UNIVERSITY OF LIMPOPO

DEVELOPMENT OF A MODEL TO SUPPORT MIDWIVES EXPERIENCING ADVERSE EVENTS IN OBSTETRIC UNITS OF THE TSHWANE DISTRICT, GAUTENG PROVINCE

By

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[redacted]

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DECLARATION

[redacted]

I, Rebotile Violet Morobe, declare that **'Development Of A Model To Support Midwives Experiencing Adverse Events In Obstetric Units Of Tshwane District, Gauteng Province'** is my work, that all sources used or quoted have been indicated and acknowledged using complete references. This work has not been submitted for any degree at this or any institution.

17th May 2024

Researcher signature Date

_____ _____

Witness signature Date

DEDICATION

I dedicate this study to the Almighty for granting me courage, health, and time to finish this study. His presence in my life gave me the courage and belief that it will be accomplished.

'Ask, and it shall be given to you; seek, and ye shall find; knock and it shall be opened unto you.' Matthew 7:7

A special dedication goes to my late father, Mosoba Frederick Makgere, who sacrificed to educate us and taught us perseverance in life, ' Re a leboga Mokone.''

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ABSTRACT

Background: The World Health Organisation has reported that Adverse Events (AEs) are announced daily internationally and nationally. An AE is an unintentional event that is and could be harmful to the patient, occurring during health care delivery. The United States of America was reported to have the highest AEs among developed countries. Although in SA *'The Status of Women's Health'* indicated progress regarding the maternal mortality ratio that has decreased nationally from 105.9 deaths per 100,000 live births in 2019 to 88 deaths on media in 2020. The mission of the National Department of Health (NDoH) in South Africa (SA) is to improve the health status of the community, prevent ill health, deliver service, and ensure that adverse events (AEs) are decreased. From 2020 to 2021, 252 AEs occurred in three Gauteng district hospitals in the presence of midwives who were expected to carry on with their duties. Midwives in obstetric units were affected by the occurrence of AEs as they were blamed when AEs occurred. Once blamed, they were psychologically and emotionally affected, leading to poor delivery of care. Fear of being stripped of their professional status once found guilty by the South African Nursing Council (SANC) the professional body, as litigations are rife in the health profession. Social media pressure on nursing misconduct and negligence of patients in public hospitals added fear to the midwives, resulting in poor performance and lack of concentration when caring for patients. Midwives, once involved in AEs become psychologically and emotionally disturbed, and cannot deliver proper care to mothers as they face consequences, fearing loss of their professional status once criminal charges are laid or the regulatory body SANC finds them guilty. As such, this study was conducted to develop a model to support midwives after experiencing AEs in the Tshwane district, Gauteng province.

The objectives of phase one that emerged from the qualitative strand were to describe challenges experienced by midwives related to AEs in obstetric units of the Tshwane district. Secondly, to explore the strategies used by managers in case of an AE in obstetric units. The quantitative objectives were to assess the support offered to midwives by their managers post AEs in obstetric units. Another strategy was to identify the factors influencing proper delivery of care by midwives to prevent AEs in obstetric units of the Tshwane district, Gauteng province.

Methodology: A convergent parallel mixed-method research study design was used for this study which had three phases. Phase 1 utilized a Mixed Method Research (MMR) design which comprised qualitative and quantitative data collection and analysis. The population used in this phase were Midwives, line and Operational managers. Purposive and simple random sampling was used to recruit participants. Selected participants had to have more than two years of experience in the obstetric unit, and know or experienced the studied phenomenon. The quantitative strand made use of the Slovin formula, sample size was calculated by the statistician. Ethical Clearance was obtained from the University of Limpopo Research Ethics Committee and the Tshwane District of Health selected facilities. Participants signed the consent form before data collection. Self-administered questionnaires for the quantitative 0approach and in-depth face-to-face interviews for the qualitative approach were used for data collection. The population size the for quantitative strand was 100, and the sampled number of midwives was 89. In the qualitative strand, data saturation was reached at 22 midwives. Managers were interviewed separately and a total of 12 managers were interviewed categorized as line managers and operational managers of the selected public district hospitals of Tshwane Gauteng province. A total of 34 qualitative interviews were conducted in the selected district hospitals of Tshwane, Gauteng province. Data analysis was analysed using Tesch's open coding method for qualitative and Statistical Package for Social Sciences (SPSS) version 24 for the quantitative strand. Trustworthiness was adhered to, that is credibility, dependability, confirmability, and transferability.

Phase 2: Concept analysis was selected as an appropriate method of choice followed in the model development, as defined by Walker and Avant (2005). This method involves examining the basic elements, structures of concepts, definitions, and functions of concepts, followed by the development of the model following the concepts, according to Chinn & Kramer (2018).

Phase 3: Model validation, where the Nominal Group Technique (NGT) was used to validate the developed model according to Chinn and Kramer 2018. Experts in maternal health care services were sampled to validate the developed model for its importance, simplicity, applicability, and relevancy in supporting midwives who might experience AEs in maternal health care services.

Recommendations: Raised recommendations were that operational and psychological support was vital for participants to cope with AEs. Flexible working hours were identified as a relief for strenuous long working hours and shortage of staff. Open lines of communication were suggested, and involvement in decision-making matters that involved participants rather than management taking decisions on their behalf. Equal treatment of participants and recognition where necessary and considered points of concern.

Summary: This study focussed on raising facts on challenges faced by midwives in public hospitals exacerbated by a lack of support from management on both human and material resources. Lack of proper care gave rise to adverse events and financial litigations of the Health Department by the community. Shortage of staff added to the lack of support for midwives in providing care. Strategies were implemented by managers to provide support to midwives. Concepts were used to guide the development of a model used as a framework of reference. Recommendations were set to reach the optimum goal of care in the district hospitals of Tshwane.

Keywords: Adverse events, Midwife, Model development, Model validation, Obstetric Unit, Public hospital, and Support

LIST OF ACRONYMS

AEs	Adverse Events
DPSA	Department of Public Service Administration
NDoH	National Department of Health
GP	Gauteng Province
KZN	Kwa-Zulu Natal
LMICs	Low Middle-Income Countries
OU	Obstetric Units
MMR	Mixed-method Research
MDGs	Millennium Development Goals
SANC	South African Nursing Council
SAHRC	South African Human Rights Commission
PTDS	Post Traumatic Disorder Syndrome
WHO	World Health Organisation
UNFPA	United Nations Population Fund
OECD	Organisation for Economic Cooperation and Development
SHW/s	Skilled Health Worker/s

DEFINITION OF KEY CONCEPTS

Adverse events

Coomarasamy, Williams, and Truchanowicz (2016) define an adverse event as any unintentional, unfavourable clinical sign, including complications of miscarriage, intrauterine death in a normal pregnancy, or maternal death. In this study, adverse events meant untoward occurrences such as maternal deaths and fresh stillbirths. Any deviation from the usual medical care that causes unintended, unexpected, preventable, or non-preventable errors, which may lead to injury, complications, harm, loss, or damage to the patient. They occur by an act of commission or omission because of healthcare management rather than the underlying disease of the patient.

Midwife

A midwife is a person registered in terms of Section 32 of the Nursing Act (Act no 33 of 2005) who supports and assists the mother and the baby to achieve and maintain optimum health during all stages of pregnancy, labour, and the puerperium. In this study, a midwife refers to a qualified practitioner registered with the South African Nursing Council (SANC) providing care to mothers during pregnancy, intrapartum, and post-natal periods.

Obstetric Unit

Obstetric units are primary health-level facilities at, which care and delivery for low-risk patients are performed. The units are housed in 24-hour comprehensive health service centers with midwifery and obstetric units managed by midwifery practitioners (DoH 2015). In this study, obstetric units mean facilities that cater for prenatal, antenatal, intrapartum, and post-partum services to mothers managed by midwives 24/7.

Model development

A model defined according to Chinn and Kramer (2018) is a symbolic graphic diagram of the representation of the empiric experiences of participants. A model symbolizes concepts or variables and their relationships. In this study, a model was developed as a framework of reference for midwives experiencing AEs in Tshwane district obstetric units, Gauteng province.

Model validation

Validation refers to the act of evaluating the appropriateness of following what is known about the system of a model and sufficient results to form a basis for discussion (Chinn & Kramer 2018). In this study, validation will be conducted to determine its relevance, applicability and appropriateness to maternal healthcare services. This was done by experts in maternal healthcare services.

Public hospital

A public hospital is a health establishment controlled by the state (National Health Act No 61 of 2003) and owned by the provincial government to provide treatment to inpatient or outpatient and other health services. It serves as a workplace for healthcare personnel (DoH 1994). In this study, a public hospital is a healthcare institution where maternal healthcare services are rendered.

Support

World Books Dictionary (2020) defines support as an act of assistance given towards a person or something in need, or someone has done something good or acceptable, or an assumption made to account for known facts. In this study, support will mean the assistance given by managers (line and operational) to midwives who experienced AEs in the obstetric units of Tshwane district, Gauteng province.

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CHAPTER 1

OVERVIEW OF THE STUDY

1.1 Introduction And Background

Adverse Events (AEs) are reported daily on international and national media. According to the World Health Organisation (WHO) (2019), AEs occur all over the world, with the United States of America (USA) having the highest maternal mortality rate among developed countries. An AE is an unintentional event that could be harmful to the patient, occurring during healthcare delivery. According to Rafter, Hickey, Conroy, et al. (2015), an AE is not due to the illness or condition for which the patient came to the health facility.

Midwives, as front liners, render care in some of the most remote or under-resourced hospitals and work in harsh/appalling conditions. According to the United Nations Population Fund (UNFPA) (2015), some of the harsh conditions are related to the shortages of midwives; for example, in Afghanistan, girls are not allowed to be educated, resulting in an increased workload on midwives. In 2003, Afghanistan had 467 midwives and faced the highest mortality rate of 400 deaths per 100,000 caused by haemorrhage, obstructed labour, infection, high blood pressure, and unsafe abortions (UNFPA 2015). Ninety-four percent of maternal deaths occur in low-middle-income countries (LMICs) within Sub-Saharan Africa (SSA) and Asia, with the two bearing 86% of the total global burden (WHO 2019a). The same study continues to indicate that Southern Asia recorded 58,000 maternal deaths, one-fifth of the total maternal mortality; most of these deaths (94%) occurred in low-resourced settings in the care of midwives.

