he is very caring about health [Mother 18] When you deliver you are poured for hot water so that you don't swell and not have pain of the body and breathing so hot water is poured so that you don't… and this belly you are massaged because it has dirty blood, she massages it so that blood comes out and it is massaged with hot water. [Mother 4] he sends me money, then he tells me go to the hospital and tell me what you have been told if there is a problem we will know what to do next [Mother 6]

	decide when to come and they have to escort them. [RM8] **Mother in-law** … with the Swahilis, the Muslims, they do come with their mother in laws for their visits [RM 1] …especially the mother in-law they have to be aware that this mother is coming to such a clinic. [RM 8] …Mijikenda's greater influence comes from the mother in law …. they are brought by their elderly mother in laws because they have a bigger say, they are thought to know much about the whole process, so every time they have a problem especially regarding to labour and to the antenatal clinics they are handed over to, to carry the whole exercise [RM 10]	when I am given the date that I am supposed to come back okay he arranges the fare [Mother 12] He advises me all the time, "go to the clinic go to the clinic." [Mother 14] because the neighbours ask me, "when will you go to the clinic?" I tell them that I will go and they say, "health is good to know early, make sure you go," so I knew it is important to come to the clinic [Mother 14] Him you explain to him that you want to go to the hospital. First of all, he loves that. He doesn't like when you stay at home and you tell him, "I have a headache, I have this,". He can't tell you to take the medication. He will tell you," It's good to go to the hospital [Mother 20] in fact, he advised me to come to the clinic. He said that it is important to go to the clinic, but I say that will go. In the morning when he called I said that I would go [Mother 5] Like that usually happens a lot there in the rural area, there are mothers-in-law who use these herbs for boiling for their in-laws and then give them to drink someone will tell you, "there is no need to go to the clinic, a medication like this like that I am going to look for it in the farm I boil it for you.' [Mother 16] "… It depends with how the family set-up is and if the rules are with the mother-in-law, if the child is at work it is a must you ask for permission from her and if she says no it is a no." [Mother 18]

		"… They are there. They are there those who ask the mother-in-law that they want to go to clinic and that is important. Mostly if you find the mother-in-law who stay in the interior part of the village, they don't know what clinic is. They say, "all my children have been delivered at home…you will not go". (Laughs). You will not go. [Mother 20] mother in-law told me to go to the clinic if I had not gone [Mother 05]
2. Autonomy Descriptor Women who were autonomous could make decision to seek care	"…. if she is empowered with the knowledge and she knows she has information to challenge the husband [RM 1] …. Yes, it is different, you see a mother who is single she is the decision maker, so she can make the decision herself but this one (married) she is not the decision maker, somebody has to make the decision for her, so if she decides to go to the clinic she will just go [RM 1] sometimes you will find a person makes her decision she's married but she comes immediately and say I was supposed to get my period last month but today have not received [RM 4] should I say, it's personal. Yah, it's a personal push for one to attend the clinic, [RM 09] "… elderly prim gravidas they stayed for long because maybe they were pursuing their education first, so when they get pregnant they are very excited, so they just come early enough so that they can start their antenatal clinic." [RM 2] "… elderly prim gravida mothers those that are looking forward to precious babies, maybe they had	I told him I am going to the clinic and he said it is ok [Mother 5] I got motivation from myself …so I know the dangers for not coming to the clinic, it's better for me to come early than to wait for him...so it is you to plan when you will go [Mother 9] ….my husband can scold me not to go to the clinic but as a woman I have to convince him [Mother 13] I discuss with my husband because he is my next of kin he's the one who I live with. So, my idea, taking it was my idea to give birth there and he accepted because I am the one who's going to give birth, not him [Mother 13] Find time, Sneak a little bit. Go and come back or just pretend that you are in pain, so that you go. Yeah, you should…you be clever a bit. [Mother 13] Let's say, okay, you are pregnant and you have not been given the clinic money and in a day you eat 50 Ksh, why don't you put 10bob and

	problems so when they conceive they come to the hospital earlier compared to those that have other babies at home." [RM 1]	look for jobs in the community you get fare to go to the clinic [Mother 13] but you if you are using your head or it is not a must to be employed, your business you can cater for yourself because even that man can give you money for use and you alone will buy for yourself what you want, you don't wait for him to plan for you, …so plan yourself [Mother 11] it is you to explain to your husband until he understands because he does not know [Mother 12] i make decision in my house, when I decide that it is tomorrow or next month I tell my husband [Mother 18] It's the woman herself who is supposed to tell her husband that i want to go to the clinic. So it's the woman to emphasize about the clinic…… I am responsible for my child [Mother 19] so most times he will not tell you to go to the clinic. Its him to hear your voice you say, "Me on a certain day I want to go to the clinic," so that he gives you the money…he will not tell you…he will not force you to go to the clinic. [Mother 20]
3.Availability of ANC book/card- Mother and child booklet Descriptor	"… so they will come early just to get those books and go to the maternity…. because when they go to maternity they have to be asked where did you attend the clinic...I have my book I attended the clinic…they only fear to be chased away if you don't, if were not... if you didn't attend the ANC [RM 8]	"… I started the 1st day of clinic, sometimes they give books for the clinic. [Mother 12] I saw the book…I still see that it is the one you use until when you deliver it is that one, when you bring the baby to the clinic, the book is the same one [Mother 5]

The mother child book had all the information and used for the baby as well. The mother were motivated to come get the book.	"…. we have the mother child booklet that is another attraction….. because they know it will be theirs and the baby they don't have to get something separate book for the baby their record is in one book [RM 3] "…. because that ante natal book it has all the developmental milestones for the baby, the danger signs, the nutrition part of it, and the graph…the graph for weight, heights, so that they can also be able to identify whether the baby is doing well or deteriorating so it's very important book [RM 6] "…what I know with our clients somebody can afford to attend the clinic but not the revisit as they are making the booklet as an identification for delivery… like a ticket to them so long as even if it is just one visit and she has this booklet [RM 3] …..why didn't you come back to clinic she is in labour she is not even listening to you……I have seen one who has done a single visit and it was over it went on like that, they never came for the return visit until delivery." [RM 3] "… They will say if you don't go to the clinic when you go for delivery the first thing you will be asked is the, so this is like a ticket to them so long as even if it is just one visit and she has this booklet. it is enough, she has already gotten an identification. [RM 3]	"… If you don't come for the clinic you will not be accepted. When you arrive here, you must present your clinic book they open it and look if you were coming because there are tests for testing HIV and what and what so if you don't come to the clinic for delivery, when you come here you are told to go back. [Mother 1] "… If you don't have a book then you should get a midwife who has a good heart, it would be work for him because if the baby is delivered and he wants to test your blood so that he knows how it is or maybe know what disease you had…. for him it will be difficult to determine all those. It is good if he has the book and knows what you went through or had a problem during the pregnancy. Maybe your blood level is low or not enough or you have a problem. If you are infected it is usually hard for someone to come and touch your child like that that is why we are advised to go to the clinic and during delivery you go to the hospital so when your book is read someone will know what kind of assistance you need. [Mother 19]
4. Mothers health literacy level	It will depend with the family where she is coming from if they are well educated enough, they will also see the importance of coming to the clinic earlier but	Let me tell you the truth, I didn't go to school like that but from whatever I learnt, when I reached class 4, we were being taught that when

Descriptor Education a good enabler to attendance Lack of education a barrier to attendance	if they are not educated they will have to stay [RM 2] .. in fact, I would say that those ones who are educated most of the times, they understand, you know even when they see the information from the media they understand [RM 01] … after giving health message when you sit one on one to that woman you try to ask questions to see if that woman she's learned anything or if she can demonstrate any knowledge then you find that sometimes you need to start from zero because she is illiterate she doesn't get anything in a certain language. So you use that language if it is "Giriama" you use Giriama [RM 4] I**lliteracy-** especially those who never attended school are the ones who usually come late to the clinic…it's because of illiteracy…if my level of education is low, then I don't understand the consequences of not attending clinic [RM 6] illiteracy contributes a lot. You find like those who didn't attend school at all they just don't have the knowledge, who don't attend school at all a mother stays at home, but she will not have that push or urge to come for ANC and when she comes during delivery you ask why didn't you attend the visits, the baby was kicking well. I didn't have any problems ……. The most barrier would be illiteracy... [RM 9] You find like those who didn't attend school at all they just don't have the knowledge, who don't	someone is a mother, they get pregnant, they are needed to go for tests [Mother 19] ".. So, when I stopped going to school, there were meetings that were arranged for education. I passed through a lot of them, I didn't go to school but I thank God I used to go to these meetings. In these meetings there are groups who educate doctors who educate the mothers with that I had to carry my pregnancy and know what I was supposed to do." [Mother 19] ".. If you go to this hospital, there are some charts there and you are told, " if you see this…" for those illiterate you are shown some pictures. "When you see this, then it is a bad sign. If you see this, this a bad sign, if you see this, it is a bad sign" So, I think all of them benefit, both benefit because I am educated and I will read and understand, there will be someone else who is not educated, might see the picture also, you see, plus the doctor who is there explaining, so if you are social a lot you will say, "what does this mean?" and you will be explained to and you will understand." [Mother 13]

