Exploring Midwives' Experiences Regarding Implementation of Maternal Death Surveillance and Response at Mwanza District Hospital, Malawi

Master of Science in Midwifery

By

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B.Sc. Nursing

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CERTIFICATE OF APPROVAL

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The undersigned certify that this thesis is the students own work and effort and has been submitted with our approval.

Signature  Date 28/03/2025

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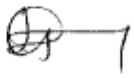
Signature  Date 28/03/2025

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Second supervisor

DECLARATION

I the undersigned hereby declare that this thesis is my own original work which has not been submitted to any other institution for similar purposes. Where other people's work has been used acknowledgement has been made.

Wakhonderachi Temweka Nyirenda Likha

Signature

Date: 28th March 2025

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I dedicate this research project to my husband Clifton and my daughter Carlyn for their love, understanding, encouragement and unwavering support throughout this study.

May God bless you all.

ABSTRACT

Despite the Malawi government's implementation of the Maternal Death Surveillance and Response initiative in 2002, preventable maternal deaths persist. Data from Mwanza District Hospital revealed 9 maternal deaths in 2023 alone. This demonstrated that Malawi, like many other low- and middle-income countries, is still far from attaining the Sustainable Development Goals (SDGs) for reducing maternal mortality. Midwives play a pivotal role as members of the MDSR team, and there is potential for midwives to indirectly experience trauma from such role. However, little is known about their experiences during implementation of the MDSR. The main objective of the study was to explore the experiences of midwives regarding the implementation of maternal death surveillance and response. We employed a qualitative explorative descriptive design. In-depth interviews with 18 purposively selected individuals were used to collect qualitative data using a semi-structured interview guide. Data analysis was carried out in accordance with Braun and Clarke's six phases of theme analysis, with Nvivo 12 software. The study highlighted three themes based on midwives' experiences with MDSR: maternal death identification, notification, and reporting. Experiences with the maternal death review and audit processes, as well as the implementation and follow-up of action plans. These themes illustrate the complexities of MDSR, such as emotional impact, protocol obstacles, and implementation barriers. The possible recommendation that emerged was the need for more research and development of national policy to identify high quality interventions to support midwives through the MDSR.

Key words: maternal death, midwife, experiences, maternal death surveillance and response

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ACRONYMS

CNMT	: Community Nurse Midwife Technician
EDQ	: Exploratory Descriptive Qualitative Research
EmOC	: Emergency Obstetric Care
FBMDR	: Facility Based Maternal Death Review
FBMDSR	: Facility Based Maternal Death Surveillance and Response
MDR	: Maternal Death Review
MDSR	: Maternal Death Surveillance and Response
MMR	: Maternal Mortality Ratio
MPDSR	: Maternal and Perinatal Death Surveillance and Response
NMT	: Nurse Midwife Technician
NMT(RNM)	: Registered Nurse Midwife Technician
NO(RNM)	: Registered Nursing and Midwifery Officer
SBA	: Skilled Birth Attendant
SDGs	: Sustainable Development Goals
SNMT	: Senior Nurse Midwife Technician
SSA	: Sub Saharan Africa
WHO	: World Health Organization

OPERATIONAL DEFINITIONS

A maternal Death: Refers to the death of a woman while pregnant or within 42 days of termination of pregnancy, irrespective of the duration and the site of the pregnancy, from any cause related to or aggravated by the pregnancy or its management but not from accidental or incidental causes.

A midwife: A person who, having been regularly admitted to a midwifery educational programme, duly recognized in the country in which it is located, has successfully completed the prescribed course of studies in midwifery and has acquired the requisite qualifications to be registered and/or legally licensed to practice midwifery.

Experience: The fact or state of having been affected by or gained knowledge through direct observation or participation. It can also refer to practical knowledge, skill, or practice derived from direct observation of or participation in events or in a particular activity.

Maternal death reviews (MDR): Refers to qualitative, in-depth investigation of the causes of, and circumstances surrounding maternal deaths.

Maternal Death Surveillance and Response (MDSR): This is a type of surveillance and a component of the health information system that permits the identification, the notification, the quantification, and the determination of causes and avoidability of maternal deaths, for a defined time period and geographic location, with the goal of responding through actions that will prevent future deaths.

Near miss: This refers to a very ill pregnant or recently delivered woman who nearly died but survived a complication during pregnancy, childbirth or within 42 days of termination of pregnancy.

Surveillance: This is the ongoing systematic collection, analysis, and interpretation of health data. It includes the timely dissemination of the resulting information to those who need them for action.

CHAPTER ONE: INTRODUCTION

1.1.Introduction

Maternal deaths continue to be a major public health issue, particularly in low- and middle-income nations. In 2020, about 287,000 women died during pregnancy and childbirth worldwide, with Sub-Saharan Africa accounting for the majority (70%, n= 202,000) of these deaths (WHO, 2023b). Maternal mortality ratios in Sub-Saharan Africa (SSA) range from 250 to 700 per 100,000 live births on average (Tayebwa et al., 2020). Malawi, like many other low- and middle-income nations, is still a long way from meeting the Sustainable Development Goals (SDGs) for reducing the maternal mortality. The maternal mortality ratio in Malawi by 2016 was 439/100,000 live births, approximately 35% decrease from 675 deaths per 100,000 live births between 2010 and 2016 (Ministry of Health, Malawi, 2020). It is estimated that by 2030, no country should have a MMR more than twice the global MMR (140/100,000), and the goal calls for a reduction in the MMR to less than 70% (UNHCR, 2021). In 2013, the WHO advised that all countries establish maternal death surveillance and response, to which perinatal deaths were added in 2016 to accelerate the reduction of maternal mortality (Willcox et al., 2023) .

Maternal death surveillance and response (MDSR) systems are recommended to improve empirical data on maternal mortality and identify effective interventions (WHO, 2013). The MDSR emphasizes the importance of responding to each maternal death with actions to prevent similar deaths in the future, as well as collecting data on all maternal deaths using clearly defined data sources and processes of identification and notification. At the heart of the MDSR are midwives, as they are directly involved in the care of the pregnant woman at all stages. Midwives' experiences are critical in the MDSR because

they are the ones who are the most frequently available skilled maternity care providers; thus, midwives' involvement in the MDSR should result in significant changes in decreasing unnecessary maternal deaths (Kalu & Chukwurah, 2022) In addition, when a maternal death occurs, the midwife who attended to the woman at the time of death completes a maternal death form 1 and sends it to the district health office within 24 to 72 hours. This is so because midwives are well placed to share both positive and negative tales about women's pregnancy experiences as they are with the woman at all stages of the care (Owolabi et al., 2014). This provides a comprehensive picture of risk factors and potential solutions to maternal mortality thereby helping identifying solutions to the gaps in care through the MDSR hence improve women childbirth experiences.

Women's delivery experiences can range from good and rewarding to terrible and traumatic (Toohill et al., 2019). Witnessing and participating in painful birthing experiences might become engrained in the midwife's role. Midwives caring for such women are occasionally subjected to horrific birth situations, including maternal death, and are accountable for their actions while delivering care through the MDSR system. However, there is insufficient data on how these events affect midwives and their practice (Sheen et al., 2016). Evidence indicates that incidents in which the mother is at risk of significant damage or death, and the midwife responds with fear, helplessness, powerlessness, or horror, have the potential to be interpreted as traumatic (Aba Abraham et al., 2020). Exposure to such conditions has been linked to post-traumatic stress disorder and other mental health disorders. Understanding their experiences in maternity care is essential in order to provide adequate support for them to enhance their skills in providing appropriate maternity care, hence the need for this study (Kinney et al., 2019).

Globally, most of the studies and reviews on MDSR have investigated the facilitators and inhibitors of the establishment and sustainability of maternal and perinatal mortality audit systems. In Malawi for instance, the majority of MDSR research has focused on the administration of the MDSR system (Willcox et al., 2023). At Mwanza District Hospital in Malawi, no study has been conducted to explore the experiences of midwives in implementing the MDSR, despite the district having an established MDSR system. Studying midwives' experiences regarding the implementation of the MDSR is essential for understanding the impact such experiences have on their practice and learning how midwives can be supported during and after the MDSR process, to improve the quality of midwifery care and women's childbirth experiences.

1.2. Background

Every year, an estimated 295,000 women die during pregnancy and childbirth, with nearly all deaths occurring in low- and middle-income nations (WHO, 2021). The majority (99%) of maternal deaths globally occur in low and middle-income nations. In Sub-Saharan Africa, the lifetime risk of maternal death is one in 16, but it is one in 2,800 in high-income countries (World Bank, 2020). Over half (45%) of postpartum deaths occur within 24 hours (Dol et al., 2022). The leading causes of maternal deaths are severe bleeding, infections, unsafe abortions, eclampsia, and obstructed labor (The Health Foundation, 2013). Maternal mortality reduction has been uneven and insufficient. As a result, discrepancies continue, reflecting challenges and bottlenecks in providing adequate health care to women, especially in low-resource settings (Lunze et al., 2015) . UN data released earlier in 2023 showed that between 2016 to 2020, the reduction in maternal mortality stagnated in 133

countries and there was a rise in maternal deaths in 17 countries, primarily in Latin America, the Caribbean, Europe, North America, and sub-Saharan Africa (WHO, 2023a)

Maternal death review (MDR) began in Malawi in 2002, and a framework was devised to conduct audits at district hospitals. Maternal death became a notifiable event since 2009, and the government has established a national commission to conduct confidential investigations into maternal fatalities (NCCEMD). The trial-run analysis of 60 maternal deaths in Malawi found that 93.4% happened in secondary and tertiary level health institutions, while 3.4% died in transit from a primary level health facility, indicating that just a handful occur in communities (Ministry of Health, Malawi, 2014). Although the trend of maternal mortality is decreasing in Malawi, the MMR of 439/ 100,000 live births is still too high, and the country is unlikely to fulfil the SDG 3 target of reducing the MMR to less than 70 per 100,000 live births by 2030 (Ministry of Health, Malawi, 2020)

The MDSR continuous action cycle relies on teams to gather and evaluate information on when, where, and why women die and to design steps to prevent such deaths, and midwives are crucial actors in the teams since they are actively involved in the care of pregnant women at all times and maybe there when the majority of maternal deaths occur (Ministry of Health, Malawi, 2014).

MDSR also offers a quick cycle of notification, review, analysis, and response which enables governments to monitor maternal mortality in near real-time, both at the subnational and national levels, and can provide early warning of problems in a health institution or locality (UNHCR, 2021). It works to reduce unnecessary maternal mortality by integrating all stakeholders in the process of identifying maternal deaths, learning why they occurred, and taking action to prevent similar fatalities in the future. Understanding

midwives' experiences at each stage of the MDSR cycle is critical as it can provide real time insights on the gaps in the process. Midwives are key stakeholders in the process as they provide direct care to pregnant mothers at all levels and are also members of the MDSR team (Ministry of Health, Malawi, 2014).

Several studies and reviews have investigated the facilitators and inhibitors of the establishment and sustainability of maternal and perinatal mortality audit systems. The lack of a national MPDSR policy, weak information, and surveillance system (e.g., lack of vital registration systems and primary data on cause of death), a lack of diagnostic capacity for the accurate cause of death classification, and gaps in identifying and documenting maternal and perinatal deaths have all been identified as barriers to effective MPDSR implementation (Kinney et al., 2019).

The majority of MDSR research in Malawi has focused on the procedure for administering the MDSR. For example, a study on the difficulties of performing maternal death reviews in Malawi discovered that key strengths in the process included the availability of data from case notes, cooperation from hospital management, and the availability of maternal death review forms. Furthermore, some of the process's flaws included a fear of being blamed, a lack of expertise and abilities to appropriately conduct death reviews, insufficient resources, and missing paperwork (Kongnyuy & van den Broek, 2008; Owolabi et al., 2014).

MDSR is a critical component of efforts to reduce maternal mortality. Midwives, as key members of the MDSR team, have unique insights about women's pregnancy experiences which could provide a comprehensive picture of risk factors and potential solutions to maternal mortality. In Malawi, at Mwanza District Hospital, no studies have

been done to explore midwives' experiences regarding implementation of the MDSR. This study sought to shed light on the women's experiences, offering a foundation for informed decision-making and improvements in maternal healthcare provision.

1.3. Problem statement

Despite the Malawi Government's implementation of the Maternal Death Surveillance and Response (MDSR) program in 2002, preventable maternal deaths persist. For example, Mwanza District Hospital recorded 9 maternal deaths in 2023 alone. Midwives, as key members of the MDSR team, play a critical role in this initiative due to their continuous involvement in maternal care and their presence during life-threatening obstetric emergencies. As per MDSR protocols, the attending midwife is responsible for completing and submitting a maternal death notification form within 24 to 72 hours (Owolabi et al., 2014).

However, engaging with maternal deaths can be profoundly distressing for midwives. These traumatic encounters occur not only through directly witnessing maternal deaths during childbirth but also through hearing firsthand accounts from affected women or bearing responsibility for patient outcomes within the MDSR process (Aba Abraham et al., 2020). Such experiences, particularly those involving severe maternal morbidity and mortality, can evoke intense emotional responses, including shock, anxiety, helplessness, and powerlessness. Evidence suggests that repeated exposure to these traumatic events increases the risk of severe mental health conditions such as post-traumatic stress disorder (Bingham et al., 2023).

Despite their critical role, limited research has explored the psychological and professional impact of MDSR implementation on midwives. Understanding how these experiences shape their practice and identifying strategies to support them throughout and after the MDSR process is crucial. Strengthening midwife resilience and well-being can enhance the quality of care they provide, ultimately improving maternal health outcomes. Therefore, this study aims to explore midwives' experiences with MDSR implementation, uncovering key insights that can inform strategies to mitigate emotional distress, enhance support systems, and contribute to the overall reduction of preventable maternal deaths.