Even more concerning is the disproportionate burden of maternal deaths occurring in SSA. The region alone carries 68% of the global burden, even though it is home to only 15.7% of the world's population (Tison, Avram, Kuhar, et al. (2020). SSA accounted for roughly 196,000 maternal deaths in 2017, and some were associated with maternal AEs (WHO 2019). According to Ope (2020), Nigeria is also associated with a high prevalence of maternal deaths due to inequalities in access to healthcare services, as women in poorly resourced settings are unlikely to receive adequate, timely, and affordable care. AEs occur in all parts of the world, South Africa (SA) is not immune, although in SA, '*The Status of Women's*

Health,' Lalthapersad-Pillay (2015) indicated that there was progress regarding maternal mortality rate, the ratio had decreased nationally from 105.9 deaths per 100,000 live births in 2019 to 88 deaths in 2020. According to Statistics South Africa (STATSSA) 2020, the lowest number was recorded in Western Cape Province, with 43.6 deaths per 100,000 live births. As such, the mission of the National Department of Health (DoH) in South Africa (SA) is to improve the health status of the community, prevent ill health, deliver service, and ensure that adverse events (AEs) are reduced. Midwives have an important role to play in this regard, which is the provision of quality nursing care as their responsibility, as guided by the Scope of Practice, R2598, Nursing Act No 33 of 2005, of the National Health Act, no 61 of 2003.

Even though SA is the second largest area in Africa after Nigeria, with a population of just over 58 million residing in nine provinces, Gauteng Province (GP) is the economic hub, a multi-cultural area with a diverse patient population and the largest in terms of population. The healthcare system in the province, including the Tshwane District, is under pressure, and midwives are under the strain of providing care, which exposes them to AEs. This is caused by an influx of people entering from various provinces and countries. Despite the best service rendered by midwives in public hospitals, when an AE like maternal death occurs, the Chief Executive Officers (CEOs), Operational Managers (OPMs), midwives, and family members of the midwives are affected as stress at work would also affect their social being causing them not to cope at home. Affected mothers who experienced AEs at obstetric units relate to their families too.

In their study on how midwives cope after experiencing a maternal death, Dartey, Phetlhu, and Phuma-Ngaiyaye (2019), concluded that midwives find it difficult to cope with such events. Also, in the study on management responses to AEs, Ally et al. (2016) contend that managers are quick to blame healthcare workers. However, Chauke (2021) asserts that the equipment and the technology are associated with interruptions to human neurological systems, which may also lead to human error and adverse effects on patients. The significance of the study was that newly developed technological equipment could cause psychological disturbances leading to AEs especially when participants are not well trained at workplaces. Consequently, midwives do not receive enough support to address the emotional distress caused by trauma in cases of AEs (Howarth, Scott, and Swain 2017). As such, there is a need to develop a model to support midwives when experiencing AEs in obstetric units of the Tshwane district, Gauteng Province.

1.2 Problem Statement

Midwives at public hospitals are experiencing high levels of stress, job dissatisfaction, burnout, low morale, and demotivation because of a lack of support from their supervisors after AEs. Lack of attention to the well-being of healthcare professionals has been identified as a missing response in the management of AEs (Austin, Smythe & Jull 2018). The nature of practice is such that even when midwives are providing safe, competent care, there can still be AEs. The researcher has observed that maternal deaths and AEs are on the rise, mostly occurring and reported at healthcare facilities. From 2020 to 2021, 252 AEs occurred (see Table 1 below). In the presence of such AEs, midwives are disturbed, and they are expected to carry on with their normal duties as if nothing happened. Apart from that, they are faced with challenges such as the media publishing AE cases and hospitals being sued. The researcher, having worked in a public hospital, realised that there is a need to support midwives during AEs. This realisation gave rise to the need to develop a model to assist midwives in dealing with work-related ordeals, as in most cases, the nursing leadership accuses midwives of negligence rather than focusing on various factors that could have contributed to the AEs.

Table 1.1: Maternal Deaths and AE Stats.

HOSPITAL	AEs NUMBERS - 2020-2021
Jubilee Community Hospital	96
Odi Community Hospital	85
Pretoria West Hospital	71
TOTAL	252

(Source: STATS SA, 2022)

The Lancet Commission on High-Quality Health Systems by Kruk, Kujawski, Mbaruku, et al. (2018) stated that 60% of lives could be saved globally by simply paying attention to the quality of care. The quality of maternal care refers to the extent to which midwives deliver appropriate care to their patients if supported after AEs. Midwives, like other healthcare professionals, have feelings of despair following an AE. However, their tears are not acknowledged, and nothing is mentioned about the pain they experience and how they can be supported. The former Minister of Health, Dr Aaron Motsoaledi, described AE claims as

reaching a ‘crisis’ as the DoH experienced litigations of negligence and malpractice after AEs (Kollapen, Carnelly, Jaichand, et al. 2017). Howarth, Scott, and Swain (2017) state that there are no support structures to address the emotional distress caused by trauma in cases of AEs.

Mashamba and Ramavhoya (2021) indicated that midwives are traumatized after obstetric emergencies, which may be the maternal or sudden death of a neonate. Obstetric emergencies are defined as life-threatening medical conditions that occur during intrapartum and postpartum periods. Despite being traumatized, there are South African Nursing Council (SANC) disciplinary processes, hearings, and the publishing of guilty midwives’ on SANC’s Professional Misconduct Civil Court Cases (2019). Social media is another stressor when AEs occur in public hospitals. Midwives are left alone with no support to face criminal charges if found guilty or can lose their hard-earned professional qualifications. Midwives become affected psychologically and emotionally in such occurrences, which leads them to lose concentration and can easily get into other AEs due to poor delivery of care. The researcher as a midwife, identified the gap and deemed it fit to develop the model which could be a frame of reference to support midwives experiencing AEs in public hospitals of Tshwane district, Gauteng province. Hence, the researcher identified a gap in developing a model to support midwives experiencing AEs in the obstetric units (OUs) of Tshwane district, Gauteng Province.

1.3 Purpose of the Study

The purpose of the study was to develop and validate a model to support midwives experiencing AEs in obstetric units in the Gauteng province.

1.4 Objectives of the Study

Table 1.2 below indicates the objectives of the current study according to their three phases.

Table 1.2: Study Objectives

	Quantitative Approach	Qualitative Approach
Phase one	Assess the support offered to midwives by their managers' post AEs in obstetric units of Tshwane district, Gauteng province.	To explore the strategies used by managers in case of an AE in obstetric units of Tshwane district, Gauteng province
	Identify the factors influencing proper delivery of care by midwives to prevent AEs in obstetric units of Tshwane district, Gauteng province.	To describe challenges experienced by midwives related to AEs in obstetric units of Tshwane district, Gauteng province
Development of a model using Chinn and Kramer's concepts and results of Phase 1		
Phase two	To develop a model to support midwives experiencing AEs in obstetric units of Tshwane district, Gauteng province	
Model validation using the Nominal group technique in conjunction with a quantitative and qualitative approach		
Phase three	To validate the effectiveness and relevancy of the developed model by maternal healthcare experts in obstetric units of Tshwane district, Gauteng province.	

1.5 Research Questions

The research questions that will guide this study are as follows:

- How can a model that supports midwives experiencing AEs in midwifery obstetric units of Tshwane district, Gauteng Province, be developed?
- What support system do OPMs and line managers offer midwives experiencing AEs in OUs of Tshwane district, Gauteng province?
- What factors influence the proper delivery of care by midwives to prevent AEs in OUs of Tshwane district, Gauteng province?
- Which strategies do managers use in case of an AE in OUs of Tshwane district, Gauteng province?
- What are the challenges experienced by midwives related to nominal AEs in OUs of Tshwane district, Gauteng province?
- How will maternal healthcare experts validate the effectiveness and relevancy of the developed model in OUs of Tshwane district, Gauteng province.

1.6 Significance of the Study

The study was significant as a unique contribution to exploring the support of midwives, closing the gap in dealing with AEs in obstetric units of Tshwane district, Gauteng province. The researcher thought that there was an opportunity for the model to be used as a valuable baseline for the development of support strategies for midwives in the Gauteng province. Using the model, the hospital management would be able to identify challenges faced by midwives, be able to save on the litigations as AEs could be reduced, midwives be supported, and performance might improve. Regarding the policy, the study may contribute to high-priority National and Provincial Health on how to manage AEs to deliver quality and safety measures required at public hospitals. The development of this model would enhance the caring of mothers under any circumstances, indicating that behaviors would consider the culture of caring, considering the profession. Mothers would be well cared for despite their conditions as midwives would be supported.

1.7 Research Methodology and Design

Research methodology is the specific technique utilised to identify, select, process, and analyse the phenomenon to be studied. A Mixed-Method Research (MMR) approach has been chosen by the researcher for the study. MMR incorporates both quantitative and qualitative designs, as defined by Tashakkori and Teddlie (2012). The rationale for electing the MMR approach was that it provided the researcher with in-depth information about the topic under study as it utilised both qualitative and quantitative methods to answer questions that could not be answered by one approach. MMR allows both numbers and words to solve problems (Creswell & Plano-Clark 2017).

According to Grove et al. (2018), a research design is a blueprint for conducting a study, a process that provides the researcher with logical steps to follow when conducting a study to address the research phenomenon. Houser (2018) defines it as a criterion for selecting informants and a general guide for data collection and analysis. In this study, the researcher selected a convergent parallel research design described by Creswell and Plano-Clark (2018) as an intervention method where qualitative data was used to support quantitative findings or vice versa.