	attend school at all a mother stays just around (delays), but she will not have that push [RM 9] …but if you get somebody who is illiterate, you see it is not easy for her to see and read unless somebody translates for her, and if there is nobody to translate for her, how is she going to get the information? She will rely on somebody, and it will depend also that neighbour might cheat her, though it is not easy, but there are there also, so they tell them don't go. You have no problem, your child is ok, the heart is beating, ok, it is ok you can wait, even me I was like that and no complication happened [RM 01]	
5.Cost reduction [government insurance]– Linda mama **Descriptor** Use of the free maternal services	…We have a Linda mama which is like the National Insurance fund (NHIF), catering for all women from pregnancy up to…...until 6 weeks post-delivery, so if it's ANC profile stands for it, like for Free because the government is catering for it. Delivery whether its caesarean, or normal, SVD is also free. So we can't say that the cost is hindering them from coming to the hospital [RM 6] There isn't any cost. They are using the Linda Mama. the Linda Mama, it used not to be there, they used to pay, they are no longer paying now, so the Linda Mama is assisting them but not fully [RM 1] They just have the Linda Mama thing which takes care of everything, for them it is to just come…ANC is free, delivery is free everything is free… even those who deliver through CS it is free. So long as they have the Linda Mama it will take care of it [RM 3]	after finishing with everything all the tests, is when I have gone for Linda Mama and upon reaching there, they have told me, "do you have…," they asked me if I have National Hospital Insurance Fund, but everything had already been taken care of [Mother 15] And then there is that Linda Mama, I don't know, it has been written in the papers, I don't know what it is [Mother 5]

	...services are free because they have the Linda Mama, the Linda mama caters for everything for the ANC mother until she delivers and the baby reaches 3 months [RM 7] Linda Mama…. has helped our mothers to come and start early and to maintain their visits [RM 8] currently the uptake of the ANC visits is quite high, because we have Linda Mama, It caters for everything. When a woman comes for ANC clinic, every check-up is being catered for by Linda Mama, so the uptake is just high. The only obligation they have is to avail yourself [RM 9] we also inform them about the issue of Linda Mama so that they know their fears of the expenses for the things they need to cater for……. some people do not know, about the Linda Mama Issue, so they still believe when they come here they will be asked to cater for the services….. So it is until the mother comes then she will know that I am not paying anything but before they come, they have the assumption that they are supposed to pay for the services [RM 10]	
Barriers influencing access and attendance to antenatal care	**HEALTH CARE PROFESSIONALS [REGISTERED MIDWIVES] RM]**	**MOTHERS**
1.Financial issues/cost/no cost to the family **Descriptor**	if you go deeper you ask them why they will tell you maybe the financial problem, things like poverty, they will give you some of their challenges that they are going through in the community that makes them not to come. Poverty is a big challenge even for the government to handle [RM 2]	most times those that come to this government hospital it is those that financial capability is low…. because my husband says, "that is a sudden matter, I did not plan for it, here I don't have money." [Mother 1]

Poverty and lack of finances. money prioritized for food	".. reasons maybe just financial constraints as in maybe some depend on their husbands to give them money for transport from their place to the facility. That is also another challenge, "I was waiting for my husband to give me money to start the clinic, so he is the one who hadn't given me" so they wait for the husband, they continue to wait, to wait, as the pregnancy advances [RM 3] there are challenges of funds to access the facility so sometimes maybe the husband is economically unable to support [RM 4] the other challenges that makes them come late for the visit, some you may find they don't have the means of transport then you find their husbands are very harsh maybe, you may tell him I want to go to the hospital then he tells her there is no money so that mother you find they are submissive so this thing of the owner of pregnancy [Mwenye], they have to consult, If Mwenye refuses they don't come…. there is what we call Mwenye syndrome in the Coastal region mostly, so Mwenye is that husband. If Mwenye refuses now the wife has no say, if she is told there is no going somewhere like that, that is what she will do…. where there is poverty there is no money [RM 7] "… other factors are funds… others the issue of finances at times it is a challenge to them, so funds is another issue…poverty does because it makes inadequate funds or absence of funds [RM 10]	I don't have money for going to the hospital [Mother 12] some families are very poor. To get that a hundred bob, to come from there to here is a problem…. she is married but now she doesn't have money, she is poor. [Mother 13] they can't reach to the service because of the financial status…there is poverty [Mother 15] I am not going because I don't have money [Mother 16] they don't start clinics... Some have financial challenges to continue, some they tell say, "there's no need to go. Even if I don't go to the clinic I will still deliver the baby, so I will not go. It is not a must for me to deliver at the hospital and there's no problem [RM 19] if it reaches that day and he doesn't have it will make him tell me, 'I have tried, I have not found, it will make you to walk, go, I can look for it right now and send you back with a motorbike but if I lack you will come back on foot [mother 2] I saw it was money when I come maybe when I go somewhere I will be told to pay a certain amount so that is why I was waiting to get first the money [Mother 5]
2.Cultural barriers	apart from that date the return date can be next month but she experienced like a problem in	they live with their grandmothers and they perform that delivery and everything, maybe

The cultural practices in the community affected attendance	between that time she is supposed to come so that's to evaluate what is the problem but you find that the one to decide is mother-in-law [RM 4] so if you go and start the ANC clinic without informing him, it becomes a problem, so in Kilifi, we have the Mwenye syndrome, (husband being the decision maker syndrome) so the husband is the one to decide for the woman because you are my wife, you have no right, the Swahili's have stated that, 'sikio halipiti kichwa' (he is the head of the family) that means the husband is the head of the home not the woman, so you should listen to whatever you are told. Go and start the ANC clinic, if you are told not to go, you don't go [RM 1] …. because the husband they have to give them the fare that money the income to come even the money and then who will make the decision to come early, it is the husbands if the husband has not given the way forward or the go ahead this mother won't come early [RM 8] Cultural barriers, like the Muslims, some of them are not allowed to go to the hospital [RM 1] we have different community, different tribes and especially the native of this area the Mijikenda actually they have that, there are cultures where they say grandmothers was born at home, she conceived at home, she delivered at home and nothing has happened to them so they want their generation not to have the modern or in the modern medicine, but they continue with the cultural beliefs so you find such people you might wait them and wait till you'll	their traditions don't allow them to go to hospital [Mother 15] others who don't come to the clinic because of cultural beliefs and values "Mostly the Mijikenda who are in the villages, someone can tell you, "I have delivered all my children here and I have taken care of them at home and there's no problem." [Mother 20] when you are in the rural areas, you get other information, that me I didn't go and I delivered, so you delay to go [Mother 16] When you ask him he will tell you, "in the old day's women stayed at home and then delivered so it is not a must." [Mother 01] People say there is no need of going to the hospital. Some say it is not a must to go to hospital because maybe their grandmothers have been delivering in the house [Mother 15] There are some men who don't give out money for the clinic and they don't want to hear about anything to do with the hospital. They can say, "my mother has taken care of a pregnancy and she delivered at home. She didn't go to hospital and us we are fine. So, you what kind of problem are you bringing?" [Mother 20] …. like my mother-in-law say that they have already delivered and they didn't go to the hospital so they don't see the importance , 'going to the hospital has what importance?" and I said that I don't know because this was

	meet them when there is a complication , when they are sick and maybe if the sickness you may see they are having ,if it can be treated traditionally you will not see them. They will only come to you when there is a complication that cannot be treated from their homes [RM 5] Another thing is experience, the first experience, some of them maybe the workload and the number of staff, there is shortage of staff and the workload is high, so somebody will come here and stay over 6 hours, so she won't come, because of that. She is needed somewhere and maybe she has other children who need her, she won't come because of that. [RM 01] the mother will say…I was waiting for my husband to give me money to start the clinic, [RM 3] some others who say that you know, they are taking care of their children. there is nobody to leave with their younger children. So, if you don't have somebody to leave their children with, they will leave it, they will not come early [RM 08] **Non Scientific information** like those ones who come from there, from the interior and they don't have that knowledge maybe those elderly women they will say "we delivered at home, and you will find that she has never gone to the clinic even once, she will say " for all my children I have delivered them at home I have never gone to the clinic" [RM 7] **TBA/HOME**	my first pregnancy but you can sit with the others in church and they say when you go to the clinic there are injections that can help the baby, there is medication to add blood and through those talks I loved to go and they say if you go it is fine and if you don't go it is also okay. So I tell my husband it is better to go and he said okay. the first pregnancy is when we stared at 4 months. So when I went to the hospital is when I got the education now and saw the importance of going to the hospital. [Mother 12] I lost other pregnancies…The were saying that the womb is delicate and they said that if it is a baby who has passed away has passed away even the mother-in-law said that months had passed you could be following the generational [traditional] and there after you can get a child. so there is no problem it is not a must to follow up with the hospital then I said 'if it is generational then the first one, the 2nd one and the 3rd one died so me it made me follow up with this pregnancy for the hospital and then I came here, for the hospital suited me. [Mother 12] **TBA- preference of care** Others believe already in miti shamba.(herbs). these TBAs so they see when they go to the TBAs already they feel safe and they don't go to the hospital. [Mother 08] three I gave birth at home then I went to the hospital [Mother 07]