1.4. Significance

This study was expected to yield valuable insights that can assist healthcare management in pinpointing areas of improvement to enhance midwives' performance and elevate the overall quality of care. Furthermore, it contributed to the expansion of knowledge and awareness regarding the critical roles played by midwives in the implementation of the Maternal Death Surveillance and Response (MDSR) framework. This newfound understanding can serve as a catalyst for enhancing midwifery curricula, fostering continuous learning, promoting professional growth, and facilitating the development of midwifery as a discipline. In addition to enriching the existing body of knowledge, the outcomes of this study will serve as a reference point for future scholars and researchers. They will provide a foundation upon which subsequent investigations can build, opening fresh avenues for research by shedding light on specific gaps and challenges within the MDSR framework. These identified gaps will serve as signposts for future researchers, guiding them in their pursuit of improving the MDSR system and ultimately contributing to the reduction of maternal mortality.

1.5. Research objectives

1.5.1. Main objective:

To explore the experiences of midwives regarding the implementation of maternal death surveillance and response.

1.5.2. Specific objectives:

1. To describe midwives' experiences regarding the identification and notification of facility-based maternal deaths.
2. To investigate the midwives' experiences in the maternal death review process of the MDSR.
3. To identify midwives' response actions in the MDSR.

1.6. Conceptual framework

Maternal death surveillance and response framework was utilized in this study. MDSR framework is a continuous cycle of notification, evaluation, analysis, and response (WHO, 2016). This study focused on the three stages of the MDSR framework, which are; identification and notification, review of maternal deaths and the response for action plans as shown in figure 1. The researcher explored the experiences of midwives during the implementation of MDSR focusing on these three stages of the MDSR framework. The specific objectives of the study were also aligned to these three stages of focus.

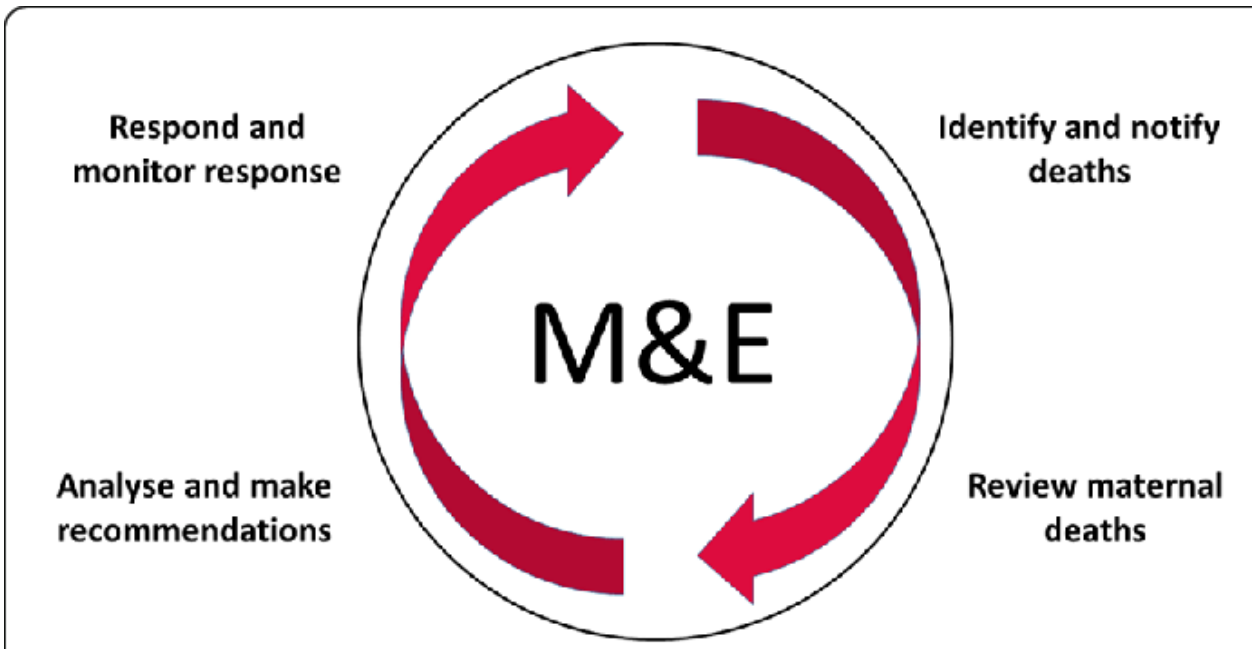

Figure 1: Maternal Death Surveillance and Response (MDSR) system: a continuous-action cycle (adapted from WHO 2014)

1.6.1. Identification and notification

MDSR intends to identify every maternal death in order to reliably monitor maternal mortality and the impact of maternal mortality-reduction measures (WHO, 2016). Midwives are key players during this stage as such this study described their experience as they identify and notify maternal deaths. So, at this stage the researcher wanted to find out midwives' experiences regarding the identification and notification of facility-based maternal deaths.

1.6.2. Review

MDRs are qualitative, in-depth investigations into the causes and circumstances of maternal death (Ministry of Health, Malawi, 2014). At this stage, the researcher aimed to assess the midwives' experiences in the maternal death review process of the MDSR.

1.6.3. Response

The response phase of surveillance involves taking action. At this level, MDSR emphasises the vital requirement of responding to every maternal death (Ministry of Health, Malawi, 2014). This study sort to identify midwives' response actions in the MDSR.

1.7. Summary

Maternal mortality is still a major concern, particularly in low- and middle-income nations, including Malawi. MDSR systems are critical for detecting, assessing, and responding to maternal deaths, with midwives playing a critical role. This chapter introduced the research, which explored midwives' experiences regarding MDSR systems. The study's main objective was to learn about midwives' experiences regarding identifying, notification, and reporting maternal deaths, as well as their responsibilities in the review and audit process, facilitators and hurdles to implementing action plans, and the emotional impact of their involvement. The study aimed to provide insights about MDSR systems and successful midwife support through qualitative semi-structured in-depth interviews. The study's significance stemed from its potential to influence policy and practice improvements in maternal health care. The study's goal was to reduce maternal mortality and enhance maternal health outcomes by answering crucial research questions on midwives' experiences and problems

CHAPTER TWO: LITERATURE REVIEW

2.1. Introduction

This chapter is devoted to a narrative overview of the current literature on midwives' experiences with maternal death surveillance and response. The evaluation of the literature aids in understanding the experience of midwives who care for pregnant women and participate in maternal death surveillance and response, as well as finding gaps in the process. As stated by Burns & Grove, (2014), a review of the literature provides the researcher with the most up-to-date theoretical and scientific knowledge regarding a certain subject, allowing one to synthesize what is known and what is unknown.

Malawian and international research evidence were evaluated in this literature review. PubMed, CINAHL and Google Scholar were searched. 'Midwives' experiences, implementation, maternal death surveillance, and response' were among the search terms that were used. To ensure relative currency in the materials listed, the literature was searched from the year 2008 to the present.

2.2. Purpose of the MDSR

MDSR facilitates gathering of information and allows for its strategic use in guiding public health actions and monitoring the impact of those actions. Monitoring the numbers and understanding the reasons for mortality is critical to increasing maternal survival (WHO, 2021). This enormity of maternal mortality drives policymakers and decision-makers to give the issue the attention it deserves; hence, proven strategies to reduce maternal mortality, such as the MDSR, are well established; nevertheless, these critical interventions are not being administered as required in lowest and middle-income countries, including Malawi (Lunze et al., 2015). .

MDSR requires notification and evaluation, as well as discussion and sharing of its findings, while steps are taken to address any problems that arise. Every death of a mother is a tragedy, as such, understanding what caused the deaths is essential to preventing future tragedies. MDSR emphasizes the importance of data collecting being linked to action. A willingness to act on results is a critical requirement for success (WHO, 2021).

The fundamental purpose of MDSR is to eradicate unnecessary maternal mortality by gathering and strategically applying the information to drive public health interventions and analyses their impact. The MDSR emphasizes the importance of responding to each maternal death with efforts to prevent such deaths in the future, as well as collecting data on all maternal fatalities using clearly defined data sources and identification and notification methods (UNHCR, 2021).

MDSR findings can have a substantial impact on activities and advocacy not just in the health sector, but also among policymakers, non-governmental organisations, and communities, among others (Lewis, 2003). Every maternal mortality case has a story to tell and provides knowledge for breaking down obstacles to better treatment; nevertheless, these discoveries must be implemented for meaningful change to occur at the policy, program, and facility levels, as shown in South Africa, Egypt, Mali, Senegal, and South-East Asia.

Effective MDSR implementation has the potential to directly enhance the quality of care and improve maternal and perinatal health outcomes. While there is a growing literature on MDR and MDSR implementation, only few studies have reported the experiences of health care workers in particular, midwives in implementing the MDSR.

2.3. Maternal Death Surveillance and Response process

An MDSR system is a continuous cycle that aims to avoid future maternal deaths by learning from prior ones. This is achieved by detecting and investigating each death, then generating and applying recommendations to prevent future deaths from comparable causes (Schrøder et al., 2016). The framework, Figure 1 allows one to study the underlying causes and factors that contribute to maternal mortality and design life-saving solutions. The MDSR has four steps: (i) identification and notification of maternal death, which is an ongoing process; (ii) review of maternal deaths; (iii) analysis and interpretation of findings from the reviews; (iv) response and action (Ministry of Health, Malawi, 2014). Midwives are key participants in the MDSR continuous cycle. To perform MDSR and act, a collaborative environment is essential, rather than a blaming culture.

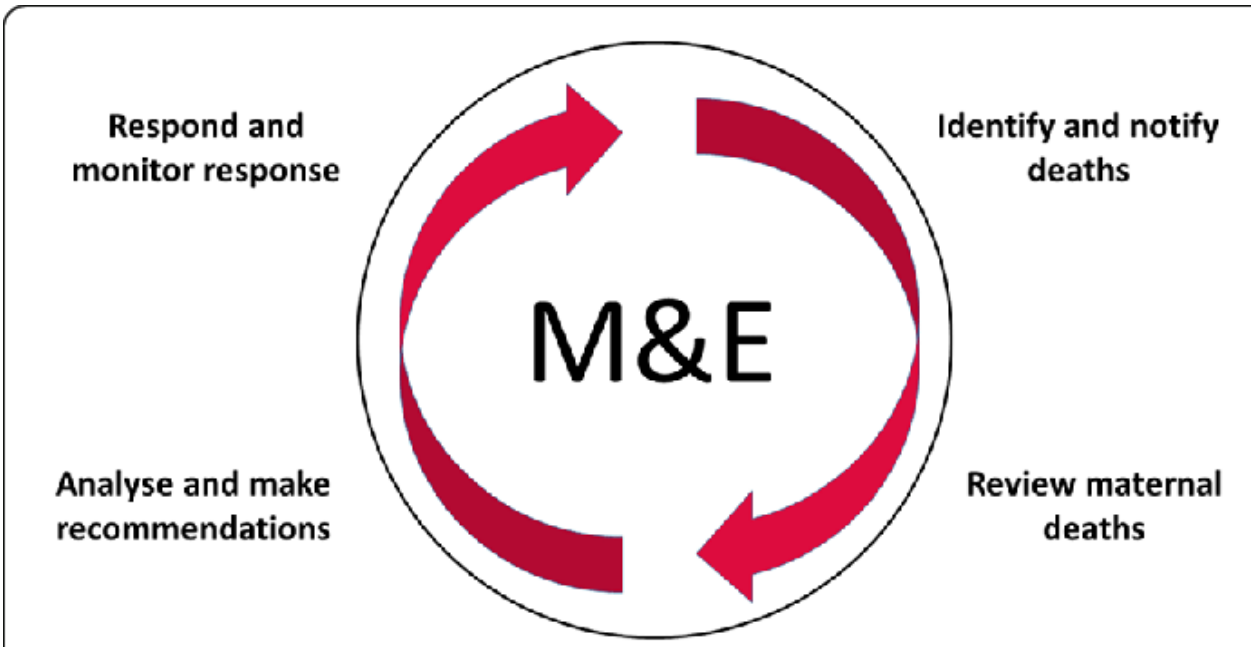

Figure 1: Maternal Death Surveillance and Response (MDSR) system: a continuous-action cycle (adapted from WHO 2014)

The MDSR continuous action cycle relies on teams to gather and evaluate information on when, where, and why women die and to design steps to prevent such deaths, and midwives are crucial actors in the teams since they are actively involved in the care of pregnant women at all times and maybe there when the majority of maternal deaths occur (Ministry of Health, Malawi, 2014). Maternal death review (MDR) began in Malawi in 2002, and a framework was devised to conduct audits at district hospitals. Maternal death became a notifiable event since 2009, and the government has established a national commission to conduct confidential investigations into maternal fatalities (NCCEMD).

2.4. Identification and notification

The narrative accounts, of each maternal death are critical in illustrating the human tragedy of the MMR crisis. They are included as anonymized episodes in complete reports and are frequently the best method to show issues such as poor access to care, flaws in the running of the health system, and problems with care quality. Each common cause of death is represented by multiple brief accounts in the comprehensive reports. They are effective instruments for not only education and discussion among health workers, but also for advocacy (Moodley et al., 2014).

MDSR have enhanced maternal mortality identification and notification, data availability, and data-driven decision making in a variety of situations (Bayley et al., 2015). A study done in Uganda discovered that most midwives evaluated the frequency of maternal death encounters at work as 'not often' (51%) and stated that their professional training prepared them to handle maternal death situations (57%). By combining data from

several sources, MDSR has reduced underreporting of maternal fatalities in Ethiopia, India, and South Africa (Abebe et al., 2017).

However, in a systematic review of qualitative studies on maternal and perinatal death surveillance and response, underreporting of deaths was observed because of fear of being blamed, political pressure, social stigma, and cultural beliefs. There was also no mandated reporting for deaths that occurred outside of a hospital. Fear of being blamed led to withholding or altering facts in accurate and incomplete information. Staff lack of grasp of aim, inadequate record keeping, resource shortages; insufficient time to collect data; data collecting forms that were too long and difficult or unavailable in certain cases were also noted (Willcox et al., 2023).