In this study, the researcher used a convergent parallel research design, where both qualitative and quantitative data were collected concurrently, analysed separately, compared, and then merged during interpretation and discussions (Fig 2). The researcher chose this design as it had equal value for collecting and analysing data to understand the phenomenon under study. This method gives a robust and detailed explanation of the phenomenon.

Study setting: This study was conducted at three hospitals in the Tshwane district, Gauteng province. See Chapter 3 for detailed information.

Population and sampling: In this study, the population were all managers (line managers and operational managers) and midwives working at the obstetric units of Tshwane District, Gauteng Province. Non-probability purposive sampling was used to select 12 managers (line managers and operational managers (OPMS). The selection of midwives involved both purposive and simple random sampling wherein 22 midwives participated in a qualitative research strand, with 89 participating in a quantitative study. These were midwives registered with SANC and employed at Tshwane district public hospitals. Clark and Creswell (2018) indicated that in purposeful sampling, the researcher intentionally selected participants who had experienced the phenomenon being explored, and who experienced AEs. The number of participants in a qualitative research strand was determined by data saturation, whereas for a quantitative study, Slovin's formula was used to determine the number to participate in the study.

Ethical considerations: Permission to conduct the study was granted by the Turfloop Ethical Review Committee, the Department of Health Gauteng province, and the Chief executive officers of the three hospitals where data were collected from line managers, operational managers, and midwives. Participants signed informed consent forms (Annexure E) before participating in the study. Measures were undertaken to ensure trustworthiness, validity, and reliability (see Chapter 3).

Data collection: For qualitative strands, the researcher used an interview guide (Annexure H) to conduct in-depth individual face-to-face semi-structured interviews with the midwives, (Annexure G) for line and operational managers as participants who consented to the interview (Annexure E). For data collection for the quantitative strand, a structured questionnaire was developed (Annexure G), which involved the statistician and comprised of

close-ended questions, in section B and section C. The designed questionnaire was completed by midwives in the presence of the researcher. Detailed data collection was presented in Chapter 3.

Data analysis: Data analysis for the qualitative approach involved Eight steps of Tesch's coding method (Chapters 3 & 4). An independent co-coder was involved to verify the obtained results. A consensus was reached between the researcher and the co-coder on the identified themes and sub-themes, which were elaborated upon in Chapter 4 of the study. For the quantitative strand, data was presented using frequencies, percentages, tables, and bar charts (see Chapter 5). A statistician was consulted during the development of the questionnaires and data analysis. After analysis of the two data sets, data were compared followed by the presentation of merged data and discussion of both together (Chapter 5). Unmerged data were discussed separately (Chapter 5).

1.8 Research Phases Summary

Table 1.3: Research Phases Summary

Objective	Research design	Population	Sampling approach	Data collection	Data analysis
1. PHASE ONE	**EMPIRICAL PHASE**				
Assess the support offered to midwives by their managers' post AEs in obstetric units of Tshwane district, Gauteng province.	Quantitative approach	Midwives	Probability simple random sampling	Questionnaire	SPSS version 24
Identify the factors influencing proper delivery of care by midwives to prevent AEs in obstetric units of Tshwane district, Gauteng province.	Quantitative approach	Midwives	Probability simple random sampling	Questionnaire	SPSS version 24

To explore the strategies used by managers in case of an AE in obstetric units of Tshwane district, Gauteng province	Qualitative approach	Line managers and OPM's	Non-probability purposive sampling	Interviews	Tesch's steps by Creswell (2018)
To describe challenges experienced by midwives related to AEs in obstetric units of Tshwane district, Gauteng province	Qualitative approach	Midwives	Non-probability purposive sampling	Interviews	Tesch's steps by Creswell (2018)
2. PHASE TWO: Model development	**Eight steps in the Chinn & Kramer (2018) Walker and Avant (2014)**				
3. PHASE THREE: Model validation	Quantitative, Qualitative, and NGT process	Midwives and manager	Purposive sampling	Questionnaire	SPSS version 24

1.9 Summary

The presented Chapter 1 introduced an overview of the study, introduction, and background. The research problem was presented. The outlining of the purpose of the study, research questions, objectives, research methodology, and design were also defined. The significance of the study. The research phase summary was tabulated and the delineation of the subsequent chapters was drawn. The research methodology and design were briefly discussed, and their application was discussed in Chapter 3. The next chapter focussed on the reviewed literature.

1.10 Delineation of Chapters

CHAPTER 1

In this chapter, the researcher gave the overview of the study, which included the introduction and background of the study, problem statement, purpose, research objectives, and questions, and introduced the research methodology and the significance of the study.

CHAPTER 2

The researcher in this chapter dealt with the literature review defining the meaning of the adverse events from different search engines and studies. Literature on the impact of AEs on midwives, mothers, and the health system was explained. Challenges experienced in public hospitals were introduced. Strategies used by managers to support midwives in cases of AEs in public hospitals were dealt with in this chapter.

CHAPTER 3

Research methodology - design and methodology including the rationale, setting, population, sampling, data collection method, data analysis, measures to ensure trustworthiness, ethical measures, steps for model development, and conclusion.

CHAPTER 4

This chapter is based on the presentation and interpretation of qualitative research results, demographic research data, themes and sub-themes, presentation of managers' results, and conclusion.

CHAPTER 5:

Discusses the presentation and interpretation of quantitative research results. The integration of qualitative and quantitative results and the conclusion.

CHAPTER 6

Conceptualisation steps discussed outlining the eight steps of concept analysis designed by Walker and Avant (2018).

CHAPTER 7

The model development chapter was drawn by describing the following sub-headings: introduction, theoretical framework, components of the model structure, assumptions of the model, process of the model, guidelines for operationalisation of the model, and conclusion.

CHAPTER 8

Model validation and the relevancy of the model. This chapter outlines the validation of the support model based on the criteria offered by Chinn and Kramer (2008), which was evaluated by experts in the model development.

CHAPTER 9

Summary, limitations, recommendations, and conclusion based on the findings to support midwives experiencing AEs.

CHAPTER 2
LITERATURE REVIEW AND THEORETICAL FRAMEWORK

2.1 Introduction

The previous chapter focussed on the overview of the study. A detailed description of the study design and why such a design was chosen for this study was presented. This chapter focuses on a literature review discussing aspects of AEs as a global challenge, which includes South Africa. A literature review is an organised, written presentation of what is known about the topic of interest (Grove & Gray 2019). Literature review accomplishes shared ideas of different researchers related to the study being undertaken. It fills in gaps in the ongoing dialogue on the study. This chapter focussed on the substantial number of relevant articles published internationally and nationally, theses, and books using different search engines, namely EHBSCO, Google Scholar, Pub Med, Science Direct LANCET, and MEDLINE.

Identification of recent articles on the topic was accomplished by searching through titles and abstracts related to the topic. The literature search was conducted with the help of the librarian, and the following keywords were used for the search: adverse events, obstetric units, public hospitals, and midwives. It is, therefore, important to distinguish between these concepts in this chapter. The literature discussed in this study included the definition of AE, prevalence of AEs, causes or contributory factors to AEs, its impact and effects on midwives, patients, and the health system, and challenges and support offered to midwives.

2.2 What is an Adverse Event?

According to the WHO (2019), an AE can be described as an ‘incident, which results in harm to a consumer’ (Health Quality and Safety Commission, 2013b). An AE may or may not be preventable, hurting mothers and midwives. If preventable, it can be considered an individual or a system error. AEs can be related to commissions or omissions caused by midwives. Thus, in such events, they are nurse-related adverse events. Coomarasamy et al. (2016) define AEs as any unintentional, unfavourable clinical sign, including complications of miscarriage or intra-uterine death in a normal pregnancy. Death is defined as passing away or seen as a permanent stoppage of life which should not happen during labour in obstetric

units. Death is seen as AE when it happens in the obstetric unit as the role of a midwife is to deliver a healthy mother and baby. Maternal death or serious injury associated with labour or delivery in a low-risk pregnancy while being cared for in a health care setting is regarded as AE. Some AEs in OUs are associated with birth asphyxia, shoulder dystocia or post -partum haemorrhage which contributes to 3% of AEs according to Johansen et al. (2021).

2.3 Prevalence of Adverse Events

The occurrence of AEs according to (WHO 2023), is due to unsafe care and is one of the ten leading causes of death and disability in the world. Each year, 134 million adverse events occur in hospitals in low- and middle-income countries (LMICs) unsafe care, resulting in 2.6 million deaths (WHO 2019). In a conference comprising 37 countries, (including France, the United States, Canada, and South Africa) held in Johannesburg by the Organisation for Economic Co-operation and Development (OECD) in 2022, it was identified that 15% of total hospital activity and expenditure is a direct result of AEs (Kenton & Boyle 2020). Few studies have investigated AEs in maternity units, but one Norwegian showed that AEs were experienced by 3.6% of pregnant women admitted to a public hospital (Johansen, Braut, Acharya, et al. 2021).

2.4 Contributory Factors to AEs

2.4.1 Long Working Hours

Long work hours increase the risk of reduced performance, exposure to fatigue, and lack of alertness on the job, exposing patients to AEs. It has been reported that individuals who work long hours don’t have enough sleep, which exposes them to fatigue (Caruso 2014). Another research by Barker (2016) asserted that long hours of work can be associated with hazards performed at workplaces. A study conducted in South Korea by Son, Lee, and Ko (2019) showed that nurses who worked more hours had the highest AE outcome scores than those with fewer hours. Caruso (2014) continued to mention that fatigued nurses also endanger patients due to sleep disturbances, causing fatigue from long working hours, which exposes patients to AEs.

Similarly, Barker (2016) asserted that long work hours can be associated with hazards and poor patient safety measures. The nurses in that study had poor relationships with patients,

nurse managers, and even their family members because of fatigue and stress at work. Another study by Jackson et al. (2021) reported a strong relationship between fatigue and stress, as compared to people who have worked fixed hours, which resulted in mental health fatigue exposing patients to AEs. Maharaj (2022) concurred by indicating that sleep deprivation contributes to decreased concentration.

