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Evaluating the level of adherence to safe motherhood practices among women receiving antenatal care at Mtendere clinic.

Name: Kabwela Mildred

Student ID: BMBCHB22114955

Name of supervisor: Mr Joseph Musona

A dissertation submitted in partial fulfilment of the requirements for the award of the Degree of Bachelor of Science in Medical Sciences at the University of Lusaka.

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DECLARATION

I, Kabwela Mildred, hereby declare that the research presented herein is my original work, conceived and executed by me unless otherwise acknowledged. All contributions, interpretations and conclusions drawn are the result of my independent inquiry, supported by appropriate citations where external sources have been referenced. This work has not been submitted elsewhere for any other degree or qualification.

Author's Signature

Kabwela Mildred

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ABSTRACT

Introduction: This study aimed at evaluating the level of adherence to safe motherhood practices among women attending antenatal care at Mtendere Clinic. By exploring factors that influence adherence, including knowledge, socioeconomic status, and access to healthcare services, this research wished to identify gaps in current practices and suggest interventions to enhance maternal and neonatal health outcomes.

General objective: Evaluating the level of adherence to safe motherhood practices among women receiving antenatal care at Mtendere clinic**.**

Methodology: This study employed a cross section descriptive design for the assessment of the level of adherence to safe motherhood practices among women attending antenatal care at a specific point in time and the study will rely on the qualitative more than quantitative aspect to collect and analyze data.

Conclusion: The study found that while awareness of safe motherhood practices was relatively high, actual adherence is limited and inconsistent. Key barriers to adherence include long waiting times, financial challenges, cultural beliefs, and inadequate family or spousal support. The findings emphasize the need for a multifaceted approach to improve adherence, one that combines health education, healthcare system strengthening, social support mechanisms, and culturally sensitive practices to improve maternal and neonatal health outcomes.

Key words: Safe Motherhood, Adherence, Antenatal Care, Maternal Mortality, Perceived Susceptibility and Severity, Perceived Benefits and Barriers.

ABBREVIATIONS

ANC – Antenatal Care

WHO – World Health Organisation

HBM – health Belief Model

SPSS – Statistical Package for Social Sciences

CHAPTER ONE: INTRODUCTION AND BACKGROUND

1.1 Introduction

Safe motherhood practices, including proper antenatal care (ANC), skilled birth attendance, and postnatal care, are essential for ensuring the health of mothers and new born. These practices are particularly critical in low-income countries where maternal mortality rates are significantly high (World Health Organization, 2020). In Zambia, the government has made efforts to improve maternal health through various initiatives, yet adherence to safe motherhood guidelines remains inconsistent, particularly in urban clinics such as Mtendere Clinic in Lusaka (Chibuye et al., 2021). Understanding the level of adherence to these practices is crucial for identifying gaps and designing interventions to reduce maternal and neonatal mortality.

1.2 Background

Maternal mortality remains a significant public health challenge worldwide, with sub-Saharan Africa accounting for approximately two-thirds of maternal deaths globally (WHO, 2019). In Zambia, the maternal mortality ratio stands at 278 per 100,000 live births, largely due to inadequate access to quality healthcare services and low adherence to safe motherhood practices (Ministry of Health, Zambia, 2022). Safe motherhood initiatives, which emphasize the importance of ANC, delivery in health facilities, and postpartum care, are integral in reducing these rates.

Mtendere Clinic is one of Lusaka's key healthcare facilities providing antenatal and maternal care services. Despite the availability of ANC services, reports indicate that many pregnant women do not fully adhere to the recommended guidelines, which includes attending a minimum of four ANC visits, receiving tetanus toxoid vaccination, and adhering to prescribed iron supplements (Moyo et al., 2020). This non-adherence could contribute to preventable complications during pregnancy and childbirth.

1.3 Problem Statement

Despite the implementation of safe motherhood programs in Zambia, adherence to antenatal care practices among pregnant women remains suboptimal, especially in urban healthcare settings like Mtendere Clinic. Non-adherence to these practices increases the risk of complications such as preeclampsia, haemorrhage, and infections, which are leading causes of

maternal and neonatal mortality (Smith et al., 2021). Addressing this issue requires an in-depth understanding of the factors influencing adherence to safe motherhood practices.

1.4 Research Objectives

1.4.1 Main Research Objective

To evaluate the level of adherence to safe motherhood practices among women receiving antenatal care at Mtendere Clinic.

1.4.2 Specific research Objectives

i. To assess the level of knowledge regarding safe motherhood practices among women attending ANC at Mtendere Clinic.
ii. To identify factors that influence adherence to safe motherhood practices.
iii. To evaluate the association between adherence to ANC guidelines and maternal health outcomes.

1.5 Main Research Question

What was the level of adherence to safe motherhood practices among women attending antenatal care at Mtendere Clinic?

1.5.1 Specific Research Questions

i. What was the level of knowledge among women regarding safe motherhood practices?
ii. What factors influenced the adherence to ANC guidelines?
iii. How did adherence to safe motherhood practices affect maternal and neonatal outcomes?

Hypothesis

Null Hypothesis (H0): There was no significant difference in the level of adherence to safe motherhood practices among women receiving antenatal care at Mtendere clinic.

Alternative Hypothesis (H1): There was a significant difference in the level of adherence to safe motherhood practices among women receiving antenatal care at Mtendere clinic.

1.6 Significance of the Research

This study provided insights into the current adherence levels to safe motherhood practices in a key urban clinic setting. The findings are valuable for policymakers, healthcare providers, and public health advocates to design targeted interventions that improve ANC adherence, thereby reducing maternal and neonatal mortality rates in Zambia. Additionally, it can contribute to the body of knowledge on safe motherhood practices in sub-Saharan Africa, which may be used as a reference for similar settings.

1.7 Scope of the Research

This research focused on women receiving antenatal care at Mtendere Clinic in Lusaka, Zambia. It assessed the knowledge, attitudes, and factors influencing their adherence to safe motherhood practices. The study included women who are currently pregnant or have recently given birth within the past year.

1.8 Definition of Key Terms

Safe Motherhood: A set of practices aimed at ensuring the health and well-being of women during pregnancy, childbirth, and the postpartum period.

Adherence: The extent to which individuals follow medical advice and prescribed healthcare practices.

Antenatal Care (ANC): Healthcare services provided to pregnant women to ensure a safe pregnancy and delivery.

Maternal Mortality: Deaths of women due to pregnancy-related complications.

Perceived Susceptibility and Severity: Women are more likely to seek ANC services if they perceive a high risk of complications during pregnancy or childbirth.

Perceived Benefits and Barriers: Access to information, socioeconomic status, and the availability of healthcare services can either promote or hinder adherence.

1.9 Summary

This chapter presented the key definitions of terms used in the topic and introduced the ideas behind it. Within this chapter is a background of the topic as well as a discussion on the problem statement that paved a way towards the research's objectives and research questions. Lastly

this chapter presented the justification of the study. The next chapter looks at a meticulous analysation of the existing literature relevant to the study.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

Safe motherhood practices, which include comprehensive antenatal care (ANC), skilled delivery, and postnatal services, are essential in reducing maternal and neonatal morbidity and mortality. However, adherence to these practices varies significantly due to factors such as knowledge, socioeconomic status, cultural beliefs, and healthcare access. This chapter reviews existing literature to contextualize the importance of adherence to safe motherhood practices. It includes a theoretical framework, an empirical review of global, regional, and local studies, a gap analysis, and a conceptual framework guiding this research.