Similarly, in Malawi MDR teams, analysts, and policymakers experienced difficulties completing forms, assessing data, and utilizing it. This was attributed to missing information on both MD1 Forms and patients' files, hence no discussion regarding the primary cause of death, final cause of death, preventable factors, morbidity, missed opportunities, and action plan (Lusambili et al., 2019; Owolabi et al., 2014). In another study missing of important information, incomplete, inaccurate, illegal or incorrect capture of patients records documentation was attributed to midwives lack of knowledge on what information to be obtained during data collection (Chirwa et al., 2022). For instance, in Tanzania, only 1% of the narrative summaries met the majority (more than 95% of the needed material) of the 2015 MDSR requirements. Most summaries were missing demographic information such as the death review number, patient code, marital status, length of amenorrhea, and mode of delivery of previous pregnancies (Said et al., 2021).

On the other hand, a study conducted in Uganda discovered that after witnessing a maternal death, midwives were responsible for informing the deceased's relatives (80.3%), writing a report (76.8%), preparing the corpse for transfer to the mortuary (61.6%), providing support to relatives (50.9%), and caring for the newborn baby (35.7%). Midwives who saw maternal death received emotional support from colleagues (31%), consolation from deceased relatives following death certification (29.9%), a maternal death audit meeting (26.8%), and obstetric emergency management training (12.3%) (Muliira & Bezuidenhout, 2015). This indicates how involved midwives in Uganda are in terms of management of maternal deaths, though still other figures especially on audit, midwives' participation is not much, compared with the other parameters.

While individual studies have highlighted various problems in identifying and notifying maternal deaths, a closer look at the literature reveals a more complex problem. Most nations are now reporting maternal deaths (Bandali et al., 2016). However, midwives' lack of training in maternal death notification protocols and insufficient resources, both human and financial impede timely notifications (Chirwa et al., 2022). This delay can result in missing or inaccurate data, lowering the quality of maternal death reviews (Owolabi et al., 2014). This reflects a systemic issue, rather than an individual failure, and emphasises the importance of targeted initiatives to overcome these capacity gaps. Furthermore, the consistency of these findings across distinct contexts such as for Malawi and Zambia just to mention a few, suggests that this obstacle may be more pervasive than previously anticipated, underlining the significance of tackling this issue to strengthen MDSR system.

2.5. Maternal death review

Understanding why a woman died during pregnancy or shortly after childbirth is a critical first step towards avoiding other women from dying in the same way. In addition to determining the medical causes of death, it is critical to understand the woman's personal story and the circumstances of her death. MDR is defined as "qualitative, in-depth investigation of the causes of, and circumstances surrounding maternal deaths. Medical causes and contributing factors are determined as part of MDR with a view to finding out why the deaths occur and what can be done to prevent them (Ministry of Health, Malawi, 2014).

Midwives serve a variety of functions in different health systems and MDSR models, but they are often the major providers of antenatal, intrapartum, and postnatal care. This proximity to the delivery of care equips midwives to make a distinctive contribution to successful MDSR systems. The practitioners have important information to share (Owolabi et al., 2014). They will gain a better understanding of the scenario, including the woman's point of view and the available drugs and equipment. They will understand why the woman arrived late at a health facility and what her family dynamics are. Midwives' unique views can help committees make the most relevant judgments when reviewing maternal deaths and, more broadly, in MDSR. Midwives should be included in the review process at all phases, from identifying cases to implementing the recommendations. If they are excluded, the MDSR system is severely weakened. Unfortunately, midwives are not as involved in maternal death reviews or as broadly in MDSR systems as they could be (Mamaye, 2016).

As much as the midwives are not broadly involved in MDRs, when they have opportunity to do so they contribute. For instance, contributors from several areas of clinical competence participate in maternal death review meetings, such as pathologists who analyse the post-mortem report or midwives who provide insight into the antenatal or postnatal care received. These specialised views can shed light on and provide various perspectives on the circumstances behind maternal fatalities (UNHCR, 2021). The engagement of several professions is critical since non-obstetric causes of maternal death, such as heart disease and psychiatric illness, are increasing. As a result, it is critical to be willing to collaborate with members of the multidisciplinary team in order to improve care quality and provide better guidance to health professionals. Non-clinical health system players, such as health inspectors, administrators, particularly administrative leaders, and politicians, are also critical to the process. While clinical actors can lead the surveillance and review processes, non-clinical health system actors must be involved to enable the ‘response' aspect of the MDSR cycle, which includes identifying and ensuring funding, resource allocation, and policy changes that allow recommendations and actions to be implemented (Mamaye, 2016).

Almost every state in the United States now has a committee in place to investigate and assess maternal deaths. Where a death occurs does not always match to where the deceased lived or received medical care. To better understand maternal mortality, a full review requires collecting complete records and data on the decedent's life, care, and death. This procedure can be complex if the death happened outside of the state of review. Cross-border information sharing poses challenges for many states due to state statutes governing maternal mortality review and data collecting, each with its own regulatory structure and

review methods. Inadequate access to detailed information can have a negative impact on maternal health (Hodder, 2021).

South Africa, Botswana, Malawi, and Ghana are among the countries in Sub-Saharan Africa that have routinely implemented maternal death audits in the previous decade. A recent evaluation of Malawi's maternal death audits discovered that the District Health Management Teams were providing supportive supervision and that standard protocols for maternal and newborn care were being followed. Malawi's approach, however, has flaws, such as a fear of being blamed, insufficient recordkeeping, and a lack of expertise and abilities for conducting effective reviews (Kongnyuy & van den Broek, 2008).

While MDR is based on the idea of 'no blame, no shame,' there are various intrinsic characteristics and contextual elements that mistakenly perpetuate the fear of blame in a variety of settings (Abebe et al., 2017). In situations where the blame culture and fear of disciplinary action remain, studies have frequently observed a lack of transparency and poor participation in MDR sessions (Agaro et al., 2016; Kongnyuy et al., 2009; Van Hamersveld et al., 2012). Smith, Ameh, Roos, et al., (2017) also underlined the importance of social and team processes at the facility level, such as the presence of a "no shame," "no blame" culture, and the ability to reflect on practice and manage change as a team for recommendations to be implemented.

According to a qualitative study of Ethiopia's MDSR system, despite the emphasis on 'no blame, no shame' in local MDSR rules, the motto 'no woman should die while giving life' unintentionally fostered the fear of lawsuit among MDSR participants (Abebe et al., 2017). Anonymity appears to be the least observed principle in Burkina Faso, Malawi, and

Kenya, owing to the time required for a complete identification of all documents and the participation in MDR sessions of providers who attended to the deceased (Boukaré Congo, et al., 2017; Smith, Ameh, Roos, et al., 2017). In Malawi, while provider and patient names were not included on case summaries, providers involved were often easily identifiable during MDR meetings (Kongnyuy et al., 2009).

Midwives give a unique form of close support to pregnant women characterized by great sensitivity. This special function and closeness may expose midwives to emotional distress and increase their risk of 'compassion fatigue' in an event of maternal death and the audit reviews that follow (Bingham et al., 2023; Cavanagh, Cockett, Heinrich, Doig, Fiest, Guichon, Page, Mitchell, Doig, 2020) Midwives may experience flashbacks, intense weariness, panic, and a breakdown in their belief in the physiology of birth. This shattered conviction can undermine midwives' confidence and raise their anxiety of inflicting suffering or death, as well as facing criticism or legal action. As such, midwives can stop viewing labour and deliveries as physiological events, leading in heightened monitoring, risk management, and the use of unneeded interventions (Toohill et al., 2019).

In a study done in Ghana, participants compared a maternal death while getting monitored during labour as substandard care. This failure was attributed to the attending midwife, the midwifery unit, and the health facility where the woman received care. When the incident happened, the attending midwife was the first to feel a sense of failure. Family members, the community, and, in some cases, other members of the health team blame the midwifery unit and the health centre for the failure. This concept of failure, according to reports, fueled the client's family and community members' perceptions and rhetoric about the unit's and health facility's ability in delivering perinatal care (Aba Abraham et al.,

2020). Sheen et al., (2016) discovered that traumatic birth experiences cause midwives to experience feelings of guilt, fear, powerlessness, responsibility, doubt, vulnerability, and decreased professional confidence. Such horrific situations can have a long-term impact on midwives' professional perspectives and perceptions for days or even years, in addition to hurting their personal life.

Maintaining employee motivation and morale is just as vital as giving MDSR training and assistance. When recommendations are not followed through on, people lose enthusiasm and morale (Chirwa et al., 2022; Kerber et al., 2015; Lewis, 2014). Similarly, low staff pay and a lack of financial incentives have an impact on motivation and involvement in MDSR. Participants in Uganda lacked desire to attend MDRs, which were frequently held during lunch breaks with little incentives for participation (Agaro et al., 2016).

Many nations are currently implementing facility based MDRs. The literature underlines a key problem in the implementation of MDR: the lack of standardised MDR guidelines might lead to variances in review quality and effectiveness (Bandali et al., 2016). Furthermore, the lack of competence among healthcare personnel performing the reviews may result in insufficient or erroneous identification of causes and contributing factors (Owolabi et al., 2014). The emotional and psychological impact of MDR on healthcare personnel, particularly midwives, is frequently neglected. Inadequate support and tools for dealing with these occurrences can lead to burnout and decreased job satisfaction, lowering the quality of care delivered (Smith, Ameh, Roos, et al., 2017). These findings show substantial systemic and individual deficiencies in how reviews are conducted, necessitating purposeful steps to remedy such gaps. Failure to address such

issues can undermine the goal of MDSR which is to improve the quality of maternal health care.

2.6. Response stage

Participation in MDR is an intervention in and of itself since it improves analytical skills, peer learning, self-reflection, capacity building, and motivation to act (Chirwa et al., 2022; Hofman & Mohammed, 2014). Participants in Tanzania indicated direct learning as the incentive for taking part in the MDRs (Van Hamersveld et al., 2012). Over a three-year period in Malawi, FBMDR was associated with a significant decrease in hospital-based MMR (250 to 182 per 100,000 live births) due to significant improvements in the quality and utilization of EmOC and SBA (Kongnyuy et al., 2008). Within two years of MDR implementation, another study in Malawi found a 23% decrease in the frequency of direct obstetric complications (from 13.5 to 10.4 problems per 1000 deliveries), particularly uterine rupture (94% decrease) and hemorrhage (60% decrease) (van den Akker et al., 2011).

MDSR has enhanced access to care in a variety of settings. To increase referrals in remote areas, Malawi created bicycle and motorcycle ambulances as well as a radio system (Vink, et al., 2012). Similarly, in Zimbabwe, MDSR adoption resulted in the assignment of a midwife to each ambulance to offer initial care (Om'Iniabohs, A., et al., 2017). District officials in Tanzania donated gasoline for all ambulances transporting women from remote health centers, waiving the $150 ambulance cost they were expected to pay previous to MDRs (Nyamtema et al., 2010). Retired nurses were redeployed in northern Nigeria to overcome manpower shortages and ensure continuous availability of care following FBMDRs (Hofman & Mohammed, 2014).

The MDSR has also improved communication throughout the health system by connecting communities, health professionals, and health authorities. For example, 'liaison officers' were hired to follow referrals to higher-level facilities and communicate critical information about each case (Abebe et al., 2017). In Tanzania, MDRs have fostered close collaboration among health workers, particularly nurses and physicians (Van Hamersveld et al., 2012).

A systematic review of quality improvement interventions in SSA concluded that MDSR improves EmOC delivery, patient monitoring practices, diagnosis, and documentation of care in low resource countries (Wekesah et al., 2016). A district in Senegal modernized its laboratory, purchased a blood bank refrigerator, hired more health experts, and secured the availability of vital drugs and supplies 24 hours a day, seven days a week, resulting in a 55% decrease in maternal mortality (Dumont et al., 2009). Similarly, numerous stakeholders mobilized resources in Nigeria to purchase a generator and a solar refrigerator for blood products (Hofman & Mohammed, 2014).

Moreover, despite the laudable global growth of MDSR in recent years, the final part, which is response lags the most in terms of implementation and efficacy (Kashililika & Moshi, 2021). A study done in Tanzania on maternal death surveillance and response; specifically looking at the comprehensiveness of narrative summaries and action points from maternal deaths. Data on each action point implementation was not accessible and was not reported in this study. This was due to facilities' inability to give documented proof of action point implementation (Said et al., 2021). On the other hand, in Malawi, lack of priotisation in addressing identified gaps from reviews and honoring recommendations from senior management was a challenge to midwives (Chirwa et al., 2022). There is a

scarcity of published studies on the effects and implementation experiences of the MDSR, for midwives in underdeveloped countries. More particularly, transition experiences from MDR to MDSR; enablers and hurdles to full MDSR implementation or scale-up; and execution of the "response" component remain unstudied (Abouchadi et al., 2013; Kongnyuy et al., 2009; Mathai et al., 2015; Smith, Ameh, Roos, et al., 2017).

Further, political concerns deriving from terrorism, external pressure, and war limit the establishment of MDSR systems including implementation of the action plans even in adjacent nations, therefore boosting maternal mortality even at regional levels (Mamkhezri et al., 2022). Emergent humanitarian circumstances and conflict, as well as post-conflict and disaster conditions, greatly impede progress towards global health and well-being goals, particularly MDSR targets for reducing maternal mortality (WHO, 2023a).

MDR findings have had a favourable impact on healthcare practices. There are efforts underway to use MDR findings to drive systemic health-care improvements at both the local and policy levels. However, evidence suggests that keeping track of implementation status is difficult. Tracking implementation status is critical for maintaining effective accountability for shared responsibility in improving maternal health care quality (Bandali et al., 2016). The similarity in performance of low- and middle-income nations such as Tanzania, Ethiopia, and Nigeria, to name a few, provides context for how the MDR findings can influence accountability, actions, and reactions at numerous levels. Monitoring mechanisms are critical for assessing whether and how MDSR findings and recommendations have been implemented to track actions and outcomes. However, most countries lack adequate monitoring mechanisms, and if they do exist, they are

inadequate or nonexistent. These highlight systemic inadequacies in action implementation that must be addressed if MDSR is to be effective.