	Because at home they are very kind they take most of the time, you know that attention you see, yeah. so they prefer, I would rather be, this one to take care of me than that one because the attention that I am getting here, if I compare with that one that I will be getting at the hospital. …...these mothers, they are being taken care of well at home by the traditional birth attendants compared to the nurses, when a mother goes to the clinic she is being mistreated the nurses are rude, so such complaints [RM 02] if they had that experience of delivery through the traditional birth attendants also they can determine instead of telling their children to go to the clinic, they advise them to go to the traditional birth attendants. those who delivered through the TBAs and they believe the TBAs services are the best, so they will advise their daughters or the daughter in laws to go the TBAs or at times direct them there instead of going to the hospital. [RM 3]	"…...mother-in-law…...believe the TBAs services are the best, so they will advise the daughters-in-law to go the TBAs …. instead of going to the hospital…" [Mother3 they see it is better they go to the TBA they deliver at home… there is a TBA that don't know how to massage and disturbs the belly and harm your baby …if maybe she has birthed you the 1st one or twins and then you come and bleed makes you to come to the hospital.....if you are told you don't understand, going to the witchdoctors, going to be massaged, you follow that, you have been bewitched and you don't come to the hospital to follow up on the matter so that you get your health. [Mother 11] "… There are those who don't come to clinic and when they reach their delivery day they deliver at the TBA…Maybe it's the fear of being asked questions… Some fear the HIV test." [Mother 17] "… women who go to the TBAs. It's that people think the TBAs will look at the baby well, will massage [Mother 20] "…There may be the person who is planning to go to the hospital because the stomach is paining that pain already has reached near so she can go to the TBA because it is near. If you say you want to board a motorcycle or you board tuktuk, the child you can die on the way she will have no choice, she can give birth already at the TBA if it is near. [Mother 09]

		"… They tell you,' you, do not to go to the hospital if you feel pain, you go to a TBA and then that TBA when you reach there, she tells you, 'if it is your pregnancy that is first or second, you should not stay here you go to the hospital. So what will you do? Will follow this for going to the hospital or will you follow the one for remaining at the TBA because the others have told you to go to the TBA but these others who give birth there then the reason I have told you it is that medicine; the pain could be near so they go to the TBA to deliver. [Mother 09]
3. Transport and distance to facility **Descriptor** Poor transport plan for the pregnant women Lack of finances to pay for transport	"…they are able even to walk, so it doesn't matter whether you have or you don't have once you know the importance of going to that clinic you will go even at your home… So she will go and look for that 50 shillings or 100 shillings because she knows the importance of the services that she is going to be offered for herself and her unborn baby…." [RM 01] there are some who come from far. So one says If I start the clinic early and I keep frequenting maybe the distance is 150 shillings, or 100 from your place to the facility you would rather wait [RM 3] So, transport to them from their homes to the facility, especially those who are who are pregnant, they find it difficult to walk. So, it is a challenge to them. [RM 5] so, if one does not have fare to come to the hospital, like a hundred shillings coming, hundred shilling going back to home, then it can be a hindrance……...sometimes it could be due to	like many times there is rain…. Like it takes 2hrs 30 mins to 3 hours because it is far and then the road is usually not that good because of the potholes [Mother 01] Like, where I come from it is very far from here [Mother 13] other times you think reaching the hospital is far so how will you reach and as you know about pregnancy, there is getting tired [Mother 18] It's because when you start early you spend a lot of time here. When you come here, a date is written for you to comeback and the months will be many. You will come here many times…the ticket, 200\= coming and going so if you start at 5 months or 4 months will be remaining for delivery. [Mother 17] "… I came here because it is near for me, because of the fare. For the one who doesn't have money, there are some clinics that are near

	distance you know, like coming to the hospital, and maybe you are from a far distance [RM 6] the other challenges that makes them come late for the visit, some you may find they don't have the means of transport then you find their husbands are very harsh maybe, you may tell him I want to go to the hospital then he tells her there is no money so that mother you find they are submissive so this thing of the owner of pregnancy [Mwenye], they have to consult, If he refuses they don't come. [RM 7] I've said about the transport being is the major challenge. Yeah, from their home to their facility, from the facility everything will be free, coming and back, that transport in between from the facility to their homes and from their home to their facility is a challenge. [RM 5] "… but now most of the facilities there have been constructed them near the people. Somebody tell you I walk more than ten kilometres to get services the least maybe we can say maybe three kilometres, four kilometres so most of health facilities have been constructed near the communities." [RM 05] "… transport……Well according to the economy, for the mother to use 50 shillings in order to reach this place, maybe it's a lot for her…. It would be better if the transport will be organized for them to be just taken and dropped to the clinic and going back, it will help a lot [RM 9] So the big issue is transport now that is why I didn't mention the other charges because Linda Mama is taking catering for that…. Transport is the most barrier…. So the cost of transport will be an issue [RM 10]	that don't need money so they can just walk [Mother 19] "… from Monday to Friday that is when I was bleeding so I went on Friday to the hospital because I did not even have strength, I did not have fare because it is far I waited for my husband to send me money I went to the hospital." [Mother 10] "…. she is married but now she doesn't have money, she is poor. It is far. There are places like xxx there isn't any clinic at all and from there to here just coming is like 200 to 250 shillings that is the motorbike and there's is no vehicle like Nairobi where you pay 20 shillings to reach somewhere, it's only the motorcycle so it is a bit challenging for them to come to the clinics… transport and scarcity of hospitals is a very big problem. [Mother 13] then where they stay may be far so that leaving there she may not have…eating is a problem, will she get fare for a motorbike for bringing her and taking her back? She will not have. Sometimes it might be a challenge for her to come to the clinic eventually she delivers at home. There are big challenges in life. [Mother 2] There others that are overburdened that can't walk, you hear and then at home there is no 50 shillings to get a motorbike, you see, there she cannot come to the clinic and say that she will

		come to the clinic the following week, if I can I will go so that can miss.… you don't have money for the motorbike. For some, coming this way, it can cost me fare, the fare is 400 or 500 shillings when coming here. [Mother 4]
Close proximity of facilities.	…. now most of the facilities have been constructed near the people. Somebody tell you I walk more than ten kilometres to get services the least maybe we can say maybe three kilometres, four kilometres so most of health facilities have been constructed near the communities [RM5]	I went to a clinic nearer to where I stay [Mother 13] the dispensary is the one close to her and she said when she felt she was having pain in the stomach, so she went to the dispensary [Mother 5]
Delay in getting services-long waiting time **Descriptor** Delays in the clinic Time wasted while waiting	I want to be frank about the visits to the hospital, and the population is quite high (patients are many) so, the waiting time can be quite high, especially the first visit. The first visit because you have to attend the ANC profile and everything, so she will take quite some time, compared to the revisits the revisit is only about palpation…. But for the first visit is quite tiresome for them [RM 9] "…. there is a lot done in first ANC because when they come they will be done for the health assessment and education when they finish we usually have the laboratory, waiting minutes, HIV counselling and testing, even there is waiting time, she is not alone remembering, after that one, they come back, they do whatever the services required for the ANC (Weight, Blood pressure, palpation) to finish up. When they finish there is going back to the laboratory to take the results, if there is a scan. There is a waiting there as you wait for results, according to the findings maybe she has issues you will refer to client to the responsible person maybe to the to the obstetrician/gynaecologist, there are the	"… the doctor writes that you go get tested for this and this. He writes for someone else so, a lot of time you will take there because when you reach the lab it is not you alone so you sit while waiting, you wait for the line if it is at moving at the bench you will wait to move until it reaches you, you go you are removed. You go to another bench, you are removed blood you come and sit, you wait for results and come to the doctor. When you reached the doctor's he is with another one that came before you so it will make you wait it is line by line, from this line to this line so it is a line until you finish [Mother 2] ".. the doctor writes that you go get tested for this and this. He writes for someone else so, a lot of time you will take there because when you reach the lab it is not you alone so you sit while waiting, you wait for the line if it is at moving at the bench you will wait to move until it reaches you, you go you are removed. You go to another bench, you are removed blood you come and sit,

	previous scars, so that she can go and book. So at least there is some hours there, I can't really approximate because it depends with the mother not all the clients will have the same problems, there are those ones that you will have to follow like those ones with bad obstetric history (BOH), previous scars, so she must go step by step until she finishes. [RM 07] so there can be delays, in terms of waiting time so maybe, they could be having such thoughts that if I go, I can be kept waiting so I better wait until such a time when I am almost giving birth [RM 06] there is shortage of staff and the workload is high, so somebody will come here and stay over 6 hours, so she won't come, because of that [RM 01] They stay long because some of them come early -6 AM they are here waiting. Until they leave at 1-2PM [RM 03] You just tell them in the morning. I'm just alone. So, you have to be patient today. [RM 08] So most of the time when they take your results to the nurse most of them are unhappy. Because they came here, have stayed for 2 hours, so they go there gloomy they are not happy. so it has been an observation that was made, so they make sure when the mother brings the results they inform them that today you took a lot of time because of ANC profile etc, but next time [revisit] you don't even go to the same room, you are directed into another room where services are offered faster. [RM 10]	you wait for results and come to the doctor. When you reached the doctor's he is with another one that came before you so it will make you wait it is line by line, from this line to this line so it is a line until you finish [Mother 2]