2.4.2 Shift Workers

Working irregular hours is seen as normal, never been questioned in the nursing profession though it has consequences for the health of an individual. Working irregular hours poses a health risk as it is accompanied by psychological, social, and physical challenges (Barker 2016). In addition, Barker (2016) added that midwives continued to go the extra mile by staying late and missing breaks to ensure that they got through what was often a heavy and challenging workload, resulting in fatigue. Bae, Song, Shin, et al. (2017) concurred that fatigue affects memory, concentration, and decision-making. If a midwife cannot make a quick decision because of fatigue in obstetric emergencies like post-partum haemorrhage, AEs like maternal deaths might occur. Lack of concentration resulting from fatigue of shift workers, as stated by Ferri, Guadi, Marcheselli, et al. (2016), caused midwives to make mistakes that led to AEs in the health care system.

The degree of ill health in OUs harms the quality of patient care. Many studies have shown that accidents occurring in healthcare centers were associated with personnel who were not in good health (Ganesan, Magee, Stone, et al. 2019). Shift work is likely to have major negative implications on patient care and safety due to poor sleeping patterns, lack of concentration, poor eating habits, and changes in the social adjustment of an individual that also affect the family (Borbély, Daan, Wirz-Justice, et al. 2016). Shift work is associated with impaired alertness and performance due to sleep loss and circadian misalignment. Due to the lack of alertness caused by shift workers in OUs, AEs easily occur as there is a lack of concentration, and midwives might also be unhealthy, causing falls in the OUs. Midwives who are not healthy can cause AEs, thus shifts are not safe, even though they need to care for patients.

2.4.3 Burnout

Burnout is a result of work environment stressors related to high turnover, negative attitudes toward patients and colleagues, excessive physical and emotional exhaustion, and loss of concern toward patients (Ray, Wong, White, et al. 2013). Burnout of midwives, according to. Jarrar, Al-Bsheish, Albaker, et al. (2023), is the high risk of poor decisions and medical errors that jeopardise safety and quality of care, resulting in serious consequences and AEs. A scoping review study conducted by Sahay and McKenna (2023) confirmed that increased workload resulted in midwives being victims of burnout. However, the Maslach Burnout Inventory (MBI) in 2016 corroborated the above statement that burnout individuals identify with high workload, low decision latitude, psychological demands, and job insecurity, including litigations caused by AEs.

In their study, Ray et al. (2013) stated that burnout contributed to feelings of reduced personal accomplishment and incompetence. Furthermore, burnout alludes to feelings of disillusion, that one has lost touch with meaning at the workplace, resulting in depersonalization. Among the outcomes of burnout, the results were reduced job performance, poor quality of care, adverse events, patient negative experiences, and staff intention to leave the profession factors, which contributed to AEs (Maslach, Jackson, & Leiter 2016*).* The outcome of burnout results is that it is a serious contributory factor of AEs, which needs attention as these characteristics indicate that such a midwife is a danger to mothers under her care. Excessive exhaustion and lack of concentration, coupled with poor job performance, lead such a midwife to repeat AEs*.*

2.4.4 Unequal Distribution of Resources

The quality of healthcare in South Africa has been compromised by various challenges that impact negatively on healthcare delivery. Improvement in quality care means fewer errors, reduced delays in care delivery, increased market share, and lower cost. (Abera Abaerei, Ncayiyana, et al. 2017). A decline in quality healthcare has caused the public to lose trust in the healthcare system in South Africa as more AEs occur due to poor quality care. In 2019, Statistics South Africa (STATS SA) reported that 71.5% of households used public healthcare facilities whenever they needed care, while 27.1% of households used private healthcare facilities when they required healthcare. In 2017, the Department of Health (DoH) revealed

that the private sector spent 4.4% of gross domestic product (GDP) on healthcare, but only provided healthcare to 16% of the population, while the public sector spent 4.1% of GDP on health, but had to provide care to 84% of the population. Mhlanga and Garidzirai (2020) and Chauke (2021) during their research reiterated that resources were not equally distributed and thus, public hospitals were exposed to AEs due to a lack of equipment and even a shortage of staff who could not cope with the number of healthcare users, which increased the AEs of these hospitals.

During colonial and apartheid times, disparities were aggravated by policies of racial segregation and exclusion, remnants of which are today still visible in health-professional backlogs, unequal distribution of human resources, and differential access to health services (Van Rensburg, 2012). Poor supply of human resources gives rise to overworked, fatigued midwives, who are prone to AEs due to poor quality of care. The South African Constitution of 1994 contributed to the poor performance of public hospitals as it guarantees healthcare access for all who live in it, yet considerable inequalities remain, and enough equipment was never provided for the overpopulated hospitals, yielding poor quality care and a higher number of AEs.

2.4.5 Shortage of Staff in Public Hospitals

The shortage of staff in SA is exasperated by countries that recruit nurses looking for greener pastures. This recruitment system, according to Walani (2015), paralyses the healthcare system, causing workload and poor-quality care, which, exposes midwives to AEs. The SA government, according to Govender et al. (2017), introduced Community Service for newly qualified professionals who assisted in the shortage. Even though these professionals were newly qualified, the results revealed that they found themselves holding ‘double’ titles, due to shortage. These study results replicate those of Thopola, Kgole, and Mamogobo (2013), showing that midwives perceived the shortage of staff as their greatest challenge, which hurt the provision of quality nursing care.

In the parliamentary questions’ session held on 23rd March 2022 in SA, the Minister of Health, Dr Joe Phaahla (Africa Media Digest) reported by Farham (2023), responded to Freedom Front Plus that there were 10 831 vacant nurse posts in public hospitals. Phaahla said that due to general budget cuts introduced by the National Treasury as part of fiscal consolidation

in the Public Service, the cost of employment was negatively affected and not all posts could be filled simultaneously. Prof Pienaar at the Health Exhibition and Congress (2016), reiterated the fact that public hospitals stressed that moonlighting was contributing to fatigue, fatigue leading to absenteeism, and a greater chance of mistakes in caring for the patient. A study conducted by Ndwedwe (2021) on absenteeism at the University of Witwatersrand indicated that nurses reported a high rate of absenteeism, leading to understaffing, overwork, and exhaustion. The ideal ratios are one nurse to four patients for morning and afternoon shifts and one nurse to seven patients for night shifts, as mentioned by Delihlazo (2014), which never happened due to overcrowding in public hospitals, which opens a door for AEs. Matlala and Lumadi (2019) reiterated that midwives were passionate about their jobs, despite the hurdles related to their day-to-day work environment. However, midwives were demoralized by a chronic shortage of staff and felt overworked.

2.5 The Impact of AEs on Midwives

2.5.1 Emotional Status of Midwives

Midwifery focuses on facilitating the arrival of new life, not morbidity or death. A study conducted by National Health Service UK (NHS) on midwives' experiences of caring for women and their families following a stillbirth found the events deeply disturbing, 'resulting in them experiencing highly negative emotions and, in some instances, deep unfounded feelings of culpability'' (Kenworthy & Kirkham 2019). Similarly, a study on the reports of traumatic events was identified in a New Zealand study of 16 midwives, with emotional stress burnout causing illnesses such as anxiety and PTSD (Calvert 2014). Mottaghi, Poursheikhali, and Shameli (2020) expressed how midwives experience AEs. Midwives in that research develop symptoms of guilt, shame, blame, nightmares, insomnia, isolation, helplessness, and hopelessness, thereby becoming the second victims. The study results conducted in Singapore by Adzo Tehoda (2021) confirmed that midwives experienced second victim-related events causing physical, psychological, and professional distress.

The lack of attention, including support for the well-being of the health professional, has been identified as a missing response in the management of AEs in countries such as America, the United Kingdom, and Sweden (Conway, Federico, Stewart, et al. 2011; Mander 2001; Seys, Wu, Van Gerven, et al. 2013; Ullström, Sachs, Hansson, et al. 2014). Theophilus,

Magyar, and Babl (2009) conducted a survey in New Zealand and across Australia, which gave results that there were no policies or programs to provide debriefing post-AEs. Another research by Calvert (2014) in New Zealand from interviewed participants, highlighted that midwives were not supported after any traumatic or adverse event, and their behaviour showed that they were traumatised emotionally and even ostracised themselves from their colleagues (Austin et al. 2014). Healthcare providers become distressed if involved, witnessed, and failed to prevent AEs. A South African study (Jordaan, Filmalter, & Heyns 2022) concurred that healthcare providers were expected to care for patients, and these expectations put them under pressure, aggravating distress, resulting in the second victim experience when AEs occur. Stressed midwives were emotionally unstable and impatient with mothers and less caring as there was no attention given to mothers and less concentration led to the occurrence of AEs.

2.5.2 Midwives as Second Victims (Summarised)

A second victim according to McDaniel and Morris (2020) is an individual who got involved in an anticipated AE. A midwife can become a second victim, blaming herself for how she will be perceived in the setting. Literature conducted by Wanda (2021) indicated midwives as second victims manifesting symptoms of guilt, grief, sadness, shame, blame, depression, nightmares, insomnia, isolation, and helplessness. The impact of being a second victim warrants psychological and institutional support to the midwives. The manager, when providing her support, has to refer the midwife to a specialist, as the midwife can repeat the same mistake because of fear, if not referred for consultation increasing AEs in the unit due to being unstable. These types of trauma might also contribute to the development of an anxiety disorder such as post-traumatic stress disorder (Kerkman, Dijksman, Baas, et al. 2019).

2.6 The Impact of AEs on the Health System

Maternal health litigations are a global concern. A study in Portugal by Sousa, Uva, Serranheira, et al. (2018) indicated that many patients (60.8%) who experienced AEs prolonged their length of stay in the hospital by an average of 9.6 days, with an estimation of

additional costs to the public hospitals. These costs are a burden in terms of clinical, economic, and social impact, and for that reason, they are a challenge for the health system. Attaining better care strategies would improve the quality of care and minimise ligation in maternal health facilities (Gowda, Bhandiwad, & Anupama 2016). In the South African district in Mthatha (Maqgadiyane 2019), maternal health facilities continued facing AEs complaints regarding poor quality of care, inadequate basic equipment, shortage of midwives, maternal mortality rate, and incompetence associated with these ligations in hospital settings.