2.7. Summary

While MDSR is progressively being adopted, there have been few reports of the experiences of health workers, in particular midwives regarding their experiences during maternal death surveillance and response. Midwives play a critical role in the care of pregnant women during antenatal, labour and delivery, including postnatal periods as they provide direct care to these women, and may be present in an event of maternal death. Therefore, understanding their experiences may bring out the hidden facets of the care which can help improve the quality of the care rendered. This chapter has reviewed literature about maternal death surveillance and response following the MDSR cycle, looking at the purpose of the MDSR and the MDSR process.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1. Introduction

This chapter presents the research methodology that was utilized to address the objectives of the study. The study design, setting of the study, study population, sampling methods, inclusion and exclusion criteria's, sample size, data collection, data analysis, trustworthiness of the study and ethical considerations will be discussed.

3.2. Study design

The study adopted an exploratory descriptive qualitative approach (EDQ). The exploratory element allowed the researcher to gain insight about the midwives' experiences in implementing MDSR. On the other hand, the description of the midwives experiences provided a detailed account of their significance hence generating a clear picture from the perspective of the participants (Hunter et al., 2019; Polit & Beck, 2011).

3.3. Study setting

The study was conducted at a secondary health facility in Mwanza District. This facility provides healthcare services to patients across Mwanza district with a catchment area of 81,075 square kilometers and a total population of about 147,976 as of 2022. It is a referral hospital for the three health centers the district has but it also receives clients from the nearby districts and neighboring country, Mozambique, since it shares a border with Mozambique. Mozambique is a district with a recorded history of war and emerging conflicts, which impacts health seeking behaviours of its residents. The district hospital has about 7 clinical departments, one of which is the maternity department, which has a labor ward, a post-natal ward, an antenatal ward, and a neonatal nursery. Mwanza district

hospital also has an antenatal care clinic which runs every day, including conducting outreach clinics. The district hospital has a bed capacity of about 250 and a nursing and midwifery staff capacity of about 18 working in the maternity unit. Mwanza district hospital was chosen because it has an established MDSR system in place. In addition, despite having an established MDSR system, maternal deaths are still occurring, for instance, in the year 2023/2024 the hospital recorded 9 maternal deaths, and from April to date it has already recorded 6 maternal deaths (Mwanza DHO, 2023).

3.4. Study population

The study targeted midwives working in maternity and female wards, operating theatre, and antenatal clinic since they are directly involved in the care of pregnant women at all these levels. These midwives handle pregnant women and may have witnessed a pregnant woman dying under their care and were answerable for their actions of the care they gave through the MDSR process.

3.5. Inclusion criteria of participants

The participants who were included in the study were midwives who had worked in the maternity unit for at least half a year and had cared for at least one ‘near miss’, or a woman who had experienced a maternal death under their care and were answerable to their actions for the care they gave the woman during the MDSR. In addition, midwives who had ever worked as safe motherhood coordinators, nurse-midwife technicians and registered midwives were also included as participants of the study to achieve variation in the data collected.

3.6. Exclusion criteria for participants

The exclusion criteria for this study included nurse- midwives who had never worked in maternity unit since their deployment, nurse- midwives who had not worked in the maternity unit for the past twelve months prior to the period of data collection, nurse - midwives who had never cared for a 'near miss', or never experienced a maternal death, and finally nurse- midwives who had never participated in the MDSR process.

3.7. Study period

The study was scheduled to run from March 2023 to July 2023, in which the researcher was to develop the proposal, collect data, analyze data, and write the report. Data collection was done for one week from 29th January 2024 to 2nd February 2024 at Mwanza district hospital. All data was collected from the participants once.

3.8. Sampling method

Purposive sampling was used to select participants, this was so as the researcher deliberately chose the participants that best contributed to the study (Polit & Beck, 2011). Maximum variation sampling approach was utilized as midwives with dimensions in qualifications and responsibilities were included (Polit & Beck, 2011).

The hospital matron referred the researcher to the safe motherhood coordinator who helped identify other suitable midwives from the maternity and female wards, operating theatre, and the antenatal clinic. The nurse-midwives working in maternity wards and antenatal clinic were chosen because they provide direct care to the pregnant mothers and are involved in the maternal death surveillance and response cycle. The current and previous safe motherhood coordinators were chosen because they coordinate the MDSR

cycle. Midwives in theatre were chosen because they also provide care to pregnant women in theatre and are part of the MDSR team. Both nurse-midwife technicians and registered nurse-midwives participated in the study to achieve variation in the data collected. The participant's gender was a combination of both male and female nurse midwives to attain a balanced view of the experiences.

3.9. Sample size

Thirty (30) participants were planned to be recruited for this study, this was so to enable important themes emerge from the data collected (Hunter et al., 2019). However, 19 participants were interviewed during data collection because upon interviewing the fifteenth participant, no more new information was obtained in the next 4 interviews. The interviewer was guided by the principle of data saturation, that is sampling continued until it reached a point at which no more new information was obtained and redundancy was achieved (Burns & Grove, 2014).

3.10. Data collection

3.10.1. Data collection method

Nineteen (19) face to face in-depth interviews were conducted with the participants. The interviews were done in English with an average duration of 30 minutes for each interview. Of the 19 interviews, one interview was done through a phone call because the participant was away on a holiday, but still she was a key participant, as she was the incumbent ward in charge for the labour and delivery ward. The in-depth interviews helped the researcher obtain as much detail as possible from the participants as they provided participants a chance to devour more details about their experiences (Polit & Beck, 2011).

3.10.2. Data collection instrument

A semi-structured interview guide, developed in line with the study objectives to guide the data collection was used. The interview guide ensured that all question areas were addressed (Polit & Beck, 2011). The tool was developed in English as all participants were conversant with English language since they were all qualified nurse-midwives with a formal training done in English. The tool was pretested on the first two participants, after which no modification was needed since no ambiguity nor inconsistency was observed on the tool.

3.10.3. Data collection and management

All interviews were audio recorded using a recorder. The audio-recorded interviews were transferred to the computer for storage, and thereafter the audio recordings were transcribed word for word to English. All the transcripts were numbered sequentially, and each page was coded with the interview number and the participant number. The handwritten notes for each participant were kept in the writing pad and were coded with interview number and participant number like the one on the transcripts.

3.11. Data analysis

Thematic content analysis approach was used to analyze the data in order to capture key issues that emerged from the textual data generated from the in-depth interviews (Polit & Beck, 2011). The transcripts were read and the audio recordings listened to by the researcher and then the researcher proceeded to analyze the data using the six phases of thematic analysis by (Clarke & Braun, 2013), namely: familiarization with data, coding the data, generating initial themes, reviewing and developing themes, refining, defining and naming themes and producing a report (Clarke & Braun, 2013).

All audiotaped data from in-depth interviews were independently transcribed verbatim into English. The transcriptions were saved as Microsoft Word documents and then uploaded into the Nvivo12 software. The researcher coded and categorized the data after reading the transcribed material several times. The data were analyzed using the six step Braun and Clark's thematic analysis method. The first stage was to familiarize oneself with the data by reading it often and actively. The following stage was to generate basic codes, which were used to organize data at a given level. The final stage was to seek for themes by examining the coded and collected data extracts. The fourth phase involved examining themes to ensure that all coded data fit appropriately. The fifth phase was to define and name each theme, followed by writing the final analysis and summary of findings.

The complete data analysis procedure used both the deductive and inductive methodology. The researcher cross-checked the themes that emerged from the analysis with the appropriate quotes. The findings were given through a full description and interpretation of the theme meanings. Direct quotes from participants were also used in the findings write-up to offer readers with distinct visuals.

3.12. Trustworthiness of the study

3.12.1. Credibility

Credibility was achieved by making sure participants recruited were knowledgeable and had an experience in the MDSR process. The researcher used purposive sampling to achieve this. An audio recorder was used to capture data from participants during the interviews to ensure that no information was missed. Data were transcribed word for word from audio recordings to English. Direct quotes from participants were used

during reporting to ensure correct representation of the participants voices. Data collection was checked by the research supervisors for clarification and confirmation of data with participants. Prolonged engagement with participants was achieved through the researchers' continuous commitment to data collection and analysis.

3.12.2. Transferability

To ensure transferability, the researcher provided information on description of the setting, study population, and the inclusion and exclusion criteria for participants to allow the reader to envision the context and type of setting in which the findings and methods may be applicable.

3.12.3. Dependability

To ensure dependability, triangulation of the data collection method was considered depending on the depth of the data collected from the in-depth interviews. An independent co-coder helped during coding to ensure the consistency of findings. The research supervisors verified the codes with the transcripts before finalizing data analysis.

3.12.4. Confirmability

To ensure confirmability, the researcher documented personal biases and reactions during data collection in a diary to avoid influencing data collection and interpretation. The researcher also involved independent people; the research supervisors for verification of participants' responses against the questions set. Confirmability was achieved by checking for facts and by using probes to check if the researcher understood exactly what the participant said and what the statement meant. Records of main decisions and events were kept by the researcher during the field work in terms of dates, venues, and the mode of entry into the field.

3.13. Ethical considerations

Before data collection, the research proposal was developed and sent for review and approval at Kamuzu University of Health Sciences Research Ethics Committee. Approval was sought from Mwanza District Hospital management team so that the researcher be allowed to conduct the study. Ethical principles of beneficence, respect for human dignity, justice, and the right to protection from exploitation were considered by the researcher throughout the study to ensure study participants were protected. Study participants were asked to sign an informed consent form to enhance the power of free choice and informed participation. Participants were free to withdraw from the study at any time they wished to. No compensation was given to participants for participating in the study.

Data were protected with adequate anonymity, secrecy, and de-identification to ensure confidentiality. Hard copies of items containing personally identifiable information, such as consent forms, data forms, and interview guides, were kept secure with restricted access.

3.14. Summary

The research design and approach in the methodology chapter of this qualitative exploratory thesis were carefully chosen to align with the research objectives, with an exploratory descriptive qualitative approach (EDQ) used to understand the essence of the participants' experiences with MDSR. Participants were chosen purposefully based on specific criteria, and data was gathered through in-depth interviews. Thematic analysis was used to analyse the data and uncover themes, while member checking ensured the findings'

credibility. Ethical considerations were top priority, with strict protocols in place to protect participants' confidentiality and ensure informed consent. While limitations were acknowledged, the study maintained its credibility throughout, paving the way for future research in the same field.

CHAPTER 4: PRESENTATION OF STUDY FINDINGS

4.1. Introduction

This chapter presents the findings of the study on the experiences of midwives regarding the implementation of the MDSR at Mwanza District Hospital. As outlined in chapters one and three, the study identified three objectives to answer the research question. These objectives were to describe midwives' experiences regarding the identification and notification of facility-based maternal deaths, to assess midwives' experiences in the maternal death review process of the MDSR, and to identify midwives' response actions in the MDSR. The findings of the study are organized in the form of generated themes and subthemes. In addition to that, the findings are presented following the stages of the maternal death surveillance and response cycle.

4.2. Sample characteristics

Nineteen participants, comprising 12 females and 7 males, were purposively recruited for the study. The ages of the participants ranged from 26 to 46 years, with varying years of work experience spreading from 3 to 19 years. The participants were interviewed either face-to-face (n=18) or by telephone (n=1). The characteristics of participants are shown in table 1.

Table 1: Characteristics of participants

Demographic variable	Participants (N=19)
Age	
26-29	8
30-34	5
35-38	2
39- 42	2
43-46	2
Gender	
Male	7
Female	12
Professional Cadre	
NMT	7
CNMT	2
SNMT	1
NMT(RNM)	1
NO(RNM)	8
Work experience	
1-3 years	6
4-6 years	2
7-9 years	6
10-12 years	1
13-15 years	1
16-18 years	2
19-21 years	1

4.3. The study themes

The findings of the study reveal a journey of midwives' experiences, starting from maternal death identification, notification, and reporting to maternal death review and audit, and finally to the implementation and follow-up of action plans in the MDSR as shown in table 2, 3 and 4.

Table 2: Research theme 1 (thematic framework)

RESEARCH THEME 1: Experiences on Maternal Death Identification, Notification, and Reporting	
Subthemes	**Description**
1. Psychological impact on witnessing a maternal death	• **Emotional Impact:** Midwives' emotional responses to managing pregnant women at risk of maternal death, including trauma and distress. • **Coping Mechanisms:** Strategies for coping with intense pressure and limited resources during critical cases.
2. Protocols and procedures in Identifying and notifying Maternal Deaths	• **Recognition of Maternal Death Risk Factors:** Clinical indicators of potential maternal death and challenges in their identification. • **Communication:** Process and challenges of notifying maternal deaths to relevant parties. • **Communication channels and coordination**: Challenges in communication and coordination among staff and with guardians. • **Timeliness:** Importance and challenges of timely notification and reporting of maternal deaths.
3. Documentation and Reporting Practices	• **Content:** Format and challenges of documenting maternal deaths. • **Challenges in Reporting:** Maintaining accurate and comprehensive documentation.
4. Cross-Border Maternal Care	• **Referrals and Care:** Condition of women at referral and challenges in conduction MDSR on cases from the neighboring country. • **Cultural and Ethical Considerations:** Attitudes and challenges in providing care to cross-border patients. • **Policy Implications:** Suggestions for improving collaboration and coordination across borders.

Table 3: Research theme 2 (thematic framework)

RESEARCH THEME 2: Experiences on Maternal Death Review and Audit Process	
Subthemes	**Description**
1. Role of midwives in maternal death reviews	• Midwives' involvement in audits and providing information.
2. Audit Environment and Dynamics	• Composition of Audit Team: Staff involvement in audits. • Audit dynamics: Conduct during audit sessions and challenges in maintaining a supportive environment. • Audit environment and Atmosphere: Challenges and opportunities in audit reviews.
3. Emotional and Psychological Impact on midwives	• Psychological trauma: Impact on job satisfaction and support mechanisms. - Support and Coping Mechanisms: Challenges and effectiveness of support services.
4. Action planning	• The need for implementation: Translating audit findings into actionable recommendations. • Responsibility sharing: Assigning action points to personnel. • Documentation of action plans: Challenges in implementation and follow-up.