Inadequate resources **Descriptor** Lack of resources reported	it comes to the essential drug maybe that what you want and they are not there, you keep referring them somewhere they don't feel good, but we want to say that there is a time that we have done well on both, we have been doing well on the ANC services but now, like the months of April we seriously had stock outs and in fact that is why we are seeing 84 from over 200 when it comes to ANC [RM 3] we don't have the ANC booklets, they buy exercise books, so you start writing from the zero [RM 6]	
Inadequate human resources- Staffing issues **Descriptor** Poor staffing and high workload	we had one nurse who died, and another one was, another was retired on medical grounds, in fact, 2 since then have retired but there is no replacement [RM 06] I can say, we are doing our best, but you know, quality depends on the rationale, so in this case, some services are compromised. So you see here in this case, we compromise (complete health assessment not done) because we squeeze a lot so that we can serve the total population. [Rm 6] We have people who went to school, they were not replaced, and others are dying, and not replaced. So up to now, they are just but promising us that, when recruitment will be done, they will consider this department, but it has taken quite some time. [RM 02] there is shortage of which I don't deny there is shortage but now you will address that thing for I don't know how long, more than 7 years and nothing has been done, [RM 02]	

	it is just the shortage, the number, the queue was big and you are there alone, so what do you do? you just work and you will just see some of them leaving they will tell you, "we are hungry" I tell them go and eat if you will be able to come back come, if you won't be able to come, lets meet tomorrow. Yeah. They will leave their books there and they will come the following day. And you continue. [RM 02] Another thing is experience, the first experience, some of them maybe the workload and the number of staff, there is shortage of staff and the workload is high, so somebody will come here and stay over 6 hours, so she won't come, because of that. She is needed someone and maybe she has other children who need her, she won't come because of that [RM 1]	
4.Incivility – Respectful maternal care **Descriptor** Poor communication Negative attitudes by midwives	when a mother goes to the clinic she is being mistreated the nurses are rude, so such complaints, I have heard about such complaints. But if the health provider is a, has a negative attitude for sure they will just go back to the community… [RM 2] they fear the health workers, is it the impression or how the health workers how they respond to them, they have the mentality that health workers are harsh so it takes them a lot of energy to come to the facility, so people will opt to come to when they are really in need otherwise most of them would disregard the coming to the facility. So health worker's attitude is one of the factors which would hinder people from coming to the institution [RM 10] Or maybe the health care worker had an issue with that mother and so sometimes she might refuse to	My book was thrown and I said, "if throwing my book is a free work…I have followed you so that you can attend to me. If you don't want to attend to me who do you want me to go to attend to me?" [Mother 19] they will shout at you [Mother 04] I hear you are quarrelled …'Why is it that some delay until the 7th month and has not come to the clinic so they refuse and say, 'I will not go…" because if you delay to come to the clinic later you are abused by the doctors…You will be quarrelled at if you come late for the clinic [Mother 5] There is my friend who used to come and told me, "there is another doctor who has a bad

	come just because she had an issue with the previous health care worker……...So they tend to think all of us are the same, so they will say, those people are all like that they will tell you that way that is how they are. So she will tell another one and another one, so they go share……. somebody has a negative attitude before they even coming to you. So the moment she comes to you, I have had such an experience so somebody comes to you, you attend to her so well, by the time you finish she tells you I was told this and this about you but you are not like that [RM 01] **Quality health care** we go extra miles, to attend to them. Sometimes I don't even take lunch I make sure, in fact not even sometimes, I don't take lunch when I get into my place of work, I will attend to them till the last person leaves, now that is when I will now think of where can I get a cup of tea or a glass of water so you have to sacrifice that lunch... [RM 2]	attitude she is talking to people the way she wants." [Mother 6] .. they say at the TBA it is best and what the doctor's do/ to you? at the TBA you are attended to well you are put well and when you deliver you deliver without a problem and the hospital, you are helped to deliver but them they don't give you the challenges like the ones for our place because you can go and a little the baby has changed and this one can return it but the hospital you don't know, it will not be turned you will be put under the knife [caeserian section] so there is the badness of the hospital and the goodness of here, so you choose by yourself Eeeh, at the TBA you are attended to well..[Mother 12] There are others that may come maybe the belly is hurting or has been squeezed so after telling them or me I have pain somewhere you will tell them and they will not bother to act fast, they will do their work but you still are in pain, you hear, still you are in pain because that happened to me the time my pregnancy was miscarried, I came here and I was bleeding, I was brought to the emergency but when I entered the emergency I was not attended to fast, the blood was just pouring, it poured until I started to lose consciousness now. So when I wanted to fall that is when they took me and put me on the bed and put water in me but I had stayed for about 1 whole hour the time I have not been attended to and the blood was just pouring so it went upto when I was losing consciousness and

		they got shocked now. Some you can tell them that you are in pain and think this one is not in a lot of pain let me look at this other one but instead you are the one in a lot of pain [Mother 04] "… There is my friend who used to come and told me, "heeh! there is another doctor who has a bad attitude she is talking to people the way she wants." You see after you talk to someone, like for me if you talk to me badly, weeh I won't come back, I won't come back it is better it is better I go elsewhere, but someone says, "heeh, that doctor I fear going to her or even going to see her because she will talk to me badly." you see that is the reason most of them don't come to the hospitals. So they say, "aah that doctor is still there, I won't go there he will talk badly to me" [Mother 6] "… you can give birth at home and then the doctor abuses you here, 'why you did not start the clinic'? 'I am waiting for my husband'...so it will be how much embarrassment because you are insulted and he is not there." [Mother 9]
5. Lack of male involvement Male not accompanying women to facility	…We have male involvement; in this male involvement when she comes with her couple (the spouse) we give them first priority. You know you can't have a husband here with 20 women and you imagine that you will seat him here until her time reaches, he will feel that insecure, there is that insecurity a little, so the women are 20 and you are alone, so if we do that, they will want to come with their husbands so that male involvement encouraging them to come with the husbands also assists. [RM 7]	It could have been good if they accepted to help because the baby is not for the mother only and this journey for carrying the pregnancy to say the truth is exhausting, it is good at least your partner motivates you there and when you come here maybe at the bench…. but sometimes you can find others brought by their partners [Mother 01] …I am told and then I tell him. When I tell him and then he says, 'were we supposed to go

	..The lack of that support from the family. Secondly, I can say even the spouse. They will, Ok you know, if there was the issue of men involvement in it, I think if we empower the men, they will be in a position even to support their wives. Their partners. But I don't see the male involvement being put into practice and being supported. Because you know ladies are being supported, women are being supported but for men even in our country it is not that effective. [RM 02] some will come back but you find that it has been a very challenge to the husband and many men because some of them they find it you know issues of ANC there's a lot screening lot of questions so sometimes they get fatigue, they get like tired want to go [RM 04]	together," eeh and then he said we go , even that I have been here , it is that he has been sent away but in the evening he could have come again it is the way he was sent away and he was told, " it is not a place you be together with your wife, be outside ." and that is why he said that he will not come but he usually like to come to the hospital [Mother 12] He does not bring me. Me I tell you this is my 2nd pregnancy even my 1st pregnancy he didn't bring me, even the day for delivering, I came alone… I have already told him but he doesn't want to come… if someone does not want to come, will you force him? [Mother 01] , it is during the time I am pregnant when I was carrying my 3rd child I told him, " so now people go to the clinic, it is needed they go as husband and wife and we get tested all of us our state of health" and he said, "since I married you for 14 years there is no disease that I have brought to you you know home , you go, put the letter here when I come I will see." So I said there is no need to compete with him and because the 1st I did, I put it and I am okay, the 2nd one I did, I put it and it was okay, that other one I put it and I put it on the dressing table, so what did I do, I went alone and tested everything I told him that the results are okay so me I trust myself [Mother 11] I felt that it wasn't necessary because, um, he has to work, he has to get money. I have to eat,

		yes. So if we just roam around going to the clinic back and forth, when will he be looking for that money, so I didn't say that it was necessary, but what I was being told, I just came back straight and told him, “I have been told what should be done...he understands. [Mother 13] It is not that easy for him to follow me here he will always come up with excuses, ‘you just go, I’m busy I am doing something else.” [Mother 15] For the woman there is nothing to think about it is the man who has to gone to look. So, when you come to the clinic and you sit with them there and maybe the work is for motorcycle and you have to work so that you get the money to eat, you buy food to eat hence they can’t come and sit with you at the clinic. He has to go to look and you remain at the clinic because sometimes you can come to the clinic in the morning at 6am and leave at 4pm. [Mother, 17] I haven’t talked to him about it because I don’t see the importance of him to sit because whatever I will be taught here is what I will explain to him. In any case if he will be asked to come in, I will tell him but I don’t blame him I have not told him why we should go together. Maybe he can’t refuse we come together but personally I have not told him [Mother 18]