2.6.1 Challenges in the Delivery of Care in Public Hospitals

Midwives are passionate about their jobs, despite the hurdles related to their day-to-day work environment**.** A study conducted by Maphumulo and Bhengu (2018) indicated that in South African public hospitals, midwives have challenges in the delivery of care, which could be resources needed for delivery care. Quality assurance teams have been established in public hospitals, which are responsible for checking if public hospitals meet the standards (Ojo, Tolentino & Yoon 2021). The improper delivery of care has made the community lose trust in the nursing fraternity.

2.6.2 Fear of Being Blamed

There is a culture of blame during adverse events, and negative emotions emerge. A midwife needs to be able to speak without fear of being stigmatised. Dahlen and Caplice (2014) in their study indicated that fear experienced by midwives exposed them to traumatic occurrences as they were psychologically disturbed. Midwives who experience AEs can have feelings of guilt affecting them psychologically as they face a blame culture from managers in the work environment. Schrøder, Lamont, Jørgensen, et al. (2016) described these feelings and experiences as existential considerations after involvement in traumatic childbirth. Midwives described feelings of the agony of being powerless, demoralised, and useless to protect women while feeling responsible (Jones, Williams, Jetten et al. 2011).

Communication following traumatic events was viewed by Watson, Angus, Gore, et al. (2015) as an essential component in supporting midwives to cope with work practices and prevent defensive statements, which resulted in blaming midwives and further increased AEs due to poor clinical decision- fearing blame. Research conducted by Whittaker (2020) highlighted

that when patients and families perceive that they are actively involved in the discussion of the adverse event, they feel more satisfied rather than being blamed by management. However, communication with peers was taken under caution, as literature identified that the emotions and events experienced by an individual may be transferred, unintentionally as an outlet of emotion or a form of debriefing (Whittaker 2020), which indicates that distressed midwives can blame each other or even their patients. The blame culture was observed as a cause of psychological stress and trauma among nurses. A nurses' perspectives study conducted by Okpala (2018) on the impact of management approaches particularly on the blame culture in healthcare organisations. Blaming individuals by management is emotionally disturbing. It has become a norm for midwives to be blamed during AEs without assessing the contributing factors of the setting. Once midwives are blamed, psychological disturbances, feelings of inferiority, and incompetence occur. Midwives who are blamed lose concentration, which can lead to repeated AEs due to psychological disturbances (Schrøder et al. 2016).

2.6.3 Peer Support

There was an openness to making oneself vulnerable post AEs by putting one's welfare in the hands of another midwife, trusting that midwife to give support, and understanding interpersonal trust (Kennedy 2018). In a study conducted by Kennedy (2018), midwives described peer support as a form of emotional first aid, a haven to discuss incidents in a non-judgemental environment. To be successful, Lane, Newmann, Taylor, et al. (2018) indicated how a peer support program must be proactive in nature. Not all midwives will actively seek support from management as there continues to be a stigma associated with speaking up and accessing offered support being judged as incompetent midwives. Peer support was regarded by Davidson and Guy (2012) and Repper, Aldridge, Gilfoyle, et al. (2013) as a collegial-level measure and value-for-money trusted relationship. Peer support is properly selected at no cost with coping strategies from experiences of dark times, which boosts the morale of the affected midwife. Peer support of mutual friendship has been seen as better support, as midwives trusted that they would not be judged and had regained confidence in their work performance with no recurrence of AEs (Repper et al. 2013).

2.6.4 Lack of Support of Midwives

Midwives encountering adverse events may be at risk of developing secondary traumatic stress or even psychological and emotional trauma. Midwives who are involved in traumatic events during deliveries find it difficult to forget and have memory spells of the incidents even after years of experience (Morobe 2018). Complications in OUs haunt these midwives, and failure to identify such occurrences brings about feelings of not being valued in their work environment. Previous studies (Kerkman et al. 2019) announced that midwives depend on their institutions to cope with emotional stress. Therefore, performing clinical inspections by experienced or specialist midwives may serve as a supporting framework for reducing defensive interventions. Cankaya, Erkal Aksoy, and Dereli Yılmaz (2021) analysed a report by midwives that highly recommended support from colleagues rather than management. In that study, it was indicated that there was a lack of institutional relationship with midwives. Researchers like (Azizi, Kamali, Moosazadeh 2021) established that trust could pave a better way of communication with subordinates. It was determined that midwives received support mostly from their colleagues in case of a traumatic birth rather than the support expected from managers. Supported, they would feel confident in performing their duties.

2.6.5 Bullying and Harassment at Public Hospitals

Workplace bullying is an important nursing issue that can influence a nurse's propensity to commit practice errors. Medical errors are costly to hospitals, resulting in litigations, and are related to patient morbidity and mortality, but also in terms of decreased patient satisfaction and loss of trust in the healthcare delivery system (Johnson 2009). Bullying, as mentioned by Johnson and Benham-Hutchins (2020), is a barrier to respectful, collaborative, and effective teamwork. Healthcare teams are more likely to experience disruptive behaviour because of bullying than workers in other industries. Bullying causes increased amounts of stress and frustration, loss of focus, and impaired job team function (Manyisa & Van Aswegen 2017). The nurses in the research by Szutenbach (2013) perceived themselves as failures. Bullying and harassment of healthcare workers endanger patient care as health providers are more focused on the negativity that happens to them. A study conducted by the Medical Journal of Australia (2019) indicated that some supervisors publicly criticised their juniors in

front of their colleagues during an adverse event. Workplace bullying has physical and psychological effects on midwives, extending to mothers due to the behaviour of stressed midwives.

Another workplace bullying and harassment study was conducted among nursing staff in Greece by Karatza, Zyga, Tziaferi, et al. (2016), who announced that bullied nurses needed support as they performed arduous emotional and physical work. The lack of support of these stressed midwives led them to poor nursing care ending in AEs. Stress symptoms and a hectic pace in the workplace reduced motivation (Azizi, Kamali, & Moosazadeh 2021) and continued to stress the fact that nurses developed defense mechanisms even in impersonal relationships with patients feeling closely related to work-related bullying. Bullying may create a toxic work environment, decreased work motivation, and a lack of concentration causing errors to result in poor productivity and a low quality of patient care ending with AEs at workplace harassment (Karatza et al. 2016).

2.7 Support of Midwives in Public Hospitals

2.7.1 Providing a Safe Environment

The occurrence of an AE brought about stigma and judgment by colleagues, hence the question: ***'Will I ever be trusted?'*** (Ullström et al. 2014). A study conducted on 31 clinicians indicated that there was a concern raised on the issue of trust of not being sure whom to confide in, members rather turned to their family members than their line managers or peer group. Midwives in that study felt that the environment was not 'safe' to confide to their peers for fear of being stigmatised (Grady, Levenson, Mesias, 2019). Fear of litigation associated with stress has negatively impacted the performance of a midwife (Alexander & Bogossian 2018).

2.7. 2 Professional Reassurance

Midwifery organisations worked to help prepare and support their members as they experienced AEs. Calvert's (2014) research indicated that midwives who experience trauma have no other option but to leave. Supported by Cox and Smythe (2011) stated that burnout midwives quit the settings. Fergusson, van der Laan, Shallies, and Baird's (2020)

phenomenological study of the experience of five charged midwives in three different New Zealand delivery suites indicated that core midwives were at risk of facing adverse events and chose to resign.

2.7.3 Supervisor Support or Encouragement

The emotional and intimate nature of the midwife-birthing person relationship made midwives particularly susceptible to the effects associated with the second victim phenomenon, and PTDS occurred (McDaniel & Morris 2020). Midwives had fears of litigation amplifying their stress, which negatively impacted their emotions and easily led to mistakes by the midwife (Alexander & Bogossian 2018). For these reasons, line managers need to develop support systems of the institution and psychological support to engage and support their members as they experience AEs (McDaniel & Morris 2020).

2.8 Strategies to Support Midwives in Public Hospitals

2.8.1 The Importance of Leadership

Nurse managers have a particularly influential role in the implementation of evidence-based practice, in terms of providing a supportive culture and environment (Maxwell 2017). For this, they need to have an underlying knowledge but also to be aware of and address barriers to implementation and understand the key role of nurse managers. A clear definition of leadership adopts the alignment of organizational mission, goals, education, and member benefits, as indicated by Bianchi, Bagnasco, Bressan et al. (2018). In this research, the focus is on supporting the midwives who experienced AEs. Issues such as poor leadership and culture, a lack of continuing professional development, or underlying failures to recognize and escalate concerns could not be fixed by managers alone, but Ali et al. (2015) concurred that the involvement of midwives was necessary for a setting to raise challenges faced with OUs. Inadequacies of institutional support included barriers to obtaining formal support, blame culture, punitive approach to AE, and systemic inadequacies (Ullström, et al. 2014).

2.8.2 Improve Leadership Interactions

Managers need to develop listening skills for their subordinates and show empathy and understanding in their situations. Kelly, Drye, and Brown (2023), in their findings, reiterated

that managers must be actively supporting midwives, showing interest as leaders by providing feedback. In the midwives' booklet, *'Unexpected Outcome,'* which guided support strategies for midwives (New Zealand College of Midwives, 2008) there were support strategies for midwives indicating counselling, support for a colleague, and debriefing.

2.8.3 Strategies to Improve Staffing

Research conducted by Hersh (2023) revealed that nurses are a vital part of the healthcare sector but are often overworked, underpaid, and unappreciated. Nurse retention and turnover impacts negatively on health care. Retention of experienced midwives was of paramount importance to improve staffing in OUs. Management needed to develop strategies to retain their staff members, especially the younger ones, to address the chronic challenges of staff turnover. Communication between nurses and management and the allocation of resources were other factors required to create a conducive working environment and improve staff shortages. The allocation of resources may help create a conducive working environment for midwives (Tang & Hudson 2019).