Table 4: Research theme 3 (thematic framework)

RESEARCH THEME 3: Experiences on Implementation and Follow-up of Action Plans	
Subthemes	**Description**
1. Facilitators in implementing action plan	• Coordination: Effective communication and coordination. • Supervision: Systems for supervising and monitoring action points. • Monitoring: Tracking progress through local registers.
2. Challenges in implementation of action plans	• Organization factors: Barriers to implementing action plans. • Monitoring and supervision: Challenges in effective monitoring. • Timing of Implementation: Delays in implementing action points.
3. Effectiveness of Maternal Death Surveillance and Response	• Impact of MDSR: Success and challenges in implementing action points. • Quality Improvement: Potential and shortcomings of MDSR.

4.3.1. Theme 1: Experiences on Maternal Death Identification, Notification, and Reporting

Participants were asked to describe their experience in identifying, notifying and reporting maternal deaths. Findings indicated the significant psychological impact of witnessing maternal deaths. They also outlined the protocols and procedures involved in identifying, notifying, documenting, and reporting these incidents. Participants emphasized the importance of thorough documentation and timely reporting, while also highlighting the complexities and challenges posed by cross-border maternal care issues, which require additional coordination and collaboration among different health systems and authorities. Four related subthemes were identified under this theme.

4.3.1.1. Psychological impact on witnessing a maternal death

Most participants narrated the profound emotional impact of witnessing a maternal death. They described the emotional toll of managing pregnant women at risk of maternal death, highlighting feelings of shock, trauma, and distress upon witnessing unexpected maternal deaths despite instituting medical intervention. One participant expressed the physical and psychological exhaustion experienced, stating*:*

> *"Of course, it affects in many areas. Physically, it affects that you go into exhaustion... you are struggling to save a life. So, you physically get tired, burn out. Psychologically, you are also stressed... you feel like demotivated, like you have done nothing" (IDI 14).*

Another participant recounted their first experience of a maternal death in the operating theatre, detailing the tension and inability to immediately communicate with the patient's guardians:

"I felt I could not manage to speak with them, because the patient was speaking when coming to theatre. Nonetheless, after one hour, it's when now, I revived myself, and now I can go out" (IDI 11).

Additionally, participants noted the frustration and sadness associated with the lack of necessary resources to save lives, with one stating:

"Mostly, it becomes painful that we offered the care but we have some things which are missing, which could have been vital to help the patients, but because these are not available, the patient died... you feel sad, it's sad. That I could have saved a mother who had a baby, but since the capability to save the mother or the baby is not around it becomes hectic and scary" (IDI 9).

Participants further reported receiving critical feedback from patients' guardians due to unmet expectations following maternal deaths, which profoundly affects them psychologically. One participant described the intense pressure and fear of retribution from guardians, stating:

"It was difficult to cope with the pressure... the guardians felt that we had done something to the woman. So, they said, we are going to deal with you. So, it was not easy to cope with the loss of the woman who was not even related to me" (IDI 7).

Another participant noted the high pressure from guardians who sometimes blame the healthcare providers, emphasizing the importance of providing psychological support and counseling to both guardians and healthcare staff,

"The pressure is high since the guardians... point fingers at you as if you haven't done any care... We were supposed to do psychological support, we counsel them... That counselling has happened" (IDI 9).

Due to the intense pressure participants experience when managing critically ill pregnant women, they discussed various coping mechanisms employed in such situations, especially when resources and staff are limited during emergencies. One participant explained the need to deal with available resources and multidisciplinary personnel, highlighting the challenges faced when adequate support is unavailable:

"You just need to work using the little resources you have, even the other teams available... But it is not easy to cope... the component of psychological support to the midwives that work in labor ward... is supposed to be there. And that's what is lacking here at Mwanza" (IDI 14),

4.3.1.2. Protocols and procedures in Identifying and notifying Maternal Deaths

Most participants narrated their experience of recognizing maternal death risk factors, identifying critical indicators such as shock, bleeding, and sepsis. However, some highlighted the challenges in identifying these indicators, which sometimes led to maternal deaths. For instance, one participant explained the difficulty in recognizing a deteriorating patient due to her pregnancy:

"In identification, it was not that easy because the patient was pregnant... But with the help of the clinician, we found that the patient was desaturating. That's when we realized that we were losing the patient" (IDI 5).

Another participant discussed the delays in clinician response, leaving midwives in a dilemma:

"The clinicians may delay coming, so at some point, the midwives... are in a dilemma" (IDI 11).

Additionally, the lack of resources was a significant challenge, as highlighted by a participant who described a critical shortage during a case of a ruptured uterus stating:

"Because she bled a lot, and she needed a lot of blood the same day... we had an element of the blood now" (IDI 17).

On communication modalities for maternal deaths, participants defined the processes and protocols for notifying the guardians, senior staff, and specifically the safe motherhood coordinator. One participant detailed the notification process:

"We notify the clinician... The clinician, after certifying... we come as a team immediately... So, the safe motherhood coordinator would notify the zone within 24 hours" (IDI 14).

They also highlighted the evolution of communication channels, noting improvements with the adoption of digital methods:

"We made some efforts to have a group... Because we used to send through fax, But still we needed to be phoning them….. and we were using the WhatsApp forum, but it was like the notifications were going very late. Maybe after a week or so, or sometimes some days….. But with the coming of the MARTSURV, it was so possible to do that within a day.

Because whenever you punched and logged into the system, and then you sent, they would receive the message the very same day" (IDI 17).

Participants also described the different communication channels used to report maternal deaths and identified gaps in coordination among healthcare team members and between staff and guardians. One participant mentioned the reliance on phone communication:

> "*We notified the coordinator... Mostly with phones. We used the switchboard to call the management"* (IDI 9).

However, another participant pointed out issues such as unavailability of drivers and lab technicians, which delayed critical care:

> *"The driver was not available... When another driver was informed... it was too late, the patient had bled a lot"* (IDI 10).

Furthermore, bureaucratic hurdles sometimes hinder timely action, as noted by a participant stating:

> *"The senior clinician tells the midwife that she/he does not have the mandate to call him... time is running out"* (IDI 10).

Regarding the timeliness of notification and reporting, participants emphasized the importance of immediate action to facilitate necessary interventions and transportation arrangements. One participant mentioned:

"Within two hours after the death has occurred... We reported it. Because it is something else. When MD has happened, it is like the whole hospital is shaken up" (IDI 9).

Another stressed the need for prompt reporting to manage subsequent procedures efficiently:

"Generally, it is not supposed to... take longer before you report... you have to ferry the body to where it is supposed to go" (IDI 4).

4.3.1.3. Documentation and Reporting Practices

On the content of the reports, participants described the comprehensive format of maternal death reports, which includes patient demographics, clinical history, and details of the care provided. One participant outlined the procedural aspects of reporting, emphasizing the importance of securing patient files to prevent tampering:

"The one on duty is the one who is supposed to write the report... All the interventions done are supposed to be written... The midwife should get hold of the patient's file, to avoid it being lost or other important information being altered" (IDI 10).

Another participant elaborated on the detailed content required in these reports, which includes personal particulars, medical and surgical history, antenatal visits, any treatments or surgeries, and the cause of death to ensure a thorough review of each case to identify gaps and improve future care practices:

"The report included the personal particulars of the patient... medical history, surgical history... antenatal visits... treatments... cause of death... and contributing factors. It also included the actions taken, what care was rendered, and what was missed" (IDI 18).

4.3.1.4. Cross-Border Maternal Care

Participants highlighted significant challenges in managing maternity cases from Mozambique, which borders Mwanza District, Malawi. They discussed the impact of cross-border referrals on maternal outcomes and healthcare delivery. One participant noted:

> *"There was a patient from Mozambique. You know Mozambique patient, they come very critically ill. So this patient came. She just came without any antenatal visits, without proper antenatal card. When I saw her on assessment, she was very pale. She has never attended any antenatal clinic or any antenatal assessment. Quick assessment indicated that patient was very pale… Her HB was very, very low…The patient .....needed emergency blood transfusion and there was no blood at the blood bank which matched with her blood group. It was a very critical condition. And we started running up and down to get maybe blood donors to save her life, but it was too late….. We tried to do our best to save the patient and the baby, but we ended up losing both. Because the mother did not go to any hospital to seek antenatal care, so it was my bad experience." (IDI 18)*

> *"We are neighboring Mozambique and this is like the facility usually, which is unlike the other facilities which are there. So usually the Mozambicans are here…. they usually refer their patients here. So we do have most of the cases coming from across our borders. So we also do have pressure because the cases which are coming from Mozambique, they are critical cases"(IDI 17).*

This delay in receiving care in Mozambique often results in patients arriving in a critical condition, exacerbating the challenges for healthcare providers in Malawi. The

difficulties in conducting response actions and community sensitization due to cross-border limitations were also discussed:

> *"... as I said the case was from Mozambique. So the other action point we were supposed to go and visit the community and sensitize the area, about the behaviour of seeking medical help when somebody is in labor or is experiencing some complications. But we didn't go because it's beyond the borders, so we didn't go" (IDI 14).*

> *"So we notified the guardians. Of course, they were coming from Zobwe. That's Mozambique part. Colleagues from Zobwe were notified. They didn't even come to collect the dead body. It is the DHO that took part in transporting the dead body to Zobwe"(IDI 18).*

Participants described the attitudes and perceptions of healthcare providers towards cross-border patients, including the ethical dilemmas and challenges faced in providing care. One participant mentioned the mixed attitudes of nurses towards Mozambican patients, noting cultural and treatment disparities:

> *"So, they reflect like Mwanza is having a lot of MDS. But in actual sense, it's not from Malawi. It's from Mozambique. And they come in a critical state. ...mostly they end into maternal death. They delay care there. When the decision has been made to be transferred here, it's late. When they are here, they are in a critical state…. To some nurses, it's the same. To other nurses, they will say a lot of things. Why did you go there instead of coming here?... But due to that, we take care of them here... though, it's not the same as Malawians"* (IDI 9).

Participants also discussed the policy implications for cross-border maternal care and referral systems, suggesting strategies for improving collaboration and coordination between healthcare systems across borders. They emphasized the need for more resources and staff to handle the increased patient load from Mozambique:

"There is a shortage of nurses and midwives, mainly here at Mwanza because we receive more cases... if they have to send us more midwives so that they can help" (IDI 2).

"...gives much pressure to the resources which are there. central level should consider, this is a boarder district, and most of the cases even the MDs we had, like in 2021-2022, you see 9 MD: 4 cases for Mwanza, but the other 5 cases sharing Mozambique. The zone needs to consider how they can be funding the district health office, coz we are serving catchment populations of other areas. Rather than only Mwanza .... but the facility is under pressure to serve many clients" (IDI 17).

Theme 2: Maternal Death Review and Audit Process

Participants were asked to describe their experience regarding maternal death reviews during the MDSR cycle. Participants described the role of midwives in maternal death review, the audit environment and dynamics, emotional and psychological impact of the audit on midwives and the action plans developed during audits.

4.3.2.1. Role of midwives in maternal death reviews

Participants described the role of midwives during audits which included participation in the audit process, providing information, and assisting in finding solutions as stated by one participant:

"Of course, the role sometimes is to highlight the care I have given to the woman. You also come up with other action plans…. You also give ideas of how maybe other disciplines can help you. And the other role is also to learn…. …Sometimes you also answer some questions, …." (IDI 14).

"The role of the midwife is to follow the proceedings. They might also help to give other information and making sure that the relevant documents and the case files are there, as well as trying to assist in finding solutions to some other problems we usually have, because they are part of the team" (IDI 17).

4.3.2.2. Audit Environment and Dynamics

Participants explain the audit setting, especially the difficulties in maintaining a supportive and nonjudgmental atmosphere during maternal death audits, as stated by one participant:

"I would say maternal death audits, surveillance, they differ with individual cases. Yeah. Sometimes …. it will be rising eyebrows, and it's like maybe some people be judgmental …... But all in all, I have experienced that it is good for the maternal death audits…." (IDI 7).

Another participant showed members' attitudes towards one another, such as blame, fault finding, and the support midwives receive during the process as indicated:

"The experience on the death audit was good. Even though others will think of it as if we are pointing fingers at one another…. The general environment of the audit was very conducive. …. Yes. My experience is not to take it personally but try to change whenever people are trying to tell you that you did not do something right.

...It was a bit difficult at first because people would say, ah, they're going to question you more, they're going to police you more…." (IDI 5).

Participants also highlighted the necessity of identifying core causes and possibilities for improvement in maternal healthcare delivery through maternal mortality audits to prevent future occurrences.

"…the main issue is always to learn where you did not do good. Maybe there was some shortfalls. And by looking at those, you will see that … now onward, we will need to be handling these situations like this. Otherwise, it's always very educative …" (IDI 4).

"People were not pin pointing to the person, but they were concentrating on constructing ideas …. They were trying to put forward things which could have been done better than they were done to save the life..." (IDI 14).

Participants further described the dynamics of audit deliberations during maternal death review sessions, including the composition of the audit team, feedback mechanisms, constructive criticism, and perceptions of fault-finding, including hiccups in the collaborative approach to analysing cases and formulating action plans, particularly blame attribution to nursing and midwifery staff, and deficiencies in clinician response.

"The composition of the audit team comes from the clinical side, … administration… the pharmacy, radiography, the nurses... but what I have observed is that most of the nurses who are not in the maternity department are not active in the participation of the audits, only a few, sometimes only the female ward" (IDI 17).

"...Actually, we do always say, we're not here for fault findings. It's the statement which is always repeatedly said there. But to my side, I do note, most of the times, I do know that they do…, we kind of finger pointing at some point. ... At some point, we have more fault findings. We have to reshuffle that department. We have to do this. So ...those statements, at some point, maybe ...a demotivation to all these people who are waiting on the ground" (IDI 11).