2.2 Theoretical review

The study is guided by the Health Belief Model (HBM), which posits that individual health behaviour is influenced by personal beliefs about health conditions and perceptions of the benefits of preventive actions. According to HBM, the likelihood of a pregnant woman adhering to safe motherhood practices is influenced by her perceived susceptibility to complications, perceived severity of maternal health risks, perceived benefits of antenatal and postnatal care, and perceived barriers to accessing these services (Rosenstock,2010).

Using the HBM provides a framework for understanding why women may or may not adhere to recommended safe motherhood practices despite their availability.

2.3 Empirical Review

2.3.1 Global Studies

Globally, adherence to safe motherhood practices remains a critical challenge, particularly in low- and middle-income countries. The World Health Organization (2021) highlights that less than 65% of women worldwide receive the recommended four antenatal visits during pregnancy. A study in India found that low educational attainment, lack of awareness, and financial barriers significantly affected adherence to ANC services, leading to poor maternal and neonatal outcomes (Patel & Kumar., 2020).

A study in Latin America found that traditional beliefs about pregnancy often delay women from seeking ANC services until the third trimester, significantly harming maternal health

outcomes (Gomez et al., 2019). This underscores the critical need for culturally tailored interventions to emphasize the importance of early ANC visits.

In high-income countries like the United States, disparities also exist, particularly among minority and low-income populations. Research by Smith et al. (2021) found that despite the availability of services, African American and Hispanic women have lower adherence rates to safe motherhood practices due to systemic barriers such as healthcare access and implicit bias within the healthcare system.

2.3.2 Regional Studies (Sub-Saharan Africa)

In sub-Saharan Africa, adherence to safe motherhood practices remains a significant concern due to economic, social, and healthcare system challenges. Studies conducted in Nigeria show that only 50% of pregnant women attend the recommended four ANC visits, mainly due to financial constraints, lack of awareness, and long distances to healthcare facilities (Ogundipe et al., 2018).

Similarly, in Kenya, Mugo et al., (2020) identified that limited access to healthcare infrastructure and low levels of health literacy among rural women were significant barriers to adherence. The study recommended targeted community outreach and health education to improve adherence rates.

A study in Tanzania found that male involvement in antenatal care significantly improved women's adherence to safe motherhood practices. Engaging male partners in educational sessions increased the likelihood of women attending all recommended ANC visits (Njau et al., 2019).

2.3.3 Locally

In Zambia, promoting adherence to safe motherhood practices has been a key focus of recent public health initiatives. However, the Ministry of Health (2022) reports that only 58% of pregnant women in Lusaka complete the recommended four or more ANC visits, despite the availability of services. A study by Chibuye et al. (2021) at the University Teaching Hospital identified inadequate knowledge about ANC's importance and long waiting times as major factors discouraging women from attending appointments regularly.

At Mtendere Clinic, specific barriers to adherence have been highlighted in research. Moyo et al. (2020) found that women frequently cited financial constraints, cultural beliefs, and a lack of family support as key reasons for non-compliance with safe motherhood practices. A survey of 150 women at the clinic revealed that only 40% adhered to the full schedule of ANC visits recommended by the Ministry of Health (Moyo et al., 2020).

2.4 Gap Analysis

While extensive research has been conducted globally and regionally on the determinants of adherence to safe motherhood practices, there is limited localized evidence from urban clinics in Zambia. Most studies have focused on rural populations, leaving a gap in understanding the unique challenges faced in urban settings like Mtendere Clinic. Addressing this gap will provide tailored recommendations to improve maternal health outcomes in Lusaka.

2.5 Conceptual Framework

2.5.1 Overview

The conceptual framework for this study integrates various independent variables, mediating and moderating factors, and their influence on the dependent variable, adherence to safe motherhood practices. Each independent variable, namely individual factors, healthcare system factors and social and cultural factors, plays a distinct role in shaping women's behaviours and decisions regarding maternal healthcare. These factors, mediated by barriers and perceptions, collectively determine the extent to which women comply with safe motherhood practices, ultimately influencing maternal and neonatal outcomes.

Below are explanations of the relationships between the variables:

Individual factors, particularly knowledge and awareness, are central to adherence. Women who are well-informed about the importance of safe motherhood practices, such as attending antenatal care (ANC) visits, opting for skilled delivery and following postnatal care guidelines, are more likely to comply with these practices. Knowledge empowers women to recognize the benefits of regular ANC visits and preventive measures, which is expected to positively influence adherence levels (Smith et al., 2021). Similarly, perceived susceptibility and severity play a motivational role. When women perceive themselves or their unborn child to be at risk of complications or when they understand the severity of potential adverse outcomes, they are more likely to prioritize adherence. These perceptions encourage proactive health-seeking

behaviours and adherence to maternal health guidelines (Rosenstock, 2010). Thus, individual factors create the foundation for informed decision-making and risk evaluation, which are critical for safe motherhood practices.

The healthcare system itself significantly influences adherence to safe motherhood practices. Access to healthcare services including proximity to facilities, quality of care and reasonable waiting times all determine whether women can engage with the maternal healthcare system. Limited access, especially in urban areas like Lusaka often discourages women from attending ANC appointments regularly (Ogundipe et al., 2018). Additionally, healthcare provider support is highly important. Women who experience compassionate, respectful and supportive communication from healthcare providers are more likely to trust the system and adhere to maternal health recommendations. Effective communication not only provides essential health information but also reinforces a woman's confidence in her care (Moyo et al., 2020). Healthcare system factors, therefore, act as both enablers and barriers, depending on the quality and accessibility of the services provided.

Social and cultural factors further shape adherence by influencing women's decision-making processes. Support systems, particularly the involvement of family members such as spouses, play a pivotal role in promoting adherence. When families encourage and support women in attending ANC visits and complying with healthcare guidelines, adherence rates are significantly improved (Njau et al., 2019). On the other hand, cultural beliefs and practices can either facilitate or hinder adherence. Traditional beliefs regarding pregnancy and childbirth may discourage women from seeking formal healthcare, favouring alternative or delayed care instead. For example, some cultural norms may view pregnancy as a natural process requiring minimal medical intervention, thereby reducing ANC attendance (Mugo et al., 2020). Understanding and addressing these cultural nuances are critical for designing interventions that promote adherence to safe motherhood practices.

The relationship between these independent variables and adherence is further mediated and moderated by barriers to healthcare access and health beliefs. Financial constraints, transportation challenges and long clinic wait times often reduce women's ability to access maternal healthcare services even when knowledge and awareness are high. Similarly, the perceived balance between benefits and barriers influences adherence decisions. Women are more likely to comply when they perceive the benefits of attending ANC visits, such as

preventing complications, to outweigh the barriers, such as time or costs. Health beliefs, particularly regarding pregnancy risks and the effectiveness of ANC practices, also moderate this relationship. Strong positive beliefs reinforce adherence, while negative or sceptical beliefs may undermine it.

The dependent variable, adherence to safe motherhood practices, encompasses critical behaviours such as completing the recommended number of ANC visits, receiving tetanus toxoid vaccinations, following prescribed iron and folic acid supplementation, and opting for skilled delivery and postnatal care. These practices are essential for improving maternal and neonatal health outcomes. The extent to which women adhere to these recommended practices is influenced by the interplay of individual, socioeconomic, healthcare system, and social factors, mediated by barriers and perceptions.