Yetti and Gayatri (2019) confirmed that the inadequate remuneration system triggers nurses' movement to private hospitals. Recognition of special days like 'Midwifery Day' or 'International Nurses Days' gives credit to private hospitals to recruit midwives better than public hospitals (Yeager & Wisniewski 2017). Retention of midwives at public hospitals needs to be promoted by motivating midwives through recognition to retain staff and prevent high turnover. Recognition of staff involved in matters that concern them, better remuneration, and flexible working hours if considered could retain staff and boost morale at public hospitals (Yeager & Wisniewski 2017).

2.8.4 Boosting Staff Morale

Understanding staff needs and motivation issues deserves attention by management if an institution is to get proceeds on resources spent on staff and for an institution to retain and attract staff; this was the outcome of research conducted in Malawi by Chipeta (2014). An argument by Maxwell (2017) debates that there is no simple answer to the question of who has good leadership skills in nursing, which has a positive impact on both the patient and the nurse. Midwives need to be allowed to form positive relationships in their working

environment. Boosting staff morale, appreciation of their input and involvement in decision-making, and include them in matters that impact them was seen as important by Manyisa and Van Aswegen (2017). Effective communication could boost staff morale and productivity for midwives, which, as related by McCarthy (2020), even has a healing process.

The findings of a study conducted by Chipeta (2014) in Malawi indicated that the poor working conditions at hospitals demoralised staff in carrying out work expectations. The demoralised staff contributed to the shortage by being absent from work. Songstad (2011) concurred with Chipeta (2014) that lack of training opportunities, recognition of experience, salary, or lack of allocation of allowances were causative factors in demoralising midwives. The most commonly cited factors leading to the poor working environment in Malawi were lack of social and retirement benefits, and proper equipment (Chipeta 2014). Poor working environment, workload, poor leadership, and work-related stress according to Nielsen, Pedersen, Rasmussen et al. (2013), expose midwives to wrongdoings that end up with AEs. Creating a work environment in, which all staff can contribute, boosts the morale of staff, as suggested by (Maxwell 2017).

2.8.5 Migration of Staff and the Effect on the Public Hospital

The migration of nurses in SA contributed to the shortage of nurses in public hospitals. Mokoka, Ehlers, and Oosthuizen (2011) ascribed migration to factors like poorly resourced public hospitals, low morale of personnel, litigations, workplace safety, inadequate salaries compared to workload, and limited development opportunities. In SA, the shortage was aggravated by the fact that SA nurses were targeted by affluent countries like Canada, the United States, and the United Emirates with better salaries. The migration of domestically trained and experienced midwives paralysed both the economy and health systems in two ways that a shortage of nurses occurred, which caused poor quality care. Poor care resulted in AEs that milked the purse of NDoH (Taylor et al. 2018). The migration flows vary in direction and magnitude over time, responding to socio-economic countries. A study by Embo and Valcke (2015) asserted that midwifery education played a role in continuous professional development (CPD), where respondents needed mandatory preceptorship. Public hospitals overlooked such factors because of workload and shortage of staff giving a reason for midwives to emigrate to other countries.

The World Health Assembly, in recognition of the human resource crisis, passed resolutions for strengthening nursing and midwifery services. Nationally, the Forum for University Nursing Deans in SA (FUNDISA), in conjunction with Mulaudzi, Daniels, Direko, et al. (2012), concurred with the realisation that training of midwives was impossible as there are not enough midwives in SA to close the gap. In summary, the above researchers identified a lack of mentoring of newly qualified midwives. Researchers in this research concluded that the gap was also created by the shortage of staff aggravated by migration.SA was not the only country experiencing migration, even countries like Zimbabwe and Ghana (Chipeta 2014) have healthcare workers migrating due to high levels of political violence, poor economic conditions, lack of resources, and poor management of health services (Chipeta 2014). In Ghana, for example, Labonté, Sanders, Mathole et al. (2015), high nurse migration rates forced the government to increase remuneration, despite having a strained health budget just to keep their professionals in their country. On top of migration, The Constitution of SA (1996) contributed immensely to the burden of public hospitals by allowing everybody residing in SA to access free healthcare causing overcrowding to the already limping health system. In summary, the migration of healthcare workers in SA had a great effect on staff shortages in public hospitals.

2.8.6 The Resilience of Midwives Versus Organisational Responsibility

Resilience is the ability to bounce back, adapt to difficulties, and stress or cope successfully despite experiencing AEs (Aburn, Gott, & Hoare 2016; Park, Kim, Lu, et al. 2019). Nurses deal with modern-day problems at public hospitals that affect their abilities to remain resilient (Hart, Brannan & De Chesnay 2014). Cooper, Brown, Rees et al. (2020) state that there is no approved definition of the concept ‘resilience’ even though a concept analysis was undertaken to examine nurse resilience using a prior selected analysis framework. Nurse managers and human resources managers needed to look for solutions not only to recruit nurses but also to become knowledgeable about how to support and retain nurses (McAllister & McKinnon 2009).

A descriptive cross-sectional study conducted by Manomenidis, Panagopoulou, and Montgomery (2019) indicated the ability of midwives to grow from AEs. The practice of self-care to develop resilience was, however, brought down by poor adaptation of mental and emotional variation to external and internal demands. However, when midwives experienced trauma through witnessing poor interpersonal care; being prevented from providing the best

care due to systemic pressures; lacking required resources being disrespected or bullied in a workplace; the responsibility for better care and support was with the institution (Cox & Smythe 2011). Throughout the hierarchy of staff, there must be an attitude of zero tolerance toward all actions and inactions that serve to undermine and harm midwives as they need support from managers to cope with traumatic events (George & Potter 2023).

2.9 The Strategies Used by Managers in Cases of AEs

2.9.1 Support in Completing the Incident Report

Hospital incident reporting serves as an important learning tool to capture errors committed and investigate the incident towards implementation of patient safety. Even though completing of incident report is necessary, there are barriers to completing PSI forms like fear of blame and repercussions of reporting (Benn, Koutantji, Wallace, et al. 2009; Braithwaite, Nugus, Greenfield, et al. 2010; Lawton and Parker 2002; Macrae 2016; Sujan, 2012). The aim of reporting an incident, as documented by Dhamanti, Leggat, Barraclough et al. (2015) in Indonesia, was to investigate and implement Patient Safety Incidents (PSI). From their thematic analysis, it was confirmed that lack of training, unwritten or incomplete records, absence of feedback, and lack of leadership contributed to inadequate management support of staff in a public hospital. The World Health Organization's (WHO, 2005), World Alliance for Patient Safety developed the first draft guidelines for adverse event reporting, with the apparition that one day it may be possible for the bad experience suffered by a patient in healthcare centers to be a source of learning in preventing AEs (Macrae 2016). In SA, the NDoH (2022) has developed standardised guidelines for incident reporting to assist in AEs.

2.9.2 Assessment of Incident

One of the strategies used by managers to assess the incident, as stated by Fitzgerald (2016), is to obtain full knowledge of the incident, and its impact on the patient and the setting. The support of this statement by the WHO (2018) further explains the importance of assessing the background of the pre-existing factors or even exposure to triggering factors of the event. This is supported by Belandi (2021) who states the importance of assessing the background of the incident's pre-existing factors including exposure to triggering factors of the incident. The importance of assessing the incident was concluded by Bos, Dongelmans, Greuters, et al. (2020) highlighting that it leads to recommendations for curbing

the reoccurrence of incidents. Assessment of the incident by managers must be done in a conducive environment away from the stressful environment where the incident occurred.

2.9.3 Provision of a Conducive Environment

Disclosure or reporting of an AE context has unique challenges where the involved midwife feels embarrassed about the error and fearful of the consequences, as researched by Szymusiak, Walk, Benson, et al. (2020), who concurred that it had an effect on human engineering towards the low self-esteem of the involved individual. The provision of a conducive environment away from the incident area was supported by research conducted by Nazário, Cruz, Paes, et al. (2021). The chosen environment indicated that an environment, if not conducive, could serve as a barrier to disclosing the AE at arms' length and only to reporting it on the surface. Research has proven that there is a relationship between fear and litigation, so it is important to improve disclosure conversations and feedback on the occurrences that can only occur in a conducive environment (Lipira & Gallagher 2014).

2.9.4 Provision of Feedback

Failure to communicate after an AE poses a significant threat to the improvement of quality care and patient safety. A lack of feedback hampers learning processes in an institution. The provision of feedback as suggested by Temte, et al. (2020) in their study has shown that the provision of follow-up when implemented, improves the perceptions of dealing with cases of AEs. The Danish study by Moeller, Rasmussen, and Nielsen (2016) highlighted the lack of nurse training which made it more difficult to understand the importance of incident reporting and the definition of error. Hamed and Konstantinidis (2022) further indicated that poor interdepartmental cooperation contributed to the blame culture experienced during AEs. Midwives could explore how to do better rather than becoming defensive, which could help them offer and maintain positive and compassionate interactions with women (Schrøder, Lamont, Jørgensen, et al. 2018).

2.10 Theoretical Framework

A theoretical framework according to Chinn and Kramer (2018), is a grouping of related concepts that are relevant to a complex situation. This study developed a model that would support midwives after experiencing AEs in OUs public hospitals. Its foundation was based

on King's Theory of Goal Attainment of Human Behaviour, which has three interacting systems of personal, interpersonal, and social interaction (1989).