4.3.2.3. Emotional and Psychological Impact on midwives

Participants describe the psychological effects of witnessing a maternal death, including psychological trauma, burnout, job satisfaction, and retention among midwives and other healthcare workers. Including midwives' reluctance to attend maternal death audits for fear of being accused and to avoid confrontation as stated by one participant:

"It is a painful experience because the people present will talk as if there is nothing you did, as if the midwife was negligent for the woman to die. ... so for example the one from peads should be commenting as if the one on duty did nothing, ...yet all those things you did, so sometimes, you say better I shouldn't go, because when I go we may argue with people, instead of us learning ...it is like people are outshining each other, as if the one on duty is a failure, and has caused that the woman should die" (IDI 10).

Participants also discussed their coping techniques and the type of support they received throughout the maternal death audit experience, as well as the problems of support mechanisms for midwives engaging in maternal death audits as stated:

"Of course, ...It's not easy to cope. ...I didn't have any pressure. I was ready to attend the audit. Because maybe I was confident that I did my best to take care of the woman…." (IDI 14).

"Well, let me say there was no pressure at all, yes. …. Maybe the involvement of other members. …. Yeah, there were so many people around, and the decisions that were made on this woman, it was like we were working as a team. …. So, yeah, that gave me the confidence …" (IDI 7).

Participants also discussed the lack of staffing levels and resources to help midwives and healthcare teams in treating obstetric emergencies. They describe the usefulness of psychological support services for healthcare personnel dealing with maternal deaths as stated:

"Normally, according to my experience, I have noted that midwives are not supported. That's why they do run away from those audits…. Mm-hmm… And, you know, every blame goes to the midwives, because they say that the midwives didn't do well. Mm-hmm. The clinicians are always on the safer side. Mm-hmm … Yeah. So, some midwives refrain from those audits…Mm-hmm. It's like they know what clinicians do…." (IDI 18).

4.3.2.4. Action planning

Participants describe how action plans are created during audit reviews, including how action points are assigned to responsible persons for implementation, as stated by one partipant:

"Of course, it depends on the action. They are shared maybe to the nurse in charge in labor ward, to somebody, to the clinical side who is in charge. It can also be

shared maybe with the CPD coordinator, …. So, it varies, there is responsibility shared widely. That's all I can say" (IDI 14).

They also expressed disappointment with the tendency of not putting into action the plans that are agreed upon during audit reviews in order to improve the quality of care for the pregnant mothers:

"…each sitting, there are always points which are laid down to be followed. But …The moment you are going out of the room, you are done, you will never hear anybody talking about the very same issue, …So that has been a problem to us" (IDI 4).

On action plan documentation: Participants describe their experience with documenting action points, emphasising the significance of detailed documentation and the accountable personnel for data documentation as stated:

"It's the safe motherhood coordinator who always writes the action points. He told us to implement the action points…." (IDI 9).

Theme 3: Implementation and Follow-up of Action Plans

Participants were asked to describe their experience regarding implementation of action plans in the MDSR cycle. Participants discussed facilitators in implementing action plans, challenges in implementing actions plans and the effectiveness of the MDSR.

4.3.3.1. Facilitators in implementing action plan

Participants described procedures for supervising and monitoring the implementation of action points agreed upon during maternal death audits as stated:

"…. and you liaise with the support from the district nursing office… Sometimes you may see these action points need support from the central level, but those action points which can be implemented here, we have support from the DMO's office, the DHO, the DNMO, and most of the supervisors. They usually follow up on this…." (IDI 17).

Participants also emphasise the importance of using supportive rather than fault-finding tactics during audits, as well as a lack of supervision while implementing action plans:

"…maybe if more monitoring and evaluation is done to the maternity ward, if the management come and supervise and audit us, even though if we feel like they are policing us, but at times it's very helpful. Because you'll be very cautious in whatever you do…." (IDI 6).

"Yeah. Maybe the best way, maybe, would be mentoring them, though we do always speak on action plan, and say, we have to be doing mentorship, and what have you, but its not there" (IDI 11).

They described progress monitoring using local registers to monitor maternal death rates and action points:

"There is a local register. This register is used to track progress on all the MDs and the action points. Usually we say, this time we have these deaths, three or four, how many have been audited? Or two" (IDI 17).

4.3.3.2. Challenges in implementation of action plans

Participants described the difficulties encountered in effectively monitoring and evaluating maternity healthcare practices and outcomes. Including the lack of appropriate

supervision and monitoring procedures to ensure the implementation of agreed-upon action plans, as well as the impact of inadequate supervision on outcomes and improvement efforts:

> *"Most of the times, it's always, maybe I can say that this is a shortfall of this hospital ...you will never see a continuation…. So, following it up becomes a problem... You see that there's completely nothing. You just do the death audit report, death audit, after completing it, it's always forgotten. I don't know" (IDI 4).*

> *"That's where I'm saying it was challenging, yes, because you document something today that is needed as soon as possible, and then to acquire such things takes quite a long time, and even after you have forgotten, there was such a case at hand. So, follow-up was quite a challenge, … No, there was no supervision" (IDI 7).*

Participants also describe how inadequate coordination among health care staff in the maternity section affects the midwives and the care they provide as stated:

> *"…But at some point, maybe the clinicians may delay coming, so at some point, the midwives, they are on dilemma to say, how should I proceed with this since the clinician is not yet here, while on my side, I've done it. Yeah, that's what I noted" (IDI 12).*

> *"Mm-hmm. Because normally, the root causes, mostly clinicians take time to come despite us calling them in good time that there's this case, you're supposed to come and see the patient. Mm-hmm. It's an urgent case. So, they don't treat an emergency case as an emergency. Mm-hmm. They show up at their convenient time" (IDI 19).*

Participants also describe organisational factors that act as barriers to implementing action plans and recommendations resulting from maternal death reviews, such as resource constraints, staff capacity, and a lack of active partners and support at both local and central levels, all of which have an impact on the implementation process and overall care quality, as stated:

> *"…mostly some actions, the actions on the hospital actions are done, but the community actions it's a challenge due to lack of resources… we cannot just go, …So that process delays and mostly the implementation is minimal in the community, but in the hospital at least we try" (IDI 14).*

> *"We lack support because most of the action points rely on support. …may be the work shifts or so on. ……. but they are willing to do so, because I've seen the midwives, because even with the pressure in their work, they still continue" (IDI 17).*

Participants described the delays that they encountered when implementing action points such as shift patterns and workloads:

> *"The time frame depends on the action, how big the action plan is. for example it's just a CPD session, we can give it a week. …, …like for the other implementation, like the community ones, that's when we can give maybe a month or two …So, it depends on how big the action plan has been drawn" (IDI 14).*

> *"The timing now is really a problem. Sometimes we say we need to do this in a week or so, but you see, it may take a month, maybe. Because with the shifts themselves, …So for them to know that we have taken these paths for the*

implementation of this, it will be now, the time will be passing …. But we do the implementation, but it's just so slow, it's not timely" (IDI 17).

4.3.3.3. Effectiveness of Maternal Death Surveillance and Response

Participants described the impact of the MDSR, emphasising uneven success in executing action items, which impacted the quality of care provided. Participants recognised the potential ofmaternal mortality surveillance to improve care quality and outcomes but emphasised the need for systemic improvements in follow-up and implementation as stated:

"So, with those action plans, we have seen that it has been very, very helpful. Mm-hmm. Everyone is now responsible, especially on the part of the clinicians, they are responsible. And number of maternal deaths has reduced in Mwanza. Working as a team is helping and also when we audit, we are able to identify the root causes of the deaths, it has been very helpful" (IDI 19).

Participants emphasize the importance of maternal death surveillance, but also highlight its impact in its current implementation, such as MDSR Addressing Infrastructure and Resource Gaps, Improved Communication and Reporting Protocols, and the Impact on Healthcare Provider Attitudes and Practices, as shown in the quote below:

"So, when we went for auditing, we found that there is lack of cylinders here. We need to refill the gases throughout, so that this problem. So, our bosses managed to lobby with partners, so they built up the cylinder plant there. So, nowadays we have it. …Because we do maternal auditing, we see what, oh, there was this problem. As a result, they plant a gas cylinder, which sometimes back, we didn't have. It helped us a lot" (IDI 2).

4.4. Summary

A maternal death incidence has a negative psychological, emotional, and physical impact on midwives, as well as repercussions on the midwifery unit and health facility as a whole. This chapter presented the study's findings based on the three main themes and eleven subthemes that resulted from the data analysis.

Chapter 5: DISCUSSION OF FINDINGS

5.1. Introduction

The goal of this study was to explore the experiences of midwives regarding implementation of maternal death surveillance and response at Mwanza District Hospital, with a focus on the MDSR cycle. This study used a qualitative study design, with 19 in-depth interviews. The data was analysed using Braum and Clark's thematic approach. This chapter highlights the important themes that arose from the data analysis in relation to the MDSR literature. The discussion is presented following the stages of the MDSR framework, focusing on stage one, two and four of the framework, as themes discussed are according to those stages. The chapter finishes by discussing the study's limitations, as well as the implications for practice, policy, and future research.

5.2. Theme one: Experiences on Maternal Death Identification, Notification, and Reporting

The first research theme discussed the psychological impact of witnessing a maternal death, protocols and processes for identifying and notifying maternal deaths, the documentation and reporting process, and cross-border maternal care issues.

5.2.1. Psychological impact of witnessing a maternal death

At Mwanza district hospital, most midwives expressed shock, distress, guilt, fear and powerlessness following a maternal death. This may contribute to some people developing major mental disorders, which can have an impact on their professional performance as well as their perception of the profession and the physiology of pregnancy and birth (Oni-Orisan, 2023). Studies indicate that how individuals traverse such experiences may influence their actions in the future; if they navigate it adversely, they

may begin initiating unneeded interventions motivated by fear, or they may even seek to be transferred to another department (Oni-Orisan, 2023; Schrøder et al., 2016). However, if they approach the experience positively and with assistance for quality improvement, it can be viewed as a learning opportunity (Bingham et al., 2023).

Midwives give a unique form of close support to pregnant women characterized by great sensitivity. This special function and closeness may expose midwives to emotional distress and increase their risk of 'compassion fatigue' in an event of maternal death and the audit reviews that follow (Bingham et al., 2023; Cavanagh, Cockett, Heinrich, Doig, Fiest, Guichon, Page, Mitchell, Doig, 2020). Midwives may experience flashbacks, intense weariness, panic, and a breakdown in their belief in the physiology of birth. This shattered conviction can undermine midwives' confidence and raise their anxiety of inflicting suffering or death, as well as facing criticism or legal action. As such, midwives can stop viewing labour and deliveries as physiological events, leading in heightened monitoring, risk management, and the use of unneeded interventions (Toohill et al., 2019). In a study done in Ghana, participants compared a maternal death while getting monitored during labour as substandard care. This failure was attributed to the attending midwife, the midwifery unit, and the health facility where the woman received care. When the incident happened, the attending midwife was the first to feel a sense of failure. Family members, the community, and, in some cases, other members of the health team blame the midwifery unit and the health centre for the failure. This concept of failure, according to reports, fueled the client's family and community members' perceptions and rhetoric about the unit's and health facility's ability in delivering perinatal care (Aba Abraham et al., 2020). Traumatic birth experiences cause midwives to experience feelings of guilt, fear, powerlessness,

responsibility, doubt, vulnerability, and decreased professional confidence. Such horrific situations can have a long-term impact on midwives' professional perspectives and perceptions for days or even years, in addition to hurting their personal life (Sheen et al., 2016).

5.2.2. Protocols and processes for identifying and notifying maternal deaths

According to the study, most midwives followed the proper processes for notifying the maternal death, however most of them felt unprepared in managing a critically ill pregnant woman and identifying maternal death in the maternity department. Lack of basic emergency care skills, increased workloads, staff shortages, and long working hours, as well as a lack of resources, all contributed to midwives feeling helpless during the maternal death experience. As a result, they failed to adequately manage the mother, leading to avoidable maternal death. This is consistent with what Bingham et al., (2023) discovered that the majority of the midwives had not undergone any refresher courses on the management of maternal death. The primary source of knowledge about incident management was experiential, beginning with the individual's own experience with a mother’s death. Although some midwives claimed to receiving on-the-job training from their older colleagues, the innate desire to avoid a similar situation during their shifts inhibited information transfer. Similarly, Leinweber et al., (2017) showed that rising workloads, staff shortages, and extended working hours frequently impede midwives from processing and overcoming these sentiments, exposing them to post-traumatic stress, compassion fatigue, and burnout.

A study of Croatian midwives also discovered that a range of job-related stressors, such as a shortage of manpower and other work resources, inadequate workplace

organisation, and a lack of contact with superiors, might be problematic for midwives in hospital-based practices Dartey et al., (2019); Knezevic et al., (2011); Sheen et al., (2016) discovered that maternal mortality has a significant emotional and psychological impact, but midwifery training does not adequately educate midwives to manage maternal death. Midwives need time to digest what had happened in an event of maternal death, and they sometimes need their colleagues to start the process of notifying their bosses and other team members about the death. Some of the midwives find it unsettling to reflect on the events that led to the women's deaths as they attempt to recall all the tasks they had undertaken for the client during the shift. In another study, it was discovered that the process of notification of maternal death and participation in the maternal death audit was a time of reflection for midwives, which at times was interrupted by colleagues who shared up to support the attending midwives (Aba Abraham et al., 2020).

On the other hand, there was an improvement on the notification system, which previously was hectic, using fax and telephone, now with the coming in of a new system called MARSURV notification of maternal death is easy and timely. Midwives were also knowledgeable on what information to include in the report when notifying about maternal death. This resonates well previous findings in other studies in which indicated underreporting of deaths which was observed because of fear of being blamed, political pressure, social stigma, and cultural beliefs (Kongnyuy & van den Broek, 2008; Richard et al., 2009). There was also no mandated reporting for deaths that occurred outside of a hospital. Fear of being blamed led to withholding or altering facts, in accurate and incomplete information. Staff lack of grasp of aim, inadequate record keeping, resource shortages; insufficient time to collect data; data collecting forms that were too long and

difficult or unavailable in certain cases were also noted (Willcox et al., 2023). However, at Mwanza district hospital, midwives showed responsibility to secure the file for the patient to avoid altering of facts and missing of some important information from the file which is common practice when the file is not secured.