6. Secrecy concealing of pregnancy Descriptor Lack of disclosure of the pregnancy Fear of the adolescents to be reprimanded by parents.	because some of them they now hide the pregnancy until now the mother now notices there is something wrong, so when they are asked now they open up and say yes I am pregnant [RM 02]] "there was one time I did an analysis. We had very few prim gravidas, primary school girls, who came late and we came to realise that even their parents didn't know that they were pregnant. maybe they were hiding, that was one incidence where we had 2 twins, who had been raped by their grandfather [RM 06] "… you may find that mother has not disclosed, you know if there is no disclosure, it will be hard to tell her I am requesting for fare I go a certain place, she will have to be asked what are you going to do." [RM 07]	
Consequences of COVID-19		
Low and late ANC attendance The low attendance of ANC		The Corona pandemic I had the baby that right now I am pregnant you would go to the hospital and you find no doctors at the clinic so we were staying at home because there was no clinic and anything so we didn't see it as a problem not going to the hospital. Even he left those…he didn't finish because of corona … Corona was being announced on the radio that it is a dangerous disease, we protect ourselves, we stay at home, we protect our babies, schools stopped because of this now we follow it up that our children…it is us even the hospitals we were not going [Mother 12]

		I have not seen if it has stopped them if I say it has stopped them, I don't know itself but I have not seen like because okay of the pregnancy Corona has come to the clinic and when you are sick, you will just come just like that so it means it has not been prevented anywhere it is me to decide that I will not go to the clinic [Mother 2] at that time there was Corona no clinic and when we came they were not doing the clinic [Mother 4]
Perceived risk and Fear/anxiety of infection **Descriptor** Fear of the unknown	by that time actually, we were advocating at these mothers to call instead of coming and to us I cannot say we were so much affected despite when these mothers come. [RM 5] because they were not coming, but time later in time because people get used people start say to me, I've never seen him somebody who has Corona. So why should I fear? I have not seen anybody who have died with corona we just see them on the TV and it did become a normal thing [RM 4]	
Financial issues **Descriptor** There were no finances Lack of money for food and transport		"... it has become difficult because the one who leaves money to use there at home you know it is not left like the way it is started. When you ask him he tells you, "there is no money, Corona this one, there is no money even at work there is no money, you know right now there is Corona," So that income that he leaves at home it is little so that little you fix there that is the challenge as in the income since Corona came it has been low [Mother 1] The pandemic is there but this time and that time, that time it was very tricky because at that time is when I got pregnant and then there was

		doctor and then private had hiked and going to private is money so at that time you were to pray to God to help you so that you are not in pain or that pregnancy does not get an issue enough to make you to go to the hospital because when you go to the hospital it is money and money you are supposed to have.… There is a time I felt like coming but I have it makes me to come, because of what reason? You will be tired, the day has reached and then you calculate about walking, you can't. [Mother 4]
Acceptance of new norm **Descriptor** The new normal was accepted The people had gone back to their normal routine and attendance	I think now the anxiety is over. because COVID is there and we are fighting with it, just as it comes that is how we are fighting with it. So if you think about COVID too much you will be stressing yourself and you will also be stressing your clients for nothing. So we just observe the measures, the guidelines that should be practiced to prevent whatever we are supposed to do, we do it, accurately, correctly and try as much as possible to prevent the spread. Yeah. Like the way we normally try to prevent the spread of other diseases even this one God will help us. [RM 2] We have gone back to normal and the normalcy has come back, even these masks we are using them but social distance I think, it is here or there, I think it is God that is helping us…That fear is gone. So it was there, even when a client comes, you feel you will not attend to her but right now we are ok. But initially it was there, you will see I have touched on a client, I have worries but right now we are ok. Before they had fear, even I myself when I leave the work I used to take a bath over there, when I see my child coming towards me, I say No don't come near	"… I am even used to, initially I was fearful but now I am used to, you know human beings it reaches a place you are used to. You say the way it will be it is like that if I will be infected and then die it will be already my day has reached, who is to live forever is who? Everyone will die so it will be my journey has reached. Nowadays I am not scared again like before." [Mother 1] The pregnant mothers reported to have noted the strictness in reinforcing the COVID-19 mitigation measures had declined and no one was concerned anymore regarding washing hand and checking of the temperatures ant the entrance. Okay, they are strict about the masks but not that strict because that is not a must, others there are no sanitizers anywhere. I believe every ward should have a sanitizer at the door. Someone comes and sanitizes or each bed should have at least or each ward, each cube should have at least somewhere to wash hands something like that. There are no sanitizers, you just and you can't wear these masks from today

	me, I would even tip toe when I go home but right now we have gone back to life as if it is normal but it is not normal but initially it was not easy. And your family when they hear you sneeze they say you have brought us Corona. I remember there is a time I had a cold and my husband had to migrate from the bed. I was unwell and he felt that this one is bringing Corona to our home. Right now we have moved to another level, the fear has reduced. [RM 3] Now it's normal. yeah, so there's nothing to it is the mean and nobody will hear them talking about Corona even mask they come when they are there so you tell the mother put on your mask. So, they are just putting here when they are in the hospital when they leave there, they remove it, and then go there on the way. So, the first time there was that fear, there was not that there was that reduction of these mothers coming who are coming back to the time to time to come and now its normal life has gone back to normal. We are no longer in pandemic it finished long ago here in Kilifi. [RM 8] "… when the strike was over now they had to come in numbers, in big numbers. In fact, we used to get big numbers. In fact, we were scared, now where are we going to put these mothers, it was crowded all over, even that social distancing that we were talking about, it was not applying but us we were just insisting them to put on masks and also we were trying as now they are there, they try as much as possible to social distance." [RM 2] "… So but as the time went by that panicking effect people tend to get used to the situation and also get used to the use of masks, the use of washing hands,	morning until you sleep with it, don't lie to me. You will just have to pull it down a little bit to get some fresh air so I can say there are no measures taken. [Mother 13] …I didn't think I will get the virus because when you go to any hospital before you enter, outside there at their reception you have to be tested for Corona…. If you have someone who has Corona, they can't be allowed to enter inside so for all that were allowed who are attended to at the hospital to they have passed there and have been tested for Corona and they were found to be negative and they were allowed to enter….Like the 1st one is getting tested, 2nd one when I entered inside there my mask was below my nose so I was told to wear the mask well so that means…and then there are doctors when they deal with a patient, they have won their gloves well. [Mother 17] Something like that I have not thought about. In my life I have not thought about that because I wear my mask and I believe God is everything. I wear my mask because it is a law that has been put and we have to adhere to it but I believe in God, I believe in God and I don't see the hospital that has many people there's Corona oooh I don't know what. I know anywhere someone can get Corona and not necessarily at the hospital or where because all those who die are not those who go to the hospital even at home they are found but I believe in God and not that kind of fear that has

	sanitizing, so they became aware. So until when you tell them to wash their hands, they know even there is no need of telling them to wash. Because they just know when you reach the gate you will just wash, when you are going for the services you are not supposed to do this. Initially they were not aware of that but now they are. So it is easier." [RM 1] There is nobody who doesn't fear COVID, everyone fears COVID but not as it was initially…. So it will reach a time that people will get used to COVID but we pray God that this COVID comes to an end but that is not ours it is God, whoever knows better is God, but still we have to go to our knees and have hope that one day COVID will be finished. And this one can be done in God's wish. There is nothing which cannot be done in the will of God. So it us to take our part." [RM 1] "… It's like the fear is now going. They are used to this situation [RM 6] you know with corona no one actually knows when it will end and people will continue living, the mothers will still be given the services, so according to the guidelines of WHO and Corona issues, so it is to adhere to those guidelines and they continue with the services the social distance, washing hands etc. you see now but they have to come to the facility. So COVID is here and it is not known when it will end. So there is no way you will say don't come because there is Corona, so long as they will adhere to those guidelines [RM 7] "… So now that people are living with COVID so people are getting used to it. It is there and it is not	made me delay to come here. I haven't thought anything about that. [Mother 18] When you enter you see the state of wearing a mask is very strict even me, I had been forced, I had covered my mouth only and I was told to pull up to my nose. It's a problem but that's how it is and I just pull it up even if I can't breathe because that is the law. These people care about us because what you are cautioned about is what can help you. If you are told to pull up your mask until the nose so that we start the discussion …you have to adhere to because that is what protects you. That is what protects you. That is something very important I have seen they care. [Mother 18] actually I am in school, I am interacting with so many people, if it is Corona I'm getting I would have gotten it so there is no need for me to fear coming here that I will contract corona. First of all, if you were told. If God had written you will get it, you will get it even if you do what so I was not afraid that I will get that, that I am afraid of coming here because I will get it. At school there are many people and they are interacting, if it is getting COVID I would have contracted it. [Mother 6] The hospital adheres to preventive measures [Mother 2] …There is some measure now, there is the Corona Pandemic we are protecting ourselves with masks but when you come we are attended

	as harmful as you could imagine. It is not like any other, not really like any other condition but it is something that can be avoided like other contagious diseases, so I think we had some knowledge which people are getting from other media and even other places they are coming to realize that we don't run away from it. You just have to take some precautions and we are good." [RM 10]	to well and you go back home as long as you protect yourself with a mask. [Mother 4] it is something we are used to already …. As long as, we wash our hands, wear mask [Mother 8]. People are no longer talking about Corona again….I do not see it being discussed a lot about Corona; it is not like earlier on [Mother 5]
	"… In our facility, the facility in charge is a psychologist. And in case of any problem the concerning mental health, we actually refer that person to her for counselling. But when it comes to mental, we always refer them to the psychologist who is the facility in charge."	