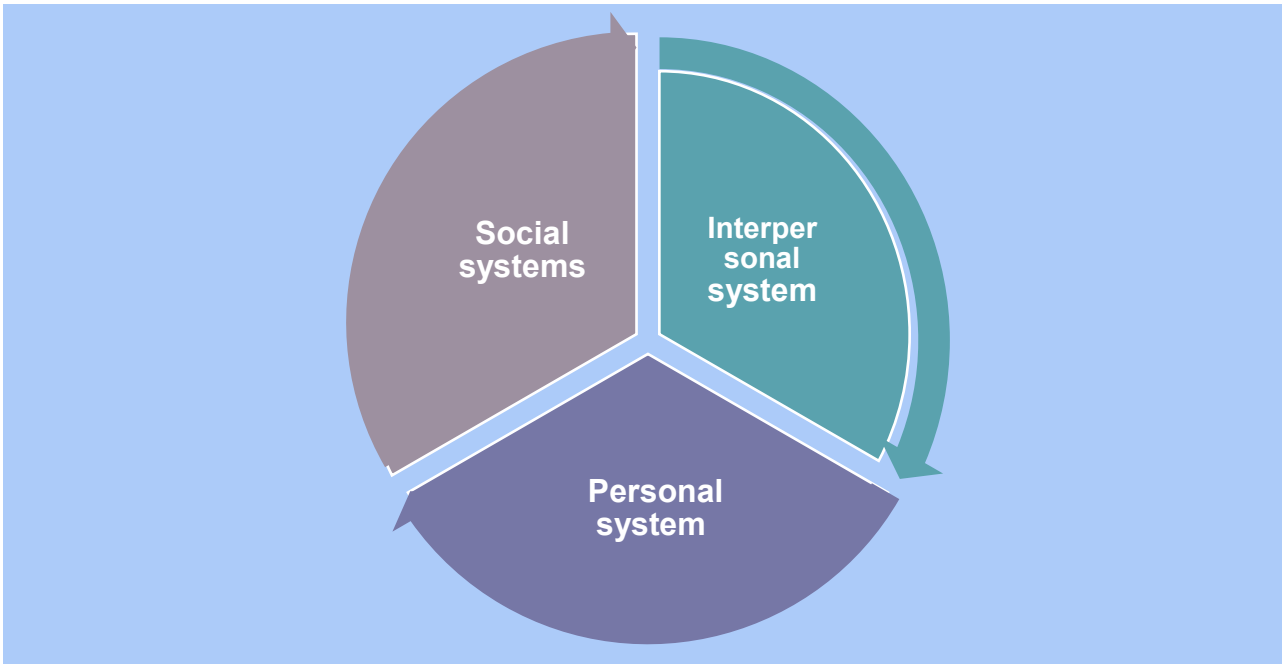

Figure 2.1: King's Conceptual System (Kings 2006)

King's theory focuses on the interpersonal relationship, which indicates that concepts are interrelated and could be used across systems to identify the essence of nursing, general systems orientation, and expand the concepts. King's theory specifically addresses how nurses interact with their patients. These concepts, which are widely used in nursing today (Alligood 2013; Bond, Hayes, Baer, et al. 2011; Sieloff, Frey & King 2007) and of significance because they indicate the following:

Personal

The concepts for the personal system are perception, self-growth, and development in nursing practice, the term means that the midwife would think about mothers, nursing care, and its direct effect on her approach to people (mothers), what questions to ask, how to process the information that is learned and what nursing activities to undertake towards caring when experiencing AEs. One assumption in King's theory indicated that the focus of nursing was based on caring for a human being in an interactive environment. The environment addressed in the assumption by King's theory would have to be conducive for both the nurse and her patient. In this study, the environment would mean the obstetric units that exist between the midwife and the mothers.

The concepts (perception, self-growth, and development) would be how the midwife interacted with her patients (mothers). Since obstetric units must be conducive, King's theory of Goal attainment would provide a holistic framework to examine the midwife's interaction after experiencing AEs in the obstetric unit, as she was responsible for delivering care that would prevent illness to meet the need that a patient was unable to provide for herself.

Interpersonal concepts

Interpersonal concepts involve interaction, communication, transaction, role, and stress. Concepts in the interpersonal system involve the human interaction of the midwife and the mother (King 2006). In this study, interpersonal concepts referred to the two interactions between the patient (mother) and the midwife, as depicted in Figure 1 above. However, the midwife's human interaction also involves her OPM and line manager. According to King's theory (2006), health involves dynamic life experiences with stressors in the internal and external environments. Goal attainment recommends optimum use of resources to achieve maximum potential care for daily living. In this study, the midwife experiences AEs, which stresses her in the MOU and lacks the support of the OPM and line manager. Support that could be provided to the midwife by her OPM could encourage growth and development.

Social system

Concepts in the social system are organisation, authority, power, status, and decision-making. The theory of Goal Attainment is derived from the personal and interpersonal systems process model of human interactions (King 2006). In this study, the decision-making bodies, which are the OPM and line managers, CEO, SANC, and DoH have the power to make decisions in cases of an AE, involving the midwife as indicated in Figure 1 above. The initial concepts of the theory (perception, communication, interaction, transaction, self, role, and decision-making) represented the essence of nursing (King 2006). The model of human interaction defines the observable behaviours in nurse-patient interactions that lead to transactions. Furthermore, the components of the goal attainment theory approach would guide the construction of the conceptual model.

2.11 Conclusion

This chapter based its literature on factors contributing to AEs. Long working hours were seen as causing hazards at workplaces as participants were fatigued. Irregular working hours pose risks associated with psychological, social, and physical challenges. These challenges of ill health in OUs harm the delivery of quality patient care. Unequal distribution of resources was pointed as another causative factor impacting hospitals' delivery of care. Midwives are also challenged by the health system as they become second victims leaving in fear of being blamed, lacking peer support, and experiencing bullying at the workplace. Managers had to develop strategies to support midwives by providing a conducive environment and guidance on the process of reporting AEs. King’s Theory of Goal Attainment was chosen to guide the theoretical framework of this study on concepts of personal, interpersonal, and social systems. Personal concept concentration is mainly on human interactions, social interest, and personal growth. The interpersonal-based phenomenon on social interest and social system focuses on decision-making, perception, and communication.

CHAPTER 3
RESEARCH METHODOLOGY

3.1 Introduction

In Chapter 2, the literature review of the study was outlined. The core aim of this chapter was to describe the research methodology, how it steered the data collection, its purpose, the rationale for its use, objectives, selection criteria used, the analysis of data, ethical clearance, and conclusion of the study to support midwives experiencing adverse events in the Tshwane district of Gauteng province.

3.2 Research Method or Approach

Research methodology is the specific technique utilised to identify, select, process, and analyse the phenomenon to be studied. Gray, Grove, and Sutherland (2017) further state that it is the major research design chosen by the researcher to study the research phenomenon in question. Houser (2018) defines it as a criterion for selecting informants guide for data collection and analysis. There are various types of research approaches, including mixed methods research.

Mixed-method research (MMR) uses a qualitative method to describe experiences with an additional quantitative strategy to measure the dimensions of the experience. MMR is defined as both qualitative and quantitative approaches in a single study (Tashakkori & Teddlie 2021). According to Bentahar and Cameron (2015), MMR amalgamates qualitative and quantitative approaches, concepts, and methods in a single study. The MMR was chosen as the researcher believed that the two methods were the best tools for answering the research questions for the current study. An important aspect of utilising both qualitative and quantitative methods is that inductive and deductive reasoning skills are implemented. According to Gravetter and Forzano (2016), the use of both thinking skills is a complementary process in which predictions of general conclusions can be made. MMR according to Gelo, Braakmann, and Benetka *(*2015) gives different interpretations allowing researchers to address daily

apprehensions from different paradigms and allowing attention to be given to more than one methodology.

In MMR, the researcher collects and analyses data, integrates findings, and draws inferences using the research question in a single study. The overall goal of mixed methods research, combining qualitative and quantitative research components, is to expand and strengthen a study's conclusions contributing to the published literature. In all studies, the use of MMR should contribute to answering one's research questions, a combination of data collection and data analysis. In this study, MMR was chosen to answer the research question 'How can a model that supports midwives experiencing AEs in midwifery obstetric units of Tshwane district, Gauteng province be developed? In this instance, data collection and data analysis of both components occurred simultaneously but independently. Using MMR by the researcher minimised bias in the study when one method was applied. Gelo et al. (2015) believe that the solution to qualitative ambiguity is to mix it with quantitative methods. To reinforce the debate, Tashakkori and Teddlie (2021) concurred that the mixed method aims to combine different methodologies to strengthen them. MMR is further utilised to develop analysis and strengthen preliminary findings using divergent data and data collection (Denscombe 2017). The strength of the mixed method is emphasized because it gives different worldviews to address problems or daily concerns from different paradigms.

Multifaceted matters can be researched and given attention rather than concentrating on one method (Gelo et al. 2015). According to Chow, Quine, and Li (2010), quantitative methods looked at the magnitude of the problem but failed to scrutinise the occurrence questioning the 'why' and the 'how' of the phenomenon. A qualitative approach is subjective in nature and easily interferes with the conclusions of the study. Gelo et al. (2021) further stated that qualitative research cannot be generalised, as utilised samples are small and the results may not cover larger populations. Research is not restricted to using traditional approaches to data collection but is guided by a foundation of inquiry that underlies the research activity (Creswell 2016). MMR study, difficulties arise when the researcher attempts to articulate how the two elements relate to one another (Tashakkori & Teddlie 2021). When the researcher could utilise

more than one data collection method, more information could be collected than when using only one methodology. There is an inconsistency among researchers about what constitutes mixed methods research (Sandelowski, Vollis, & Knafi 2001; Bryman 2012; Tashakkori & Teddlie 2021).

In this study, the researcher having gathered information from other sources, thought of triangulating the methods by directly comparing quantitative statistical results with qualitative findings for corroboration and validation purposes. The researcher compared quantitative results with qualitative findings to create a better understanding of the phenomenon by comparing multiple levels within the system.