The independent variables collectively shape adherence to safe motherhood practices by influencing a woman's access to information, ability to navigate barriers, and motivation to act on maternal health recommendations. For instance, a woman with high education (socioeconomic factor), strong social support (social factor), and a positive relationship with healthcare providers (healthcare system factor) is more likely to overcome financial and cultural barriers and adhere to safe motherhood practices. Similarly, knowledge and perceived severity of risks (individual factors) can drive adherence, even in the presence of moderate barriers. This interconnected relationship underscores the need for a comprehensive approach that addresses all these factors simultaneously to improve adherence levels.

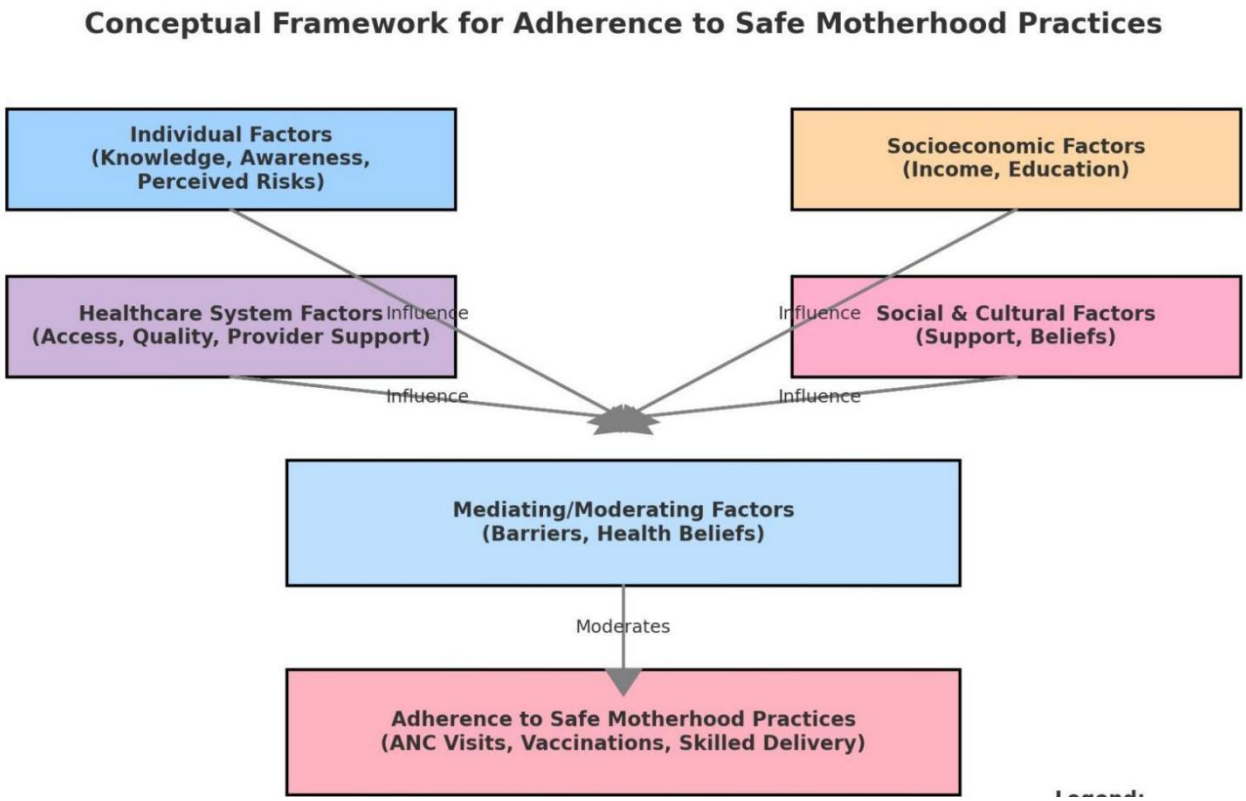

Figure 2.1 Conceptual framework

2.6 Summary

The independent variables when considered individually and collectively, play a critical role in determining adherence to safe motherhood practices. Addressing these variables through targeted interventions, while accounting for mediating and moderating factors, can significantly improve maternal health outcomes in contexts like Mtendere Clinic. This framework provides a robust foundation for understanding the factors influencing adherence and designing effective strategies to enhance it.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

This chapter presents the research methodology that was used to assess adherence to safe motherhood practices among women attending antenatal care (ANC) at Mtendere Clinic. It includes the study design, research approach, study site, data collection methods, sampling procedures, and ethical considerations.

3.2 Research Design

A descriptive cross-sectional design was utilized in this study. This design allows for the collection of data at a specific point in time, capturing the current level of adherence to safe motherhood practices and the associated factors among women attending antenatal care (ANC) at Mtendere Clinic. This design is appropriate for identifying prevalence and examining relationships between variables.

3.2.1 Research Approach

This study adopted a mixed-methods approach, integrating both quantitative and qualitative methods. The quantitative component provides measurable data to assess the level of adherence to safe motherhood practices, while the qualitative component explores the contextual and subjective factors influencing adherence. Combining these approaches ensures a comprehensive understanding of the research problem.

3.3 Research Context

The research was conducted at Mtendere Clinic, located in Lusaka, Zambia. Mtendere Clinic serves as a primary healthcare provider for a diverse population, offering maternal health services, including antenatal and postnatal care. It was selected due to its accessibility and its role as a key urban health facility with reports of varying adherence to safe motherhood practices.

3.4 Study Population

The study population comprised all women who are currently pregnant or have given birth in the last six months and are receiving antenatal or postnatal care at Mtendere Clinic. These women represent a group directly affected by the outcomes of adherence to safe motherhood practices.

3.5. Target Population

The target population included women attending ANC or postnatal care services at Mtendere Clinic during the data collection period. This population is selected because they provide first hand insights into adherence levels and the factors influencing their compliance with safe motherhood guidelines.

3.5.1 Exclusive Criteria

Women who have attended less than one antenatal visit wer be excluded, as they were not sufficiently experienced to assess adherence. Women who were unable to provide informed consent due to cognitive impairments or language barriers will also be excluded.

3.5.2 Inclusive Criteria

Pregnant women and mothers who were receiving or have received antenatal care at Mtendere Clinic within the past six months. Women who provided informed consent to participate in the study.

3.6 Sample Size

A sample size of 150 women was determined using the Yamane's formula for sample size calculation in cross-sectional studies. It is represented by the formula;

$$n = \frac{N}{1 + N(e)\text{^}2}$$

Where:

i. n is the required sample size.
ii. N is the size of the target population.
iii. e is the acceptable margin of error

The estimated population of women at Mtendere clinic was about 240. Therefore, using a

desired margin of error of e = 5% = 0.05

$$n = \frac{240}{1+240(0.05)^2}$$

$$n = 150$$

3.7 Sampling Techniques

A simple random sampling technique was employed to select participants. This technique ensures that every eligible woman attending Mtendere Clinic during the data collection period has an equal chance of being included in the study. Random sampling minimizes selection bias and enhances the generalizability of the findings.