Appendix 14: Primary coding of the topics

INTRA: Belief about pregnancy as normal health (uneventful) (absence of illness, feels safe),

INTRA Experiences of previous pregnancies/Knowledge deficit on importance of antenatal services

INTRA: Appointment invitations for routine care or when unwell (urgent care need)

INTRA: Risk perception Illness/complication/ perception of **risk/self-assessment**

INTRA: History of comorbidities/Complication of pregnancy (loss)

INTRA: **Autonomy**/temporality/decision-making (societal norms)

INTRA: Concealing pregnancy/secrecy

INTRA: Women's education: Locus of control/literacy level/education level

INTRA: Availability of ANC card is complete and presented

INTER: Culture/gender norms (Social script for women) Busy work schedule/ child care responsibilities (multigravida)

INTER: Influence from family members/ Support from family members, TBA/grandmother advice

INTER: Information needs

INTER: Male involvement/patriarchal

INTER: Incivility/ disrespect/ rudeness (Communication with the midwives/satisfaction with care)

EXTRA: (cost / no cost to family) no payment for ANC (policy)

EXTRA: Transport and distance to the facility (Poor terrain/roads)

EXTRA: Health system issues including workload/staff shortage,

EXTRA: Delay in getting services/Waiting time/lack of services

Appendix15: Verbatim examples of primary coding

Intrapersonal Belief about pregnancy- I am not sick I have no problem	
Midwife	"… some say, I am not sick, I have no problem, my child is ok, and I am ok." [RM 01] ". the old multigravida mothers, ...normally come at around the second trimester or even third because they just say that I am used to be coming even the last trimester." RM2 "…. when she comes during delivery you ask why you didn't attend the visits, the baby was kicking well. I didn't have any problems. So, for her to come to the clinic, she must first have a problem... RM9 "…I have the experience …... I don't have any problem I don't feel I have any problem so why should I come early……They didn't have any issues…. and delivered well there was no complications delivered and went home……. And then here we have so many clients, why should I be coming here and queue for hours? And I feel I don't have any problem." [RM 8]
Mother	"…...there's no need to go. Even if I don't go to the clinic, I will still deliver the baby, so I will not go. It is not a must for me to deliver at the hospital and there's no problem." [Mother 19]
Researchers' inference	The belief of pregnancy as normal event meant that the women when well and no need to attend ANC. This a cultural phenomenon, supported by fatalistic attitudes.

Intrapersonal Risk perception about pregnancy -History of comorbidities/Complication of pregnancy (loss) (Midwife negotiating care plan	
Midwife	"…. we can say they are aware because they tend to even come before their attendance date …. who had bleeding and reduced foetal movements, also swelling because of the hypertension they came back." [RM6] "…mother has a pending Pre-eclampsia with headache, dizziness ……. they fear a lot ……when I go there, I can be taken for caesarean section I can …. she's aware that she has a problem …." RM4 "…...Yes, they feel because even a mother may come to a clinic for the antenatal the routine one, but because they perceive a certain risk. A mother might come and tell you my baby is not playing he is so quiet, or a mother may come complaining I feel a lot of dizziness, I am bleeding... I think they have that perception…" RM10

Mother	"… My current pregnancy now, so this one was a bit challenging too, because I was experiencing some drops of blood while I was still pregnant when it was like three months. So, it, it led me to start my ANC earlier." [Mother 13] "… I started in the first month of my pregnancy because I was not feeling good, I was feeling abdomen pains, which made me go to the hospital." Mother3 "…i fear delivery of the baby …...the fear I have because many people lose their lives there. Many pregnant women lose their lives when they are giving birth or maybe the babies and just have complications ……" RM15 "…. Yes, the pain began the day before yesterday, which meant I had to endure it for two days until my clinic appointment today. I did not want to come twice because it would be more expensive, so I had to wait two days to see the clinic…." [Mother1]
Researchers' inference	The knowledge on complications and danger signs were a reason for attendance since they perceived a particular risk. Pregnant women wait until they get a problem to seek help in the hospital. Expectation of risks appear to be low but this is in contradiction to wide spread knowledge within communities of women who had to die prior to delivery or in delivery (MM).

Interpersonal Information needs on frequency and timing of ANC for mothers, appointment. invitations for routine care or when unwell (urgent care need) [awareness of signs & symptoms of pregnancy]	
Midwife	"… Yeah, through heath education that we give them actually most of them they want to know more about these danger signs. Otherwise, if you don't know either the danger signs and maybe it occurs to you when you are at home, and you have nobody either to tell you about it you might even lose the baby. So, most of them actually they come to know that about the danger signs and how to prepare for themselves what we call the Individual Birth Plan (IBP), individual birth plan for them at least to be investigated on diseases like the syphilis, things like gonorrhoea, also the HB and blood groups so they actually come to know." [RM 05] "…We give nets to the first attendance, the first clinic…… now that for preventing malaria, we teach them on how to prevent malaria by sleeping under nets, clearing the bushes, and water, for effective control." [RM 06] "…we schedule them and give them appointment…RM3
Mother	"… If you feel dizzy or bleeding quickly come… we are usually educated …. when you feel your belly is paining and the day has not reached, you come, when you see blood come, when you are dizzy or have a headache, you come. They tell us [Mother 12]
Researchers' inference	The information also includes danger signs, birth preparedness and complication readiness, and when to report to hospital. There appears to be not awareness arise on the need for a family action plan should the mother encounter abnormal signs in pregnancy and need to access an urgent consultation / assessment with a midwife or obstetrician.

Intrapersonal Timing/frequency of antenatal clinic	
Midwife	"…what they normally say is that when they come early to the clinic, they will make so many trips. They will make so many trips, coming to and from to the clinic so it is just tiresome. So, they would rather start late like after 6 months,7 months at least they will come say for just 2 or 3 times and they are done with their ANC. So that coming back and forth they don't want." [RM 3] "… not all of them start at the same time but actually most of them start during the second trimester why, they say when you start your clinics early you will visit a facility so many visits." [RM 5] "… but they used not to come early because they used to say if you go early, you will go there for so many visits." [RM 1] "…but this time every mother is supposed to be seen monthly, so when you start early you have to come every month until you are due." [RM 3]
Mother	"… I just told myself that I will be going on my 6th month. Because I don't have any problems." [Mother 15] "… you start the clinic early, and us we think that when we start early you will go many times until you get tired." [Mother 11] "… I saw that I would get tired fast, every month I would come to the clinic so I said let me reach the 6th month I will be near to deliver." [Mother 14]
Researchers' inference	According to the midwives, some women initiated antenatal care visits at different trimesters with majority reporting in second trimester thus missing the prevention and treatment interventions. The women preferred coming late to reduce the number of times they visited the clinic and some mothers stated that they came towards the end since she had no problems.

Interpersonal Knowledge deficit on importance of antenatal services/late attendance/ previous pregnancy experiences	
Midwife	"… most of the mothers used to start the clinic late, ok, maybe in the second trimester, some in the third trimester because they used to not have the knowledge that it is important for them to start the clinic early [RM 1] "… It is because, the multi gravidas, tend to think they know already but with this ones, the primigravida, she doesn't know anything so she has not been given TTs, she has not been given anti-malarial, then she will say, you see I have been given those injections I have finished but for you have not been given, so if you stay home you are going to get tetanus with your child. Me I won't get so you had better go early, so they tend to see, they tend to come early compared to the multigravidas." [RM 01]

Mother	"...but others go at 8 months, 9 months when they want to deliver, that's when they go to the clinic. Let's say you go to the clinic at 8 or 9 months, but you will miss the vaccines. There is medication that you are given to help you on improving the blood, and during delivery the blood has to be the right amount, if you say that you are going to deliver on the 9th month it would be bad because you will not know if the blood is enough and also whether the baby positioned well. You won't know. You will just be carrying and there are many diseases that you will not know if you are okay or not hence you have to go to the hospital so that you are tested rather than carrying the pregnancy thinking you are okay." [Mother 19] "… No, I didn't know anything. I just knew that you can come then you are told, "you could have even started on the first day." I didn't know anything so me I was just coming to confirm. I didn't know anything, I just came to see what people are being done for at the clinic, you are treated or what is done to you."[Mother 06]
Researchers inference	The midwives perceived that there was evidence of ignorance from the multigravida who started clinic late since their previous pregnancy experiences may have been uneventful but would advise the primigravida who had no knowledge to attend ANC and receive the routine vaccines (Tetanus toxoid)
Intrapersonal Autonomy/temporality/decision making (societal norms)	
Midwife	"it's a personal push for one to attend the clinic."RM9 "… if she is empowered with the knowledge and she knows then she has information to challenge the husband." [RM 1] "…. some they do not have that adequate information when they need to start our ANC clinic" RM4
Mother	"…. Coming was a decision I made on my own." Mother1 "…it is my own decision..." Mother3 "…. I decide to walk to the hospital... because he is not the one with the problem you are." Mother8 "…...I would like to start going to the clinic next month…. you might not get the permission…...and your morale diminishes because you had planned earlier to go to the clinic on a specific day but now it is not like that. This will lead to delay." Mother18
Researchers' inference	The decision-making power may have been shared but for the women who were empowered and made own decisions it was easy for them to plan on seeking care. Lack of autonomy was evidenced by the need to seek permission from family.