5.2.3. Documentation and reporting process

The reporting and documentation of actions done by the midwives in this study were congruent with the protocols and guidelines for facility based maternal death surveillance and response and the national protocol on maternal death review. Even in the presence of clinicians, midwives documented the events that lead to the death in the patient files and in their report book. This is important as this information is required for the certification of the death and for the audit.

Prompt reporting of maternal death is critical for the start of MDR actions, and it should be done immediately by healthcare workers who are attending to the client at the moment of death. In the absence of a specialist or medical expert, the national policy requires the most senior midwife on duty to perform maternal death certification (World Health Organization, 2004). However, for Mwanza district Hospital, no trained senior midwife is available at the facility which poses a challenge to midwives when clinicians are not readily available to certify the death.

Furthermore, the trend at Mwanza in this study, indicates an improvement in documentation, as previous studies in Malawi showed missing of important information from the patients files during maternal death audits (Chirwa et al., 2022; Kongnyuy & van den Broek, 2008; Owolabi et al., 2014).

5.2.4. Cross border maternity care

In this study, midwives had diverse attitudes towards managing women from Mozambique, with majority being critical since they did not completely comprehend the service agreement between the Malawian government and Mozambique. This affects midwives' responses to the care they provide to such women, as well as putting a strain on their already limited resources. As a result of Mwanza district being across the border, midwives are unable to provide feedback to Mozambique on the irregularities they notice in the treatment pregnant women get in Mozambique. This impedes quality improvement, and the unfavourable outcomes have an impact on Mwanza's maternal health indicators, even though the problems are in Mozambique, but the outcomes are reported by Mwanza district health office. This is consistent with research findings that show that political dangers caused by terrorism, external pressure, and conflict in neighbouring nations raise the rate of death in the original country. This implies a spillover impact of regional conflicts on the rise of maternal mortality at the regional level (Mamkhezri et al., 2022)**.**

In USA where a death occurs does not always match to where the deceased lived or received medical care. Cross-border information sharing poses challenges for many states due to state statutes governing maternal mortality review and data collecting, each with its own regulatory structure and review methods. Inadequate access to detailed information can have a negative impact on maternal health (Hodder, 2021). This was the same at Mwanza district hospital, as it was not possible to access health care information on pregnant women who came from Mozambique which were much needed during maternal death reviews.

Rocanello-Snow, (2021) highlighted that attacks that disrupt the functioning of a community or a country have an indirect influence on maternal health because they target key socioeconomic determinants of health such as transportation, education, and healthcare infrastructure. Women's subordination and terrorist occupation in specific territory make it dangerous for women to travel and seek medical care, particularly when doctors are not available. This is in line with the situation in Mozambique, a lot of pregnant women are afraid to walk long distances to access maternity health care in their country instead they come to Malawi, though late and with complications.

According to United Nations women's data, the maternal death rate in war-torn nations is high, and more than 800 million people reside there. External and internal conflicts, such as foreign pressure, war and cross-border, civil disorder, terrorism, and civil war, are common in Middle Eastern and African countries, including Mozambique (Mamkhezri et al., 2022). Global trends obscure significant disparities in maternal survival between regions of the world and countries within those regions, and emergent humanitarian settings, as well as conflict, post-conflict, and disaster situations, significantly impede progress towards global health and wellbeing goals, including targets for reducing maternal mortality, such as MDSR systems (WHO, 2023a).

5.3. Theme two: Experiences on Maternal Death Review and Audit Process

The second research theme discussed the role of midwives in maternal death review, the audit environment and its dynamics, emotional and psychological impact of the audit on midwives and how action plans are developed during audits.

5.3.1. Role of midwives in maternal death reviews

In this study, the activities performed by midwives during the reviews were consistent with the MDR guidelines. It was discovered that midwives play an active role in the MDR in providing comprehensive background to the events that occurred prior to the maternal death. As major stakeholders, they also offer recommendations for future actions. This is encouraging because their active participation can help improve quality which eventually can reduce avoidable maternal deaths.

As observed in another study, indeed midwives serve a variety of functions in different health systems and MDSR models, but they are often the major providers of antenatal, intrapartum, and postnatal care. This proximity to the delivery of care equips midwives to make a distinctive contribution to successful MDSR systems. They have important information to share (Owolabi et al., 2014). They will gain a better understanding of the scenario, including the woman's point of view and the available drugs and equipment. They will understand why the woman arrived late at a health facility and what her family dynamics are. Midwives' unique views can help committees make the most relevant judgements when reviewing maternal deaths and, more broadly, in MDSR.

Unfortunately, midwives are not as involved in maternal death reviews or as broadly in MDSR systems as they could be (Mamaye, 2016). The facility based MDR process requires evidence of maternal deaths to be collected and documented appropriately. All collected evidence should be effectively examined to get at the reason of the woman's death (World Health Organization, 2004). Midwives are custodians of this evidence due to their proximity with the cases being reviewed.

5.3.2. Audit Environment and Dynamics

The study revealed that midwives were concerned with themes like as fear, guilt, blame, and humiliation, which would not typically be addressed through psychological treatment such as debriefing from the support system. As a result, several midwives avoided attending maternal deaths audits, undermining the audits' objective of improving quality. Despite professional recommendations from WHO emphasising the necessity of shifting away from a blame culture, this message is not reaching the workers engaged in maternal deaths. Finger-pointing, blame, fear and guilt still occur during maternal death audits. While MDR is based on the idea of 'no blame, no shame,' there are various intrinsic characteristics and contextual elements that mistakenly perpetuate the fear of blame in a variety of settings (Abebe et al., 2017). In situations where there is blame culture and fear of disciplinary action remain, studies have frequently observed a lack of transparency and poor participation in MDR sessions (Agaro et al., 2016; Kongnyuy et al., 2009; Van Hamersveld et al., 2012). This was also noted at Mwanza district hospital. As some midwives preferred not to attend the maternal death review to avoid getting into conflict with collegues due to being accused. In his study, Schrøder et al., (2016) discovered that in the aftermath of a traumatic birthing experience, which includes maternal death, was that the major attention is on the patient rather than the health care provider, in this case the midwife. Although it is recognized that second victims also need support, low health care finances and a poor knowledge of how to work with health care practitioners in such circumstances pose a barrier (Wu AW, 2000).

5.3.3. Emotional and Psychological Impact on midwives

While many midwives expressed frustration and stress as a result of maternal mortality audits, others saw the experience as an opportunity for professional growth. The dissatisfaction and stress were caused by the insufficient support midwives received throughout the experience; yet, midwives who did their best in caring for the mother, even though she died, considered the audits as opportunities for learning. However, most midwives did not receive the necessary support, and while the audit environment was judged favourable, most midwives reported concerns of inadequate communication, blame, and humiliation during the deliberations. Similar to Aba Abraham et al., (2020) study, there was clearly a lack of coping support from midwifery leadership and hospital management, and debriefing chances were limited. In contrast, in other situations, such as inner-city UK, debriefing and help are available following a comparable incident. This is consistent with what (Elmir et al., 2017; Toohill et al., 2019) discovered in their research: certain midwives may enjoy positive personal and professional growth when provided the opportunity to speak with a sympathetic listener, hence they can cope with the aftermath of witnessing such a horrific event. Healing can begin in a secure, supportive, and nonjudgmental setting that encourages debriefing. This encourages contemplation and learning, which can help to reduce feelings of self-blame and ineptitude. As a result, midwives can become introspective rather than defensive practitioners, which enhances their communication, confidence, and ability to maintain positive interactions (Elmir et al., 2017; Toohill et al., 2019) .

Coping is vital in workers' lives since it enhances their overall well-being and health. This study showed disparities in how midwives dealt with the strain of maternal death

audits. This is congruent with the findings of Dartey et al., (2019), who discovered that no two people deal in the same way since they have diverse resources such as motivation, self-esteem, and personal control. The ability to cope with a difficult situation is primarily determined by trait culture, resilience, and personality, and hence coping style is not dependent on the individual.

5.3.4. Action planning

In this study, midwives as key stakeholders actively participated in formulation of action plans by giving recommendations and taking up responsibility for actions assigned. This was encouraging as the willingness to participate at this level would eventually help improve the quality of care if the plans are put into action. It is emphasised that midwives' involvement in the process of developing maternal death recommendations might increase their commitment and likelihood of implementing the offered recommendations and actions (World Health Organization, 2004). This could result in women receiving greater attention, support, and high-quality care from midwives. As observed in another review, it is critical during maternal death reviews to be willing to collaborate with members of the multidisciplinary team to improve care quality and provide better guidance to health professionals. Non-clinical health system players, such as health inspectors, administrators, particularly administrative leaders, and politicians, are also critical to the process. While clinical actors can lead the surveillance and review processes, non-clinical health system actors must be involved to enable the ‘response' aspect of the MDSR cycle, which includes identifying and ensuring funding, resource allocation, and policy changes that allow recommendations and actions to be implemented (Mamaye, 2016).

5.4. Theme three: Experiences on Implementation and Follow-up of Action Plans

The third research theme discussed facilitators in implementing action plans, challenges in implementing actions plans and the effectiveness of the MDSR.

5.4.1. Facilitators in implementing action plan

In this study, midwives identified supportive supervision and availability of both human and material resource as elements which can help the actions to be easily implemented. However, these elements were not available at Mwanza as such no significant improvement or change was observed on the issues that are noted during audits. This demotivates the midwives leading to burnout. According to a Ugandan study, the most important facilitators of implementing action plans in MDSR were integrating all health workers in the MDSR process, eliminating blame, strengthening leadership, following MDSR recommendations, and functionalizing lower health facilities (Namagembe et al., 2023). Smith, Ameh, Godia, et al., (2017) found that the major drivers for successful implementation of MDSR were an adequate legal framework, a no-shame, no-blame culture, government and political commitment, and the ability to reflect on practice and manage change as a team for recommendations to be implemented. These are consistent with the shortcomings identified in the study's findings regarding the implementation of action plans (Smith, Ameh, Godia, et al., 2017).

5.4.2. Challenges in implementation of action plans

In this study, supervision of actions planned was inadequate. This was so as there was no proper follow up on the actions that were planned to address issues from the maternal death audit. This contributed to midwives' poor performance as they are demotivated when the leadership does not address the issues in the audit. This is similar with the findings of

Merali et al., (2014), who discovered that the largest avoidable factor contributing to maternal mortality was poor health-care practice. These deaths may have been avoided if health workers performed better, and supervision is an important part of quality improvement that was not addressed in this study. According to others, the presence of health care providers at deliveries does not guarantee the safety of women and newborns. Adequate health worker training is essential, as are refresher courses and patient safeguard quality efforts like as supportive supervision, which serve to guarantee that health professionals consistently deliver basic levels of care at every delivery (Merali et al., 2014).

The study also discovered that there was poor communication and collaboration amongst midwives and clinicians, as a result the issues of blame, and refusal of responsibility was present during audits. This affected midwives' performance as they still need clinicians' opinion on different cases in line of duty, of which they find challenges to get hold of the clinicians most times leading to poor outcomes. Collaboration between physicians and nurses may improve a number of patient outcomes and diseases. Researchers identify open communication, trust, respect, shared leadership, appreciation of unique contribution, and collegiality as enabling variables for successful interprofessional relationships. The midwives were not exposed to the majority of these components during MDSR. According to researchers, barriers to good interprofessional collaboration include time constraints, a lack of explicit descriptions of each other's roles and tasks, poor organisational support, a lack of clear leadership, different standards of professional values, different goals and priorities, and vertical management structures with discriminatory power structures (Matthys et al., 2017).

In this study there was poor organizational support to the midwives. The workload for midwives was huge, they worked long shifts and very few per shift, there was also inadequate material resources to help them manage clients better. This affected their performance as their focus would be on routine tasks as such, they are not fully prepared to handle emergency conditions leading to avoidable maternal deaths. This is consistent with findings from a study conducted in Uganda, which found that the major barriers to MDSR implementation were insufficient knowledge and skills, fear of blame or litigation, failure to implement recommendations, burnout due to workload, and insufficient leadership to support health workers (Namagembe et al., 2023).

5.4.3. Effectiveness of Maternal Death Surveillance and Response

In this study, midwives revealed that MDSR had helped to improve their performance on duty as they are aware that they will be answerable for the actions they institute during care as such the quality of care has improved which has contributed to a significant decline in the number of avoidable maternal deaths they are experiencing now. Response from MDR helped management build an oxygen plant to ensure that critical pregnant women requiring oxygen supplementation are assisted properly. Oni-Orisan, (2023) noted that every maternal death has a story to tell and provides information to unlocking barriers to improve services. Findings from MDSR can provide evidence to influence actions and advocacy among those in the health care sector but also beyond including policy and decision makers, non-governmental organisations and communities among others (World Health Organization, 2004). At a general hospital in Jigawa state, Nigeria, hemorrahage was found as a leading cause of maternal deaths due to insufficient blood supply and non-functional blood banks. In response, service providers sensitized the public to encourage

voluntary blood donation, which led to the formation of blood donors club. Similarly with the expansion of the MDSR system in Ethiopia, responses to findings led to recommendations for focused postpartum hemorrhage training for facility personnel, availability of hemorrhage guidelines, and job aids at all health facilities among other actions. In one facility, additional operating space was established with appropriate anesthesia support to reduce waiting times for emergency procedures. There is improved communication within the hospital and among different professional groups including midwives, anesthetists, obstetricians, managers and laboratory staff (Bandali et al., 2016). Findings from MDSR can influence accountability, actions and responses at multiple levels.

5.5. Possible constraints

One of the constraints in the study was that the study was conducted at one district health facility hence results cannot be generalized since the views of participants in Mwanza cannot be the same elsewhere. Findings could be enriched if the study was also conducted in other districts. The other limitation was time because the researcher had to work within the academic calendar.

5.6. Unique contribution of this study to midwifery

This study identified critical gaps that midwives face in the implementation of the MDSR process, which may hinder their ability to effectively contribute to maternal death surveillance and response. By highlighting these challenges, the findings provide valuable insights that can inform national policy development and guide the design of targeted interventions to support midwives.