3.8 Data Collection Methods

Data collection involves both primary and secondary methods:

i. Primary Data: Data was collected through structured questionnaires and semi-structured interviews. The questionnaires capture quantitative data on adherence levels and associated factors, while the interviews provide qualitative insights into participants' experiences and perceptions.
ii. Secondary Data: Patient records and clinic reports were reviewed to validate self-reported data and gather additional information on adherence trends at Mtendere Clinic.

3.8.1 Research Instruments

i. Structured Questionnaire: The questionnaire included closed-ended questions to collect demographic data, adherence levels (e.g., number of ANC visits), and perceived barriers to adherence.
ii. Semi-Structured Interview Guide: This instrument was used for qualitative data collection, exploring participants' personal experiences, cultural beliefs, and challenges affecting adherence.
iii. Secondary Data Checklist: A checklist was used to extract relevant information from clinic records, such as the number of ANC visits completed and vaccination records.

3.9 Data Analysis Plan

Data was analysed using both quantitative and qualitative methods:

Quantitative Data Analysis: Data from the structured questionnaires will be entered into the Statistical Package for the Social Sciences (SPSS) for analysis. Descriptive statistics, such as frequencies and percentages, will summarize adherence levels, while inferential statistics (e.g., Chi-square tests and logistic regression) was used to identify associations between independent variables (e.g., knowledge, income level) and adherence to safe motherhood practices.

Qualitative Data Analysis: Data from the semi-structured interviews was analysed using thematic analysis. Transcripts was coded to identify recurring themes, such as barriers and motivators for adherence. This approach provides deeper insights into the contextual factors influencing adherence. By combining these methods, the analysis will generate both numerical trends and nuanced explanations, ensuring a robust interpretation of the findings.

3.10 Ethical Considerations

Ethical Approval: Approval was obtained from the University of Lusaka ethics committee and Zambia National Health Research Ethics Board before data collection begins. Participants were provided with detailed information about the study's purpose, procedures, and potential risks. Written consent was obtained before participation. All data was anonymised, and identifiable information was excluded from the final report. Digital data was securely stored, and only authorized personnel had access. Participants were informed of their right to withdraw from the study at any time without consequences to their healthcare.

3.11 Summary

This chapter provided a meticulous layout of the methodological approach the study employed. The outline of the research methodology looked at the research design, study site, study population and sample size. This chapter further gives an insight on the data analysis procedures and ethical considerations the study used.

CHAPTER FOUR: RESULTS

4.1 Overview

This chapter presents the findings of the of the study. The study primarily aimed at evaluating the level of adherence to safe motherhood practices among women receiving antenatal care at Mtendere clinic. The data was collected from 126 respondents and the findings are presented using descriptive statistics in the form of frequency tables, percentages and simple graphical representations.

4.2 Demographic characteristics

Table 4.1 presents the age of the respondents. The majority of the respondents were within the age range of 30 – 34 years.

Age		
Category	count	percentage %
15 - 19 years	21	16.66667
20 - 24 years	12	9.52381
25 - 29 years	22	17.46032
30 - 34 years	66	52.38095
35 years and above	5	3.968254
Total	126	100

Table 4.1 Age

Figure 4.1 depicts the marital statuses of the participants.

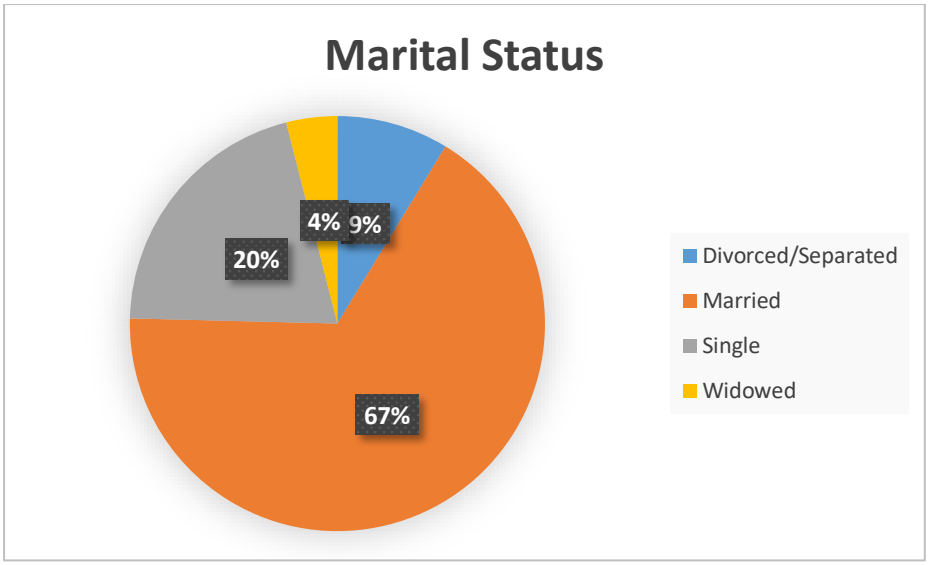

Figure 4.1 marital status

Table 4.2 presents the education level among the respondents.

Education level		
category	count	percentage %
No formal education	34	26.98413
Primary education	15	11.90476
Secondary education	56	44.44444
Tertiary education	21	16.66667
Total	126	100

Table 4.2 Education level

Figure 4.2 presents the employment statuses of the respondents. A majority of the respondents were unemployed.

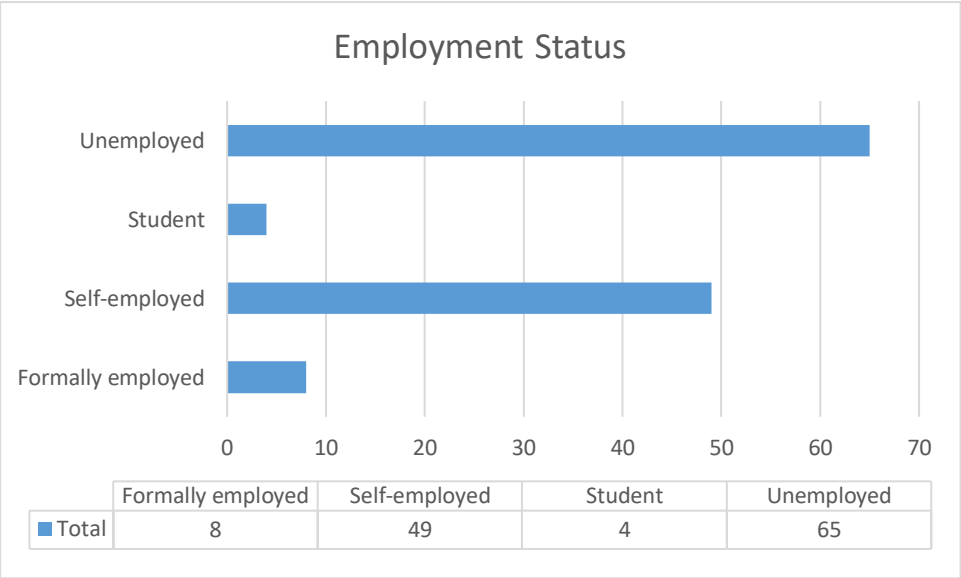

Figure 4.2 Employment Status

Figure 4.3 presents the monthly income of the respondents.