Intrapersonal Mothers health literacy level, Women's education: Locus of control/literacy level/education level	
Midwife	"…illiteracy contributes a lot…. those who didn't attend school at all … don't have the knowledge, a mother stays just home, but she will not have that push or urge to come for ANC…...reason the baby was kicking well... didn't have any problems. So for her to come to the clinic, she must first have a problem but if everything is fine no attendance…" RM9 "… that part of knowledge plays a big part because the one who are very much educated they outfit (overlook) that of distance, they will try and get that money, they are educated they know the importance so she is aware about important so she's aware about ANC services so you find that way she will come [RM 4] "…It will depend with the family where she is coming from if they are well educated enough, they will also see the importance of coming to the clinic earlier but if they are not educated they will have to stay [RM 2] "... in fact, I would say that those ones who are educated most of the times, they understand, you know even when they see the information from the media they understand [RM 01] "… especially those who never attended school are the ones who usually come late to the clinic…it's because of illiteracy…if my level of education is low, then I don't understand the consequences of not attending clinic [RM 6]
Mother	".. Let me tell you the truth, I didn't go to school like that but from whatever I learnt, when I reached class 4, we were being taught that when someone is a mother, they get pregnant, they are needed to go for tests [Mother 19]
Researchers' inference	From the perspective of the midwives; being literate or illiterate was assumed to be a determinant to attendance. The paucity of data from the mothers on their literacy was attributable to the researchers understand that this was a sensitive issue to explore; women felt shame at not being able to read. The educated mothers understood the importance of early initiation of antenatal care compared to those with no education who would delay and come only when there was a problem or near the time of delivery.
Extra personal: Availability of ANC Mother and Child booklet	
Midwife	"… so, they will come early just to get those books and go to the maternity…. because when they go to maternity they have to be asked where you attended the clinic...I have my book I attended the clinic…they only fear to be chased away if you don't, if were not... if you didn't attend the ANC [RM 8] "…. we have the mother child booklet that is another attraction…... because they know it will be theirs and the baby they don't have to get something separate book for the baby their record is in one book…. what I know with our clients somebody can afford to attend the clinic but not the revisit as they are making the booklet as an identification for delivery… [RM 3]

Interpersonal Influence from family members	
Midwife	"…apart from that date the return date can be next month, but she experienced like a problem in between that time she is supposed to come so that's to evaluate what is the problem, but you find that the one to decide is mother-in-law...RM4" "...it is different; …. a mother who is single she is the decision maker…. so, if she decides to go to the clinic, she will just go……. But married one she is not the decision maker; somebody has to make the decision for her... RM1…."
Mother	"….my mother, my mother-in-law, my sisters-in-law. Everybody is involved…. they support me when, when I'm down, …you know pregnancies come with their moods, you can just make a phone call …They'll come and do what you need." [Mother 13] "… "We are four women married to one man, so when I am unsure about something, I always ask them if they have experienced it and can advise me on how to deal with it. It is something we always support each other". Mother4. "… in fact, he advised me to come to the clinic. He said that it is important to go to the clinic, but I say that will go. In the morning when he called, I said that I would go." [Mother 5] "…...I was waiting for my husband to give me money to start the clinic, so he is the one who hadn't given me" so they wait for the husband, they continue to wait as the pregnancy advances..." Mother3
Researchers' inference	Decision making is supported by husband and wider family. What can be viewed as support may also be viewed as controlling behaviour by family and husband.
	"…. because that ante natal book it has all the developmental milestones for the baby, the danger signs, the nutrition part of it, and the graph…the graph for weight, heights, so that they can also be able to identify whether the baby is doing well or deteriorating so it's very important book [RM 6]
Mother	"… I saw the book…I still see that it is the one you use until when you deliver it is that one, when you bring the baby to the clinic, the book is the same one [Mother 5] "… If you don't come for the clinic you will not be accepted. When you arrive here, you must present your clinic book they open it and look if you were coming because there are tests for testing HIV and what and what so if you don't come to the clinic for delivery, when you come here you are told to go back" [Mother 1] "… If you don't have a book then you should get a midwife who has a good heart." [Mother 19]
Researchers' inference	The ANC book card was valued and was a requirement for ANC attendance and when in labour for fear of reprimand if they do not present it. The book was an identification and an attraction to attend since it had learning materials for those who could read and same book was used for the baby vaccine

Interpersonal Male involvement/patriarchal (Societal gender norms) /Lack of male involvement

Midwife	"…We have male involvement; in this male involvement when she comes with her couple (the spouse) we give them first priority. You know you can't have a husband here with 20 women and you imagine that you will seat him here until her time reaches, he will feel that insecure, there is that insecurity a little, so the women are 20 and you are alone, so if we do that, they will want to come with their husbands so that male involvement encouraging them to come with the husbands also assists." [RM 7] "… The lack of that support from the family. Secondly, I can say even the spouse. They will, ok you know, if there was the issue of men involvement in it, I think if we empower the men, they will be in a position even to support their wives. But I don't see the male involvement being put into practice and being supported." [RM 02] "…. We give privileges for those who come with their husband we, first of all, we first serve their first serve because of that it's like there that supports also not that because maybe does but he is busy has tried all his best and come. We also encourage them to continue coming until delivery because the journey is a bit long so we encourage them." [RM 04] "… Most of them they just come without their husbands. If you ask them, they will tell you the husband is at work." [RM 01] "…. men make decisions, they are the super powers, they don't want to be corrected, if he says this will be done then it means that is the one that will be done…" [RM5]
Mother	"…I felt that it wasn't necessary because, he has to work, he has to get money. I have to eat, yes. So if we just roam around going to the clinic back and forth, when will he be looking for that money, so I didn't say that it was necessary, but what I was being told, I just came back straight and told him, "I have been told what should be done...he understands." [Mother 13] "…. It is not that easy for him to follow me here he will always come up with excuses, 'you just go, I'm busy I am doing something else." [Mother 15] "…. I haven't talked to him about it because I don't see the importance of him to sit because whatever I will be taught here is what I will explain to him. In any case if he will be asked to come in, I will tell him but I don't blame him I have not told him why we should go together. Maybe he can't refuse we come together but personally I have not told him." [Mother 18]
Researchers inference	A priority was given to women who came with their spouse to encourage men attending ANC. The reason for this phenomena, is that midwives understood that men were not patient and could not be kept waiting for long, they were said to be busy and stigma sitting with many women at the ANC.

Extra personal Cost or no cost to the family- Cost reduction [government insurance policy]– Linda mama	
Midwife	"…We have a Linda mama which is like the National Insurance fund (NHIF), catering for all women from pregnancy up to…...until 6 weeks post-delivery, so if its ANC profile stands for it, like for Free because the government is catering for it. Delivery whether its caesarean, or normal, SVD is also free. So, we can't say that the cost is hindering them from coming to the hospital." [RM 6] "… They just have the Linda Mama thing which takes care of everything, for them it is to just come…ANC is free, delivery is free everything is free… even those who deliver through CS it is free. So long as they have the Linda Mama it will take care of it." [RM 3] "...services are free because they have the Linda Mama, the Linda mama caters for everything for the ANC mother until she delivers, and the baby reaches 3 months." [RM 7] "…don't have the means of transport then you find their husbands are very harsh maybe, you may tell him I want to go to the hospital then he tells her there is no money." RM7
Mother	"… then where they stay may be far …eating is a problem; will she get fare for a motorbike for bringing her and taking her back? She will not have. Sometimes it might be a challenge for her to come to the clinic eventually she delivers at home." Mother2 "…...Poverty deters women from visiting the clinic because they cannot afford to pay transport…." Mother2 "…If had the money, I could have gone anywhere because hospitals are many and there's a private hospital near home." [Mother17]
Researchers' interpretation	The cost reduction strategy through the National insurance fund known as Linda Mama would cater for all the costs for the pregnant mothers until 6 weeks after delivery. However, this did not cover the indirect costs incurred by the women's family (husbands control family finances).