A key contribution of this study is the recognition of the emotional and psychological burden midwives experience when engaging in the MDSR process. Addressing this issue is essential for ensuring both their well-being and the quality of care they provide. The study underscores the need for structured institutional support mechanisms, such as dedicated spaces within healthcare facilities where midwives can access mental health resources and debriefing sessions following traumatic events. Strengthening such support systems can enhance midwives' resilience, improve their engagement in MDSR activities, and ultimately contribute to better maternal health outcomes.

5.7. Recommendations

This section outlines recommendations and suggestions of areas for further research. Recommendation for policy, practice and research will be highlighted in line with the findings and discussion of this study.

5.7.1. Recommendation for policy

National guidelines are required for maternity care and mental health services in order to raise client and midwives' knowledge of maternal mental health issues, including management of maternal deaths, and to provide evidence-based, doable methods for assessment, prevention, and management. Nevertheless, protocols for managing the psychological challenges of midwives in Malawi, and the Mwanza DHO in particular, are still lacking. The mental and psychological therapy that could help midwives deal with such psychological traumas are not available in Malawi. Therefore, during review of the maternal and neonatal health guideline, section should be included discussing MDSR, including mental health support in MDSR.

There is also a need for the development of support and debriefing models that incorporate established pathways of support for midwives following maternal death, as there is currently no structured programme for debriefing or support for midwives who attend to women who die during pregnancy, labour and delivery, or postpartum at Mwanza District Hospital. Debriefing sessions can help midwives communicate their emotions, improve coping skills, and promote emotional healing and recovery.

An unexpected maternal death may be seen as a major occurrence, necessitating that leadership consider the emotional well-being of all professionals involved in the patient's

care. To help staff cope with the impact of a maternal loss, the organisation and leadership team can use debriefing principles, in which a crisis intervention expert works with the group to identify both healthy and unhealthy coping skills and follows up with affected individuals who require ongoing assistance (Dietz, 2009). The stress of these experiences may escalate to a level of grieving that is beyond a midwife's present coping mechanisms, as a result debriefing strategy might help to start the healing process, improving the physical and mental wellbeing of affected midwives.

The government of Malawi and Mozambique should sign a memorandum of understanding to share maternity records with one another and to corroborate in case of maternity care and maternal death surveillance and response to prevent maternal deaths. This is so because collecting complete data on maternal deaths can be challenging when care was provided outside of the woman's state of residence (Hodder, 2021). In addition, the government of Malawi and Mozambique should sign a service level agreement of what services women from Mozambique should access in Malawian hospitals to ensure responsibility for resources is equally shared by the two countries and to ensure that both parties understand the exact nature and quality of health service to be rendered.

5.7.2. Recommendation for practice

Maternal death surveillance and response principles must be integrated into all maternity care settings, as well as midwifery training programs. Midwifery training institutions should review their curriculum at all levels, so that issues of maternal death surveillance and response are included. This is important as midwives will be prepared of such occurrences preservice so that they are not taken unawares by such incidences during practice. This helps them mentally navigate such events better.

Limited competences among health care workers, particularly midwives, are identified as important factors to increased maternal and neonatal mortality in LMICs (Mwakawanga et al., 2023). This resonates well with the experience of midwives at Mwanza when attending a critically ill pregnant woman, some of them could hardly notice that a pregnant woman's condition was detoriating and no proper actions were taken according to the findings of the study. Therefore, it is recommended that continuous professional development for nurses and midwives through training, mentorship and supervision programs be instituted to improve maternal outcomes.

5.7.3. Recommendation for research

More studies are needed to provide a more comprehensive knowledge of the mechanisms explaining how the maternal death surveillance and response approach contributes to maternal morbidity and mortality prevention. More research in Mwanza can be conducted to determine the effectiveness of the MDSR since its inception. Another area of research may be to investigate the cross-border factors that influence maternal morbidity and mortality, as well as the MDSR system at the Mwanza district health office.

5.8. Conclusion

The goal of this study was to explore the experiences of midwives regarding maternal death surveillance and response at Mwanza District Hospital. The study adopted an exploratory descriptive qualitative approach (EDQ). In depth interviews were conducted with a total of 19 midwives, selected through purposive sampling, using semi structured interviews which were audio recorded. To analyse the data, thematic analysis was used following the six steps proposed by Braun and Clarke and NVivo 12 software was used

during the analysis. The step-by-step process by Braun and Clarke was followed, starting with familiarization of oneself with the data, followed by preliminary coding, organizing themes, developing initial codes using the code book and finally refining the themes according to the entire data set.

Three main themes and eleven subthemes were generated from the study. The first theme focused on experiences on maternal death identification, notification, and reporting. Subthemes were psychological impact of witnessing a maternal death, protocols and processes for identifying and notifying maternal deaths, documentation and reporting processes and cross border midwifery care. The second theme related to the experiences on maternal death review and audit process. Subthemes were role of midwives in maternal death reviews, audit environment and dynamics, emotional and psychological impact on midwives and action planning. The last theme focused on experiences on implementation, and follow-up of action plans. Subthemes included facilitators in implementing action plans, challenges in implementing action plans and effectiveness of maternal death surveillance and response.

Overall, the findings of the study revealed the physical and mental burden of midwives regarding implementation of maternal death surveillance and response at Mwanza District Hospital. This is associated with increased workload, shortage of staff, lack of resources, lack of moral and physical support, inadequate supervision, unmet expectations from action plans, cross border maternal care factors, culture of blame and shame just to mention a few. On the other hand, midwives attested to the importance of the MDSR system as it provides a platform for checks and balances hence improving the

quality of care. Midwives also, seem to be committed to improve the quality of maternal health care they provide amidst such experiences.

Witnessing maternal death, as well as the process of maternal death surveillance and response, places a heavy psychological and sometimes physical strain on midwives, and regular attempts to deal with such issues often translate to visible signs of them shunning maternal death audits, frustration and brain drain. In addition to having right knowledge and skills, midwives must also receive physical, emotional, and psychological support during such experiences to be at their best. The system must ensure that midwives are prepared for uncertain times such as maternal death so that they are able to bear and withstand the pressure that accompanies such an experience. To avoid mental breakdown and other challenges that can occur as a result of such an experience.

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APPENDICES

Appendix 1: Gantt chart

	March-July 2023	July-August 2023	September-December 2023	January-February 2024	March-April 2024	May 2024	June, 2024	July, 2024
Preparation of thesis proposal								
Presentation of thesis proposal								
Preparation and submission of thesis Application to ethics committee								
Data collection								
Data analysis								
Report writing								
Submission of thesis								
Presentation of thesis								

Appendix 2: Budget

	ITEM	UNIT COST	TOTAL	JUSTIFICATION
1	Research ethics committee	168, 900(150 dollars)	168, 900	COMREC requirement.
2	Study setting approval	15,000	15,000	Mwanza DHO requirement
3	Transport	40,000	40, 000	Travelling cost for data collection, Mwanza is about 102Km from Blantyre.
4	Printing and binding	10, 000	10, 000	Requirement for submission.
5	Stationery	15, 000	15, 000	For managing data.
6	Communication (airtime)	15, 000	15, 000	For calls and internet
	Total		263,900	

Appendix 3: Study consent form

KAMUZU UNIVERSITY
OF HEALTH SCIENCES

Informed Consent Form for midwives working at Mwanza district hospital maternity department who are invited to participate in qualitative research titled 'exploring midwives experiences regarding implementation of maternal death surveillance and response'

Name of Principle Investigator: Wakhonderachi T. Likha M.Sc. M. student
Name of Organization: Kamuzu University of Health Sciences
Name of Sponsor: Self Sponsored

This Informed Consent Form has two parts:

- **Information Sheet (to share information about the study with you)**
- **Certificate of Consent (for signatures if you choose to participate)**

You will be given a copy of the full Informed Consent Form

Part I: Information Sheet

Introduction

I am Wakhonderachi T. Likha, a Master of Science Midwifery student at KUHES. I am doing research on experiences of midwives regarding implementation of maternal death surveillance and response at Mwanza District Hospital. I am going to give you information and invite you to be part of this research. You do not have to decide today whether you will participate in the research. Before you decide, you can talk to anyone you feel comfortable with about the research.

This consent form may contain words that you do not understand. Please ask me to stop as we go through the information, and I will take time to explain. If you have questions later, you can ask them of me or of another researcher.

Purpose of the research

Maternal deaths continue to be a major public health issue, particularly in low- and middle-income nations. We want to find ways to stop this from happening. We believe that you can help us by telling us what your experience is regarding implementation of maternal death surveillance and response and how it has helped reducing maternal deaths. We want to gain insights into midwives' experiences concerning the implementation of MDSR using the MDSR framework, by trying to describe midwives' experiences regarding the identification and notification of facility-based maternal deaths, assessing the midwives' experiences in the maternal death review process of the MDSR, and finally identify midwives' response actions in the MDSR.

Type of Research Intervention

This research will involve your participation in a one to one in depth interview that will take about one hour.

Participant Selection

You are being invited to take part in this research because we feel that your experience as a midwife can contribute much to our understanding and knowledge about midwives' experiences regarding MDSR.

Voluntary Participation

The choice that you make will have no bearing on your job or on any work-related evaluations or reports. You may change your mind later and stop participating even if you agreed earlier.

Procedures

We are asking you to help us learn more about maternal death surveillance and response at your hospital. We are inviting you to take part in this research project. If you accept, you will be asked to participate in an interview with myself or a research assistant. During the interview, I or another interviewer will sit down with you in a comfortable place of your choice. If you do

not wish to answer any of the questions during the interview, you may say so and the interviewer will move on to the next question. No one else but the interviewer will be present unless you would like someone else to be there. The information recorded is confidential, and no one else except Dr M. Kamanga, my supervisor will have access to the information documented during your interview. The entire interview will be recorded, but no-one will be identified by name on the recorder. The recorder will be kept in lockable and safe cabinet. The information recorded is confidential, and no one else except Dr. M. Kamanga will have access to the tapes. The recordings will be destroyed after 365 of days.

Duration

The research takes place over six months in total. During that time, we will visit you once for interviewing you and each interview will last for about one hour each.

Risks

There is a risk that you may share some personal or confidential information by chance, or that you may feel uncomfortable talking about some of the topics. However, we do not wish for this to happen. You do not have to answer any question or take part in the interview if you feel the question(s) are too personal or if talking about them makes you uncomfortable.

Benefits

There will be no direct benefit to you, but your participation is likely to help us find out more about experiences of midwives in MDSR, and how to improve the quality of maternal care at your institution.

Reimbursements

You will not be provided any incentive to take part in the research.

Confidentiality

The research being done in the community may draw attention and if you participate you may be asked questions by other people in the community. We will not be sharing information about you to anyone outside of the research team. The information that we collect from this research project will be kept private. Any information about you will have a number on it instead of your name. Only the researchers will know what your number is, and we will lock that information

up with a lock and key. It will not be shared with or given to anyone except DR. Kamanga, my supervisor.

Sharing the Results

Nothing that you tell us today will be shared with anybody outside the research team, and nothing will be attributed to you by name. The knowledge that we get from this research will be shared with you and your institution before it is made widely available to the public. Each participant will receive a summary of the results. There will also be dissemination meeting at the institution, and this will be announced. Following the meetings, we will publish the results so that other interested people may learn from the research.

Right to Refuse or Withdraw

You do not have to take part in this research if you do not wish to do so and choosing to participate will not affect your job or job-related evaluations in any way. You may stop participating in the interview at any time that you wish without your job being affected. I will give you an opportunity at the end of the interview to review your remarks, and you can ask to modify or remove portions of those, if you do not agree with my notes or if I did not understand you correctly.

Who to Contact

If you have any questions, you can ask them now or later. If you wish to ask questions later, you may contact any of the following: Wakhonderachi Likha, 202240350010@kuhes.ac.mw or Dr. M. Kamanga, mkamanga@kuhes.ac.mw

This proposal has been reviewed and approved by COMREC, which is a committee whose task it is to make sure that research participants are protected from harm. If you wish to find about more about the IRB, contact COMREC Chairperson, Prof. Eric Umar (0888118993).

Part II: Certificate of approval

(This section is mandatory)

I have read the foregoing information; I have had the opportunity to ask questions about it and any questions I have been asked to have been answered to my satisfaction. I consent voluntarily to be a participant in this study

Print Name of Participant_____

Signature of Participant _____

Date _____

Day/month/year

If illiterate

I have witnessed the accurate reading of the consent form to the potential participant, and the individual has had the opportunity to ask questions. I confirm that the individual has given consent freely.

Print name of witness_____ **Thumb print of participant**

Signature of witness _____

Date _____

Day/month/year

Statement by the researcher/person taking consent

I have accurately read out the information sheet to the potential participant, and to the best of my ability made sure that the participant understands that the following will be done:

1. **Purpose of research.**
2. **Risks.**
3. **Benefits.**

I confirm that the participant was given an opportunity to ask questions about the study, and all the questions asked by the participant have been answered correctly and to the best of my ability. I confirm that the individual has not been coerced into giving consent, and the consent has been given freely and voluntarily.

A copy of this ICF has been provided to the participant.

Print Name of Researcher/person taking the consent_____

Signature of Researcher /person taking the consent_____

Date _____

Day/month/year

Appendix 4: Interview guide

Part 1: identification and notification of facility-based maternal deaths.

Can you describe your experience in managing a pregnant woman who was at risk of a maternal death?

What has been your experience with maternal death identification, notification and reporting at your facility?

Probes:

How long did it take for you to report the death?

What information did you include in the report?

What mode of communication did you use to report the death?

How did you cope with the pressure of such an experience?

What kind of support did you receive during the process?

Part 2: Midwives' experience in the maternal death review process in the MDSR.

Can you describe your role as a midwife during the maternal death review process of the MDSR?

Probes:

What has been your experience?

Tell us more about the general environment of the review?

What support did you receive during the process?

How did you cope with the pressure?

Part 3: Midwife's response actions in the MDSR.

Can you tell me about your experience on how you implemented the response actions of the MDSR?

Probes:

Was it timely?

Did you document the response actions?

Was supervision done?

Was there monitoring and evaluation?