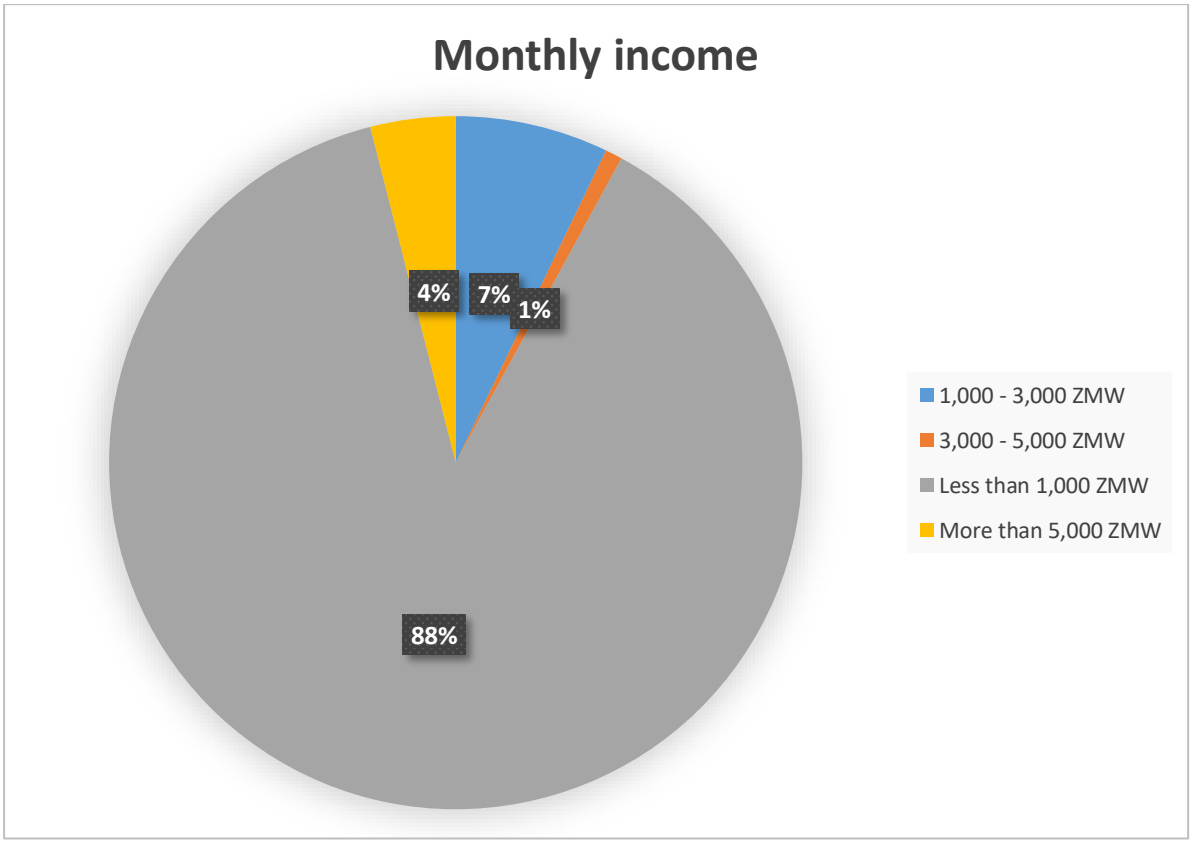

Figure 4.3 Monthly income

4.3 Level of knowledge regarding Safe Motherhood practices

Table 4.3 presents the awareness of safe motherhood practices.

Heard about Safe Motherhood Practices		
Category	count	Percentage %
No	13	10.31746
Yes	113	89.68254
Total	126	100

Table 4.3 Heard about Safe Motherhood Practices

Table 4.4 presents the sources of information from which participants obtained knowledge on ANC.

Source of Information		
Category	count	Percentage %
Community health worker	30	23.80952
Family/friends	30	23.80952
Health facility	53	42.06349
Not heard of it before	13	10.31746
Total	126	100

Table 4.4 Source of Information

Table 4.5 presents the participants knowledge on how many recommended ANC visits they must have.

Recommended ANC Visits		
Category	count	Percentage %
1-2 visits	16	12.69841

3 visits	19	15.07937
4 or more visits	74	58.73016
I don't know	17	13.49206
Total	126	100

Table 4.5 Recommended ANC Visits

Figure 4.4 shows the perception of benefits of attending ANC according to the participants.

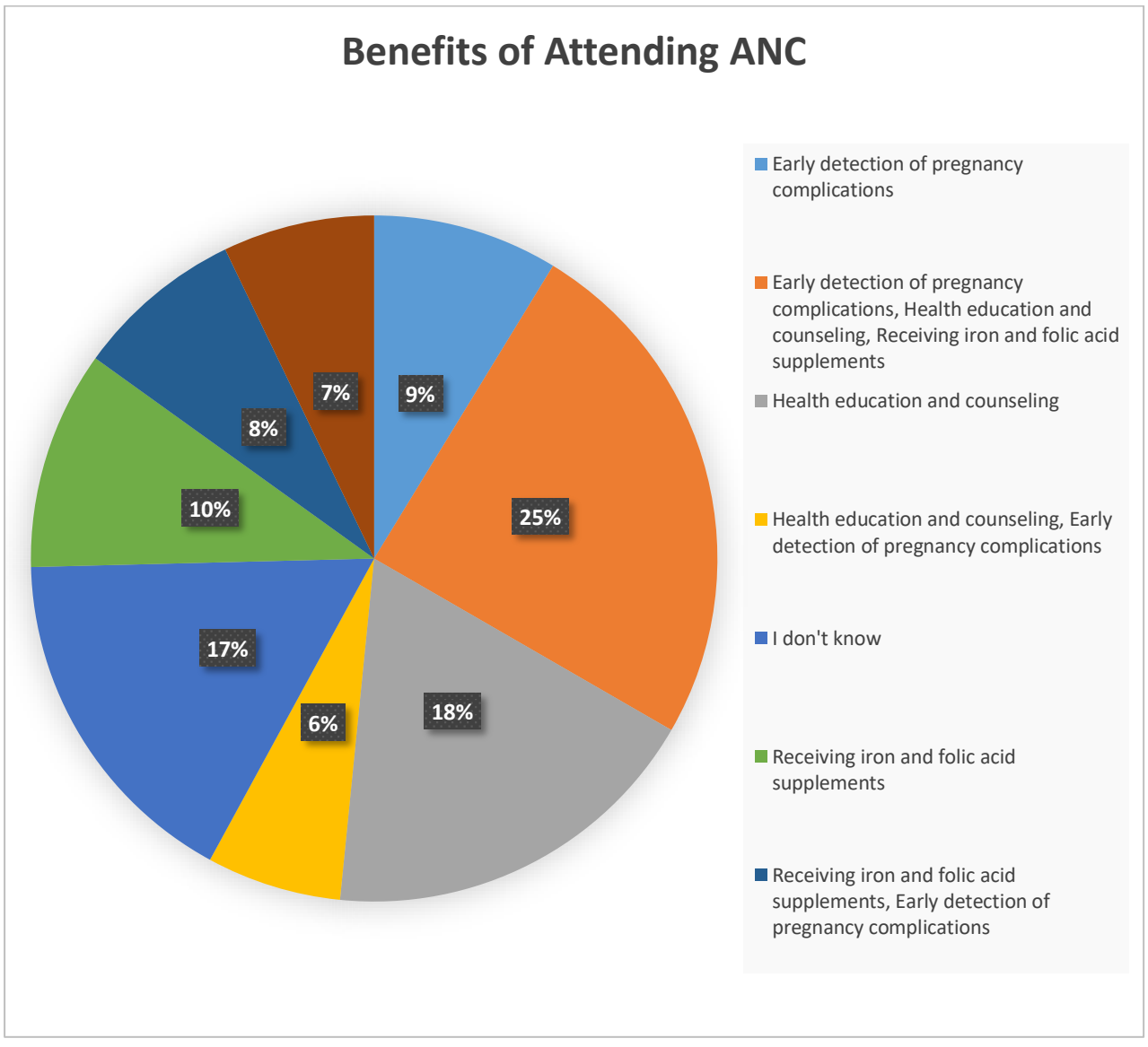

Figure 4.4 Benefits of Attending ANC

4.4 factors that influence adherence to safe motherhood practices

Figure 4.5 presents the challenges that prevent ANC attendance faced by the respondents.