Interpersonal Secrecy and concealing pregnancy	
Midwife	"schoolgirls came late and we came to realise that even their parents didn't know that they were pregnant. maybe they were hiding …." RM6 ……they now hide the pregnancy until the mother notices there is something wrong... when they are asked they open up and say yes I am pregnant….RM2 …mother has not disclosed…RM7
Mother	"……so I decided to keep it a secret and let her realize when I am 5months or 4. At least with that, it would be a grown baby and she can't force me to do away with the pregnancy." Mother17

	"…. No, I have not talked to anybody else." Mother1 "…...I can't tell my mum; she will be very disappointed." Mother 6
Researchers' inference	Pregnancy secrecy was evident in that it delayed the antenatal attendance for fear of disclosure and can potentially lead to poor maternal and fatal outcomes.

Extra personal Health system issues /workload/staff shortage/ strike	
Midwife	"… some of these industrial actions like strike …they assume when we went on strike the health facility was closed. So, they will stay if we go on strike for 6 months whatever the months, they will stay and actually that is the challenge that we had when we came back, there were so many non-clinic attendances who came for delivery. You had gone on strike, so that one really affected negatively on the attendance for pregnant women because most of them never went for the ANC." [RM 3] "… Another thing is experience, the first experience, some of them maybe the workload and the number of staff, there is shortage of staff, and the workload is high, so somebody will come here and stay over 6 hours, so she won't come, because of that. She is needed someone and maybe she has other children who need her, she won't come because of that." [RM 01]
Mother	I went to a private, there were doctors who had gone on strike at that time…the doctors are not coming back and me I feel there is a problem that is disturbing me…When I was in my seventh month, it was when the doctors returned to work, I went to a dispensary for my clinic." [Mother 02] "… I struggled like that until it reached 6 months that is when I got that money, I went to the private and that's when I started my clinic…. it was on the 3rd month; the doctors had not yet reported to work. they were on strike." [Mother 4]
Researchers' inference	The staff shortages and workload due to lack of replacements of staff led to delay in service delivery. This increased the waiting time and the mothers were afraid to come and wait for long due to competing tasks.

Interpersonal Culture norms- Busy work schedule/childcare responsibilities (Social script for women's work)	
Midwife	"…they are taking care of their children. there is nobody to leave with their younger children with…...if you don't have somebody to leave with their children they will not come early …….one and a half years two years so carrying them and coming to the clinic… they have to have somebody to leave with the children" [RM8] "…. so somebody will come here and stay over 6 hours, so she won't come, because of that. She is needed someone and maybe she has other children who need her, she won't come because of that." [RM1]
Mother	"… The thing that has made me to come today, I wanted to come earlier on but I was busy at work .....it is not all that we get offs some where they work, maybe they rest on Sunday, on Sunday the clinic is not open, the clinic is Monday and mostly on Friday. Like today so someone like that you find them, you know some employers you have to ask them for permission so that they allow." [Mother 6]
Researchers' inference	The cultural roles for women to take care of other children and social script for women to find time to come to the clinic was a challenge. This could mean going against the norms for a patriarchal society when men are the head of the family

Interpersonal Delay in getting services-long waiting time	
Midwife	"… I want to be frank about the visits to the hospital, and the population is quite high (patients are many) so, the waiting time can be quite high, especially the first visit. The first visit because you have to attend the ANC profile and everything, so she will take quite some time, compared to the revisits the revisit is only about palpation…. But for the first visit is quite tiresome for them." [RM 9] "… so there can be delays, in terms of waiting time so maybe, they could be having such thoughts that if I go, I can be kept waiting so I better wait until such a time when I am almost giving birth." [RM 06]
Mother	"… Some usually say that the clinic is not important… because you delay your time, you come and get on the line, you wait for the doctor, you get late and the baby is okay." [Mother 14] "… it took a long time because I arrived at 7 a.m. and I finished at 1 PM [Mother 03]
Researchers' inference	The high number of patients per day also contributed to the delay and long waiting time and the pregnant women reported waiting in the que for long before being attended in each room.

Interpersonal Incivility/ disrespect/ rudeness	
Midwife	"when a mother goes to the clinic she is being mistreated the nurses are rude, so such complaints."RM2

	"that health workers are harsh so it takes them a lot of energy to come to the facility, so people will opt to come to when they are really in need otherwise most of them would disregard the coming to the facility." RM10 "……the client gets satisfactory in a different way so they go where she will be handled well though far away, so it is a problem for this mother to start ANC clinic nearby clinic ……. the mother is getting late." RM4
Mother	"…They tell us to maintain our cool, not to argue, and to let them do their job. As a result, you must endure the discomfort until they are finished….." [Mother 1] "… This our hospital, it is like a behaviour these sisters (midwives) are aggressive, what you will be told is to co-operate, 'mother you don't listen it is like this like this.' It is not that someone is not listening sometimes if you think like that you keep quiet because them they know more than you, 'will you compete with someone and they are the ones helping you? it will make you keep quiet'…. the belly is paining by bad luck if you vomit or bleed you are told, "woman you are dirtying, take the cloth and come and wipe." And then you wipe." [Mother 1] "…like midwives are violent, when you come, they waste your time and the baby is okay." [Mother 14] "… in fact in times of delivery others say they are insulted." [Mother 15]
Researchers' inference	The communication between the midwives and the women was not that of therapeutic relationship and made women not want to seek care. How the midwives respond to women in a disrespectful manner can cause fear and affect attendance.

Interpersonal Transport and distance to facility	
Midwife	"… so, if one does not have fare to come to the hospital, like a hundred shillings coming, hundred shilling going back to home, then it can be a hindrance……...sometimes it could be due to distance you know, like coming to the hospital, and maybe you are from a far distance." [RM 6] "… I've said about the transport being is the major challenge. Yeah, from their home to their facility, from the facility everything will be free, coming and back, that transport in between from the facility to their homes and from their home to their facility is a challenge…they find it difficult to walk. So, it is a challenge to them." [RM 5] "… there are some who come from far. So one says If I start the clinic early and I keep frequenting maybe the distance is 150 shillings, or 100 from your place to the facility you would rather wait." [RM 3] "… So the big issue is transport now that is why I didn't mention the other charges because Linda Mama is taking catering for that…. Transport is the most barrier…. So the cost of transport will be an issue." [RM 10]
Mother	"…. It takes me 2 to 3 hours to arrive at the clinic because it is quite very far and the road is not good..." Mother1

	"……I don't have money and the hospital is far and …because of financial status "……I have to travel long distances, which is exhausting and expensive…." Mother1 "….. other times you think reaching the hospital is far, so how will you reach there? and as you know about pregnancy, there is getting tired." [Mother 18] "… from Monday to Friday that is when I was bleeding so I went on Friday to the hospital because I did not even have strength, I did not have fare because it is far I waited for my husband to send me money I went to the hospital." [Mother10] "… There others that are overburdened that can't walk, you hear and then at home there is no 50 shillings to get a motorbike, you see, there she cannot come to the clinic and say that she will come to the clinic the following week, if I can I will go so that can miss.… you don't have money for the motorbike. For some, coming this way, it can cost me fare, the fare is 400 or 500 shillings when coming here." [Mother 4]
Researchers Inference	Disturbances to life's routines became stressors. Travel time, transport cost and long waiting time acted as a barrier to utilization of antenatal care even when maternal health services were free. The factor that prevented access was distance to facility and transport costs as those who were impoverished were not able to afford.

Extra personal: Consequences/Impact of COVID-19	
Midwife	"… When COVID-19 came there was drop of attendance just went to almost zero. I think it's our fear also the health workers and the fear. I mean you cannot afford not to be close to this mother. Because during palpation during physical examination, also us we also we had that fear to attend but we had to, but the goodness is that the mothers were not coming also for that time that was our advantage." [RM 8] "… It has been low especially last year, for now this year it has improved not compared to last year, during those months of March, April, May, June, July, the attendance was low. Sometimes we can attend even over, the revisits we can get even over 600, and for new clients we can get even around 300. But it went up to 100 or even some months less than 100. So, it affected." [RM 1] "… some women would come late, and others they would not come completely." [RM 10] "… the turnout has been very poor especially that first quarter of the COVID, it was very poor because that fear of COVID, because people were saying there is Corona let me stay at home. So, you find out the turnout was low, we used to get very few ANC mothers." [RM 7] "… We have gone back to normal, and the normalcy has come back, even these masks we are using them but social distance I think, it is neither here or there." [RM 3]
Mother	"I watch on television and if Corona has increased, they say that…the way it is increasing, if it is that progressing, we are explained to, we listen to the news we are told that Corona has increased … at that time there was Corona no clinic and when we came they were not doing the clinic." [Mother 4]

	"… I thought of generally… this hospital is very congested; it has many people so being contracted with this virus is very easy unlike private hospitals." Mother13 "… I am even used to, initially I was fearful but now I am used to." [Mother1]
Researchers' inference	The anxiety concerning the pandemic of COVID-19 during the study would mean mothers stayed at home and was afraid of infection. The numbers of mothers attending the ANC was low, but the normality was setting in though the measures for prevention was maintained apart from the social distancing due to the fact that the infrastructure remained the same and midwives also would palpate the pregnant mothers at close range for lack of another way for assessment

Appendix 16: Map of Kenya

Appendix 17: Map of Kenya showing Kilifi County