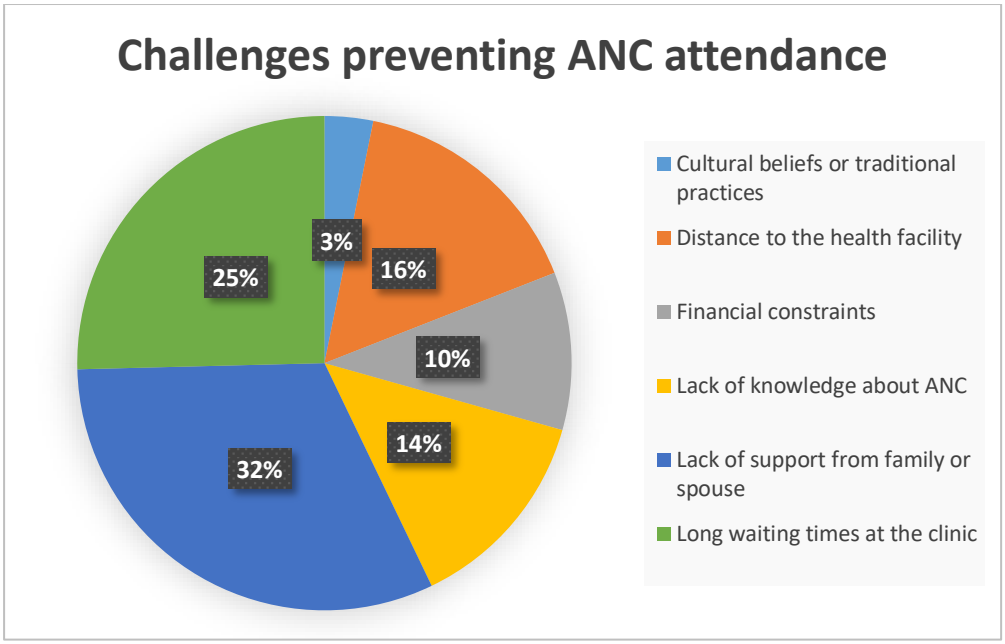

Figure 4.5 Challenges preventing ANC attendance

4.5 Adherence to ANC guidelines and maternal health outcomes

Table 4.6 to Table 4.10 present the findings to adherence to ANC guidelines and maternal health outcomes.

ANC Visits Attended		
Category	count	Percentage %
1-2 visits	57	45.2381
3 visits	7	5.555556
4 or more visits	62	49.20635
Total	126	100

Table 4.6 ANC Visits Attended

Figure 4.6 shows the distribution of mothers based on the frequency of antenatal care visits.

Received Tetanus Vaccination		
Category	count	Percentage %
No	58	46.03175
Yes	68	53.96825
Total	126	100

Table 4.7 Received Tetanus Vaccinations

Figure 4.7 summarizes the percentages of mothers who received tetanus vaccinations during pregnancy.

Took Iron and Folic Acid Supplements		
Category	count	Percentage %
No	8	6.349206
Yes, but not regularly	83	65.87302
Yes, regularly	35	27.77778
Total	126	100

Table 4.8 Took Iron and Folic Acid Supplements

Figure 4.8 illustrates the proportion of births attended by skilled personnel in health facilities.

Gave Birth in Health Facility with skilled birth attendance		
Category	count	Percentage %
No	78	61.90476

Yes	48	38.09524
Total	126	100

Table 4.10 Attended Postnatal Care

Figure 4.10 indicates the percentage of mothers who received postnatal care after delivery.

Attended Postnatal Care		
Category	count	Percentage %
No	79	62.69841
Yes	47	37.30159
Total	126	100

CHAPTER FIVE: DISCUSSION

5.1 Overview

This chapter presents a comprehensive discussion of the findings in relation to the study objectives on assessing the level of adherence to safe motherhood practices among women receiving antenatal care at Mtendere Clinic. The chapter further connects the results with literature reviewed in Chapter Two to offer deeper insights into the dynamics influencing adherence to safe motherhood practices among women attending antenatal care (ANC) at Mtendere Clinic.

5.1 Knowledge Regarding Safe Motherhood Practices

The results indicate that a majority (89.7%) of the participants were aware of safe motherhood practices, and 58.7% correctly identified the recommended number of ANC visits as four or more. This suggests that knowledge about safe motherhood practices is relatively widespread among women attending Mtendere Clinic. These findings align with the Health Belief Model, which suggests that increased knowledge and perceived benefits can motivate health-promoting behaviors.

Despite high awareness levels, gaps remain in translating knowledge into consistent behavior. Only 49.2% of respondents attended the recommended four or more ANC visits. This reflects a discrepancy between awareness and action, possibly due to other influencing factors such as socioeconomic constraints or health system challenges. Similar trends were noted in a study conducted in India by Patel and Kumar (Patel and Kumar, 2020), where despite knowledge of safe motherhood practices, financial limitations and limited access to quality services affected adherence. The main source of information reported by participants was health facilities (42.1%), followed by community health workers and family/friends. This underscores the role of frontline health providers in disseminating maternal health information. However, it also highlights the need to strengthen and diversify communication channels to ensure broader and more consistent health education, especially among women with low or no formal education (26.9% in this study).

5.2 Factors Influencing Adherence to Safe Motherhood Practices

The study found several significant barriers affecting women’s adherence to safe motherhood practices. These include long waiting times at the clinic, financial difficulties, lack of family or spousal support, and cultural beliefs. Financial constraints and healthcare access issues are

consistent with findings from Ogundipe and colleagues (Ogundipe et al., 2018), who reported similar challenges in Nigeria, particularly in low-income urban communities. Long waiting times and poor service experiences were major deterrents for consistent ANC attendance. Women who have to wait many hours for service while balancing household or job responsibilities may be discouraged from attending future appointments. Moyo and co-workers (Moyo et al., 2020) also found that long queues and understaffed facilities in urban Lusaka clinics were major contributors to missed ANC visits.

The study also found that social and cultural influences play a vital role. Lack of partner support and cultural beliefs about pregnancy discouraged some women from seeking services. These findings are aligned with Gomez and colleagues (Gomez et al., 2019), who reported that in many traditional communities, pregnancy is viewed as a natural process that doesn't always require medical intervention. Similarly, Njau and colleagues (Njau et al., 2019) emphasized the positive impact of male partner involvement on maternal healthcare adherence in Tanzania. These findings support the conceptual framework, which outlines individual, social, and systemic factors as interconnected determinants of health behavior. Addressing only one factor, such as improving knowledge, may not be enough unless systemic and social barriers are simultaneously tackled.

5.3 Adherence to ANC Guidelines and Maternal Health Outcomes

Adherence to the full set of ANC and postnatal care guidelines was suboptimal. While 49.2% of respondents attended four or more ANC visits, only 38.1% delivered in health facilities with skilled birth attendants, and only 37.3% attended postnatal care. This fragmented adherence reduces the potential benefits of safe motherhood programs. These findings are concerning given that the continuum of care—from pregnancy through delivery to the postnatal period—is essential for ensuring positive maternal and neonatal outcomes. Fragmented care undermines the effectiveness of interventions, such as tetanus immunizations, iron and folic acid supplementation, and timely management of complications.

The study showed that 53.9% of women received a tetanus vaccination, and only 27.7% reported regularly taking iron and folic acid supplements. This highlights significant missed opportunities for preventive care. Smith and co-workers (Smith et al., 2021) found that poor adherence to recommended maternal health interventions among marginalized groups in the

U.S. also contributed to increased maternal and neonatal risks. Thus, adherence to ANC guidelines at Mtendere Clinic remains below national and WHO targets. This limited adherence is reflective not of a lack of knowledge but rather the influence of complex social and systemic barriers. The findings reinforce the importance of integrated interventions that address not only individual behaviors but also healthcare delivery systems, cultural attitudes, and socioeconomic constraints.

CHAPTER SIX: CONCLUSION, RECOMMENDATIONS AND LIMITATIONS

6.1 Conclusion

The study aimed to evaluate the level of adherence to safe motherhood practices among women attending ANC at Mtendere Clinic. It found that while awareness of safe motherhood practices is relatively high, actual adherence is limited and inconsistent. Key barriers include long waiting times, financial challenges, cultural beliefs, and inadequate family or spousal support. These barriers hinder full compliance with critical interventions such as regular ANC visits, skilled birth attendance, and postnatal care. The findings emphasize the need for a multifaceted approach to improve adherence—one that combines health education, healthcare system strengthening, social support mechanisms, and culturally sensitive practices to improve maternal and neonatal health outcomes.

6.2 Limitations of the Study

i. Self-Reported Data – Much of the data was based on participants' self-reports, which may be affected by recall bias or the desire to give socially acceptable answers.
ii. Limited Geographic Scope – The study was confined to one urban clinic in Lusaka and may not reflect conditions in rural or other urban areas.
iii. Cross-Sectional Design – The study provides a snapshot in time, limiting the ability to infer causal relationships or trends over time.
iv. Sample Size – The sample of 126 participants, while statistically acceptable, may not capture the full diversity of experiences and challenges across the population.
v. Limited Qualitative Data – Although semi-structured interviews were used, a deeper qualitative inquiry could have provided more nuanced insights into the barriers and motivators affecting adherence.

6.3 Recommendations

i. Enhance Community-Based Health Education – Implement regular outreach programs using community health workers to raise awareness and provide education on the full spectrum of safe motherhood practices.

ii. Improve Health Service Delivery at Clinics – Reduce waiting times and improve patient flow at Mtendere Clinic to make ANC services more accessible and time-efficient for women.

iii. Provide Financial Support or Incentives – Introduce subsidies or conditional cash transfers for pregnant women to offset transportation and medical costs, encouraging them to attend all required visits.

iv. Promote Male Involvement in Maternal Health – Encourage spousal participation through education campaigns and partner-friendly clinic policies to foster a supportive environment for maternal health.

v. Integrate Culturally Sensitive Interventions – Develop culturally appropriate messaging and engage local leaders to address beliefs that hinder adherence while respecting community values.

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APPENDICES

APPENDIX ONE: CONSENT

Participant Informed Consent Form

Title of Study: Evaluating the Level of Adherence to Safe Motherhood Practices Among Women Receiving Antenatal Care at Mtendere Clinic

Principal Investigator:…….
Institution:……
Contact Information: …….....
Date:…….....

Introduction

You are invited to participate in a research study that aims to evaluate adherence to safe motherhood practices among women attending antenatal care at Mtendere Clinic. Before you decide whether to participate, please read this form carefully. It explains why the research is being conducted, what participation involves, and your rights as a participant.

Purpose of the Study

The purpose of this study is to assess the extent to which women adhere to safe motherhood practices, including antenatal care (ANC) visits, skilled delivery, and postnatal care. The findings will help improve maternal health services and address challenges affecting adherence.

Procedures

If you agree to participate:

- You will be asked to complete a questionnaire about your knowledge, experiences, and adherence to safe motherhood practices.
- Some participants may be selected for a short interview to discuss their experiences in more detail.
- The questionnaire will take approximately 15–20 minutes, and interviews will last around 30 minutes.

Your participation is completely voluntary, and you may skip any question that makes you uncomfortable.

Potential Risks and Benefits

- Risks: There are minimal risks associated with this study.Some questions may be sensitive, but you are not required to answer anything you are uncomfortable with.
- Benefits: While you may not benefit directly, your participation will help improve maternal healthcare services and shape future health policies to better support pregnant women.

Confidentiality

All information you provide will remain strictly confidential:

- Your responses will be anonymized, and your name will not appear in any report or publication.
- Data will be stored securely and only accessed by authorized researchers.

Voluntary Participation and Right to Withdraw

- Participation in this study is completely voluntary.
- You have the right to withdraw at any time without providing a reason, and this will not affect your access to healthcare services at Mtendere Clinic.

Questions and Contact Information

If you have any questions about this study, please contact:

Your Name: …….

Ethics Review Board: ……..

If you agree to participate, please sign below.

Consent Statement

I have read and understood the information provided in this consent form. I understand that my participation is voluntary and that I may withdraw at any time. I agree to participate in this study.

Participant's Name: ……

Signature: ……

Date: ……

Researcher's Name: …….

Researcher's Signature: ……

APPENDIX TWO: QUESTIONNAIRE

Questionnaire: Evaluating the Level of Adherence to Safe Motherhood Practices Among Women Receiving Antenatal Care at Mtendere Clinic

Instructions:
Please answer the following questions honestly. Your responses will remain confidential and will only be used for research purposes. Tick (✓) or circle the appropriate answer where applicable.

SECTION A: Demographic Information

1. Age:
   ☐ 15–19 years
   ☐ 20–24 years
   ☐ 25–29 years
   ☐ 30–34 years
   ☐ 35 years and above
2. Marital Status:
   ☐ Single
   ☐ Married
   ☐ Divorced/Separated
   ☐ Widowed
3. Education Level:
   ☐ No formal education
   ☐ Primary education
   ☐ Secondary education
   ☐ Tertiary education
4. Employment Status:
   ☐ Unemployed
   ☐ Self-employed
   ☐ Formally employed
   ☐ Student
5. Household Income Level (per month):
   ☐ Less than 1,000 ZMW
   ☐ 1,000 – 3,000 ZMW
   ☐ 3,000 – 5,000 ZMW
   ☐ More than 5,000 ZMW

SECTION B: Knowledge and Awareness of Safe Motherhood Practices

6. Have you ever heard about safe motherhood practices?
   ☐ Yes
   ☐ No
7. If yes, where did you learn about safe motherhood practices? (Tick all that apply)
   ☐ Health facility
   ☐ Community health worker
   ☐ Family/friends
   ☐ Media (radio, TV, internet)
   ☐ Other (please specify): _____
8. How many antenatal care (ANC) visits are recommended during pregnancy?
   ☐ 1-2 visits
   ☐ 3 visits
   ☐ 4 or more visits
   ☐ I don't know
9. What are the benefits of attending ANC? (Tick all that apply)
   ☐ Early detection of pregnancy complications
   ☐ Health education and counseling
   ☐ Receiving iron and folic acid supplements
   ☐ I don't know

SECTION C: Adherence to Safe Motherhood Practices

10. How many ANC visits have you attended during this pregnancy (or last pregnancy if recently delivered)?
    ☐ None
    ☐ 1–2 visits
    ☐ 3 visits
    ☐ 4 or more visits
11. Have you received a tetanus toxoid vaccination?
    ☐ Yes
    ☐ No
    ☐ I don't know
12. Do you know the importance of taking iron and folic acid supplements during pregnancy?

    ☐ Yes
    ☐ No
    ☐ I don't know

13. Did/are you take the iron and folic acid supplements prescribed during your pregnancy?
    ☐ Yes, regularly

☐ Yes, but not regularly
☐ No

14. Have you received information on the signs of complications during pregnancy? ☐ Yes
☐ No
☐ maybe

SECTION D: Barriers to Adherence

15. What challenges prevents or discourage you from attending ANC visits? (Tick all that apply)
☐ Lack of knowledge about ANC
☐ Financial constraints
☐ Long waiting times at the clinic
☐ Distance to the health facility
☐ Lack of support from family or spouse
☐ Cultural beliefs or traditional practices
☐ Other (please specify): _____
16. Do you feel that your healthcare provider explains information clearly?☐ Yes
☐ No

SECTION E: Social and Cultural Influences

17. Does your spouse/partner encourage you to attend ANC visits?
☐ Yes
☐ No
☐ Not applicable
18. Do cultural or religious beliefs influence your decision to seek maternal healthcare?
☐ Yes, positively
☐ Yes, negatively
☐ No influence

SECTION F: Suggestions for Improvement

19. In your opinion, what can be done to improve adherence to safe motherhood practices at Mtendere Clinic? (Open-ended)

Thank You for Your Participation!

Your responses are highly valued and will contribute to improving maternal healthcare services.

APPENDIX THREE: Gantt Chart

Activity	Duration	Month 1	Month 2	Month 3	Month 4	Month 5	Month 6
Proposal writing	1 Month	X					
Ethical approval	1 Month		X				
Data collection	2 months			X	X		
Data analysis	1 Month					X	
Report writing	1 Month						X
Total	6 months						

Gantt Chart

APPENDIX FOUR: Proposed Research Budget

Data Collection (Travel, stationary, etc.)	K300
Ethical clearance fee	K500
Miscellaneous Expenses	K100
Printing and binding of dissertation	K150
Total	K1250

Budget

UNIVERSITY *of* LUSAKA

Passion for Quality Education: Our Driving Force

UNIVERSITY OF LUSAKA RESEARCH ETHICS COMMITTEE (UNILUS-REC)

Plot No. 37413, Off Alick Nkhata Mass Media. P. O Box 36711, Lusaka.
Phone: +260211258505, 258409 Fax +260211233409; Cell +260976075850,961917862,
E-mail:unilus@zamnet.zm,ictar@zamnet.zm

UNILUS-RESEARCH ETHICS COMMITTEE

Ref no: FWA00033228-635(08)/(08)/{2024}

Date: 27 March 2025

STUDENT NAME: **Ms. MILDRED KABWELA**

Evaluating the level of adherence to safe motherhood practices among women receiving antenatal care at Mtendere clinic.

The above research was submitted to the research ethics committee for review. The study has no major ethical problems and is approved subject to the following:

1. The study cannot be changed without express permission of the UNILUS research ethics committee.
2. Approval from the necessary authority should be sought.

Professor Kasonde Bowa

MSc(Glasgow),M.Med(UNZA),FRCS(Glasgow),FACS,FCS,DPH(LSTMH),MPH(UCL)

Chairman- UNILUS REC

Professor of Urology and Consultant Urologist

Deputy Vice-Chancellor – Research and Innovation

Executive Dean - School of Medicine and Health Sciences

In reply please quote
LDHO/9/7/6
No.:

All correspondences should be addressed to the District Health Director

Tel +260-211-235554
Fax +260-211-236429

REPUBLIC OF ZAMBIA

MINISTRY OF HEALTH

14th April. 2025
BOA 50827

LUSAKA DISTRICT HEALT
P.O. B
Received
MINISTRY OF HEALTH
MTENDERE HEALTH CENTRE
2 2 AP 2025
FACILITY IN-CHARGE'S OFFICE
P.O. BOX 50827 LUSAKA

LUSAKA principal Investigator MS. Mildred Kabwela
University of Lusaka

LUSAKA

PORO

REF: REQUEÜ±QR AVVHORIT.Y TO CONDUCT STUDY

We are in receipt of your letter dated April, 2025 over the above subject.

Please be informed that Lusaka District Health Office has no objection for you to conduct a study titled "Evaluating the level of adherence to safe motherhood practices among women receiving antenatal care at Mtendere Clinic".

Kindly ensure that findings are shared with the health Facility on soft copy to Astridah.maseka@moh.aov.zn. cwsianchapa@qmail.com and 'alisanambeye@gmail corn and that while research is going on. operations must continue with no interruption, Furthermore, work hand in hand the planner, Clinical Care Specialist, Public Health Specialist and Medical Superintendent as you conduct your research and support them with accreditation.

By copy Of this letter. the Medical Superintendent and Public Health Specialist is kindly requested to facilitate accor

Dr. Astridah Kona Yihemba M05eka
Director Health Services
LUSAKA DISTRICT HEALTH OFFICE

cc: The Public Health Specialist— Munali Sub district

NATIONAL HEALTH RESEARCH AUTHORITY

Lot No. 18961/M, off Kasama Road, Chalala, P.O. Box 30075, LUSAKA

Tell: +260211 250309 | Email: znhrasec@nhra.org.zm | www.nhra.org.zm

NHRA8450/27/02/2025 **27th March 2025**

The Principal Investigator,
Kabwela Mildred,
university of lusaka,

Dear Kabwela Mildred,

Re: Request for Authority to Conduct Research

The National Health Research Authority Is in Receipt of Your Request for Authority to Conduct Research Titled **"Evaluating the level of adherence to safe motherhood practices among women receiving antenatal care at Mtendere clinic"**

I wish to inform you that following submission of your request to the Authority, our review of the same and in view of the ethical clearance, this study has been **approved** on condition that:

1. The relevant Provincial and District Medical Officers where the study is being conducted are fully appraised.
2. Progress updates are provided to NHRA bi-annually from the date of commencement of the study.
3. The final study report is cleared by the NHRA before any publication or dissemination within or outside the country.
4. After clearance for publication or dissemination by the NHRA, the final study report is shared with all relevant Provincial and District Directors of Health where the study was being conducted, University leadership, and all key respondents.

Yours sincerely,

National Health Research Authority

Prof Victor Chalwe,
Director and Chief Executive Officer

Ref no: FWA00033228-635(08)/(08)/{2024}