3.2.1 Research Design

According to Grove et al. (2018), a research design is a blueprint for conducting a study, a process that provides the researcher with logical steps to follow when conducting a study, to address the research phenomenon. Various designs are used in a mixed-method study, including convergent mixed-method research designs. According to De Vos, Strydom, Fouché, et al. (2018), a convergent design is a single-phase weight to understand the phenomenon of interest. A convergent parallel research design is, therefore, a mixed-method research (MMR) design in which the researcher uses quantitative and qualitative approaches simultaneously, prioritising both methods (Creswell et al. 2016). The convergent design demonstrated that qualitative and quantitative strands formed a complete understanding of the phenomenon as it used multiple research methods in the same study (Creswell and Creswell 2017). In this study, the researcher used a convergent parallel research design. The purpose of using the convergent parallel research design was therefore to attain diverse consistent data on the same topic to further understand the phenomenon being studied. The researcher therefore used both qualitative and quantitative strands where data was collected concurrently, analysed, and interpreted separately.

The design is used when the researcher is expected to triangulate the methods to compare findings for validation purposes (Morse 1991, as cited in Creswell 2016). In

this study, the researcher compared the results of the two data sets for similarities and differences. Similar results were integrated, interpreted and then discussed together (figure 3.1 below).

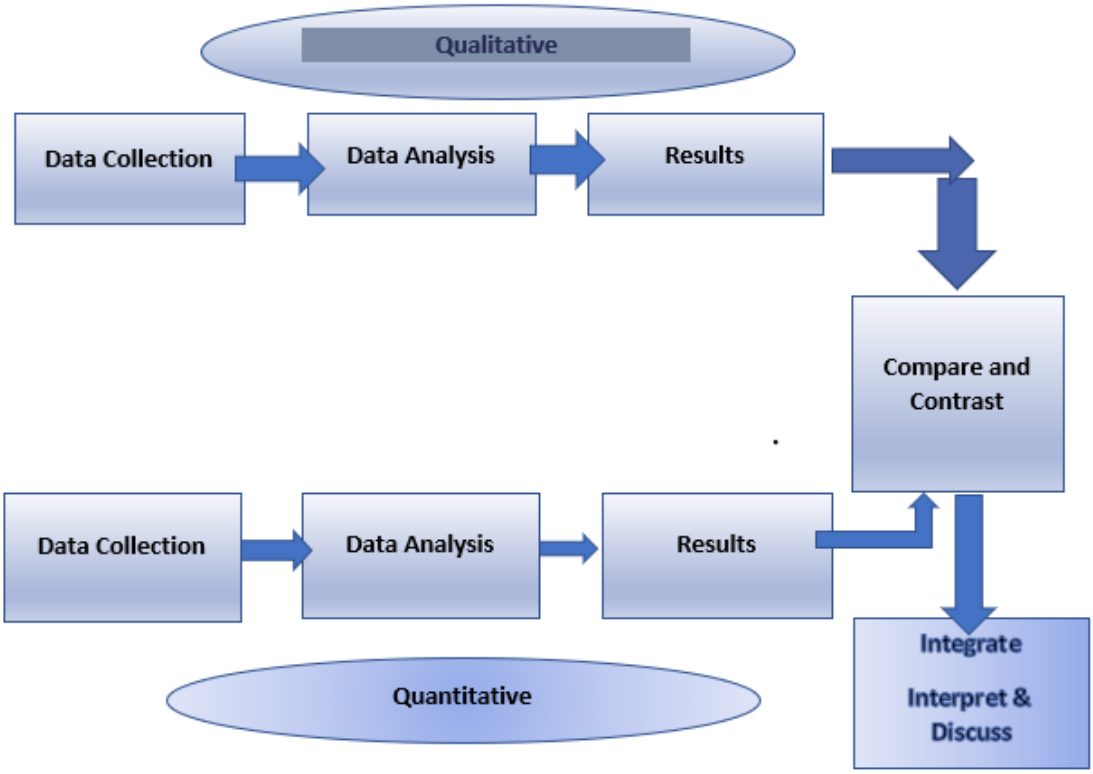

Figure 3.1: Convergent Parallel Research Design (Creswell 2018)

3.3 Research Paradigm

Frame of reference

The frame of reference is in conjunction with paradigmatic perspective and classification of key concepts.

3.3.1 Paradigm in Research

A paradigm, according to Creswell (2018), is a set of basic beliefs, assumptions, or ideologies about human beings, which assigns value to methods of knowledge development guiding the researchers' inquiry. Tashakkori and Teddlie (2021) indicated that pragmatism in the mixed method was based on the debate on the

incompatibility of the two approaches. A definition cited by Christensen, Johnson, and Turner (2015) states that a paradigm is a framework of thoughts or individual beliefs by which reality is interpreted. Harritis (2011) argued that the mixed-method approach must have multiple paradigms to highlight it. Pragmatists, according to Creswell (2018), opened doors for multiple methods; the researcher has chosen the mixed method as it has deepened findings and provided an understanding of the studied phenomenon better than using the approaches in isolation. Creswell and Plano-Clark (2018) indicated that pragmatism provides ontological and axiological assumptions influencing the study from previous experiences in understanding knowledge and approach to the phenomenon. The researcher interacted with midwives in public hospitals of Tshwane to get an understanding of their experiences following AEs and the support they have received from their managers. Polit and Beck (2020) indicated that findings in a naturalistic setting are the interaction that happens between the selected participants and the researcher.

Therefore, this study was conducted in the OUs where midwives were working and had experienced AEs. The researcher was able to gain insight into the studied phenomenon as the gathered information was reliable as first-hand information from participants involved, relating their experiences.

3.3.1.1 Ontological Assumptions

Meta-theoretical assumptions specify the nature and reality of the study and what needs to be known or understood about it to explore the experiences, perceptions, and expectations in the study. Assumptions, as defined by Grove et al. (2018), are statements taken for granted or considered true, even though they have not been methodically verified. They are principles that are accepted as proof of verifications without proof and form the foundation of theoretical reasoning (Brink, van Der Walt & van Rensburg 2015). Polit and Beck (2020) verify assumptions as ‘basic principles believed to be true without proof of being verified’ Ontological assumptions assert that the aim is not to find the truth or reality but to assist in supporting. Polit and Beck (2020) state that experiences are subjective, dynamic, holistic, and individually based’, meanwhile Saks and Allsop (2007) refer to ontology as the study of reality.

The researcher's ontological beliefs are that reality and truth about working conditions are determined by the circumstances related to the researcher and the participants. Consequently, the researcher explored the experiences of midwives who encountered AEs in their lifetimes and were working in the OUs of Tshwane District. The researcher additionally explored the strategies used by managers if midwives encountered AEs to get a better understanding of their situation to come up with a solution to their problems.

3.3.1.2 Axiological Assumptions

Axiological assumptions refer to the researcher's idiosyncratic values that characterise qualitative research meanwhile epistemology provides us with knowledge. Axiology enabled the researcher to identify the internal valuing system that influenced the researcher's perception of the study, and the decisions and actions undertaken (Aliyu, Singhry, Adamu, et al. 2015*).* Axiology focuses on values determined by the researchers' experience (Holden & Lynch 2004; Webb, Metha & Jordaan 2010) focusing chiefly on principles determined by the researcher's involvement in the phenomenon. Nevertheless, pragmatists asserted that researchers cannot distance themselves from the subject or even the methods being studied. Pragmatists further argued that researchers are human and can therefore not be completely neutral in any situation they choose to investigate thus the researcher must bracket her values, interests, and experiences to avoid being biased. The current study related closely to the researcher's experience in a birthing unit of a public hospital where the researcher had spent eight years as a midwife as such triangulation was used to report what participants had said to avoid being subjective.

Inductive reasoning

A qualitative approach is inductive in nature, which implies that, according to (Creswell & Poth 2018), the researcher started by observing a phenomenon that led to an investigation, which brought about new concepts or theoretical perspectives. The researcher in this study discovered problems that led to the development of a model

that emerged from the convergence of qualitative and quantitative approaches. Inductive reasoning was, therefore, seen as the beginning of an approach.

Deductive reasoning

Deductive reasoning comes from inductive reasoning leading to specific conclusions like the development of a model drawn from the developed inductive reasoning. The difference between inductive and deductive reasoning is that inductive reasoning has probabilistic reasoning, whilst deductive reasoning has specific conclusions (Creswell & Poth, 2018). The research design in this study was discussed based on the three phases that were followed to achieve the goal and objectives of the study.

3.4 Phase One: Empirical Phase

In this phase, qualitative and qualitative research strands were presented; the researcher started by presenting the qualitative research strand followed by the quantitative one, although the two were done concurrently.

3.4.1 Qualitative Approach

In Phase 1, qualitative research is known as an investigative approach that relies on multiple types of subjective data. Qualitative data investigates subjects in their natural settings. Creswell 2011, Parahoo 2014, cited by Morobe 2018, defines qualitative research as an approach that starts with assumptions, a study of research problems inquiring about the meaning of a phenomenon being studied. Qualitative design is characterised by the phenomenological origin, which focuses on lived experiences. Qualitative designs are descriptive, explorative, and contextual in nature. Denzin and Lincoln (2021) argue that qualitative research is a study in a natural context to interpret events, to make meaningful understanding. This phase addressed the following objectives of the study:

> To explore the strategies used by managers in the case of an AE in obstetric units of Tshwane district units of Tshwane district, Gauteng province.

To describe challenges experienced by midwives related to AEs in obstetric units of Tshwane district, Gauteng province.

Qualitative research design is seen as investigative, interviews are conducted where participants express their views and relate their experiences. The researcher collected the narratives and identified themes once the experiences of midwives regarding AEs were explored and understood. The researcher obtained in this study information-rich data from the interviews. Lo-Biondo-Wood and Haber (2021) recommended qualitative research as the best method. The qualitative method allowed the researcher to collect data through different methods like interviews, field notes, and focus groups. Qualitative research participants were interviewed in a natural setting, which allowed them to express their ideas openly and in a flexible natural setting.

3.4.2 Characteristics of a Qualitative Research Approach

The qualitative approach allowed the researcher the liberty to decide when data was saturated, even with fewer participants. There was prolonged engagement with the participants building rapport, thus, the participants and the researcher got to know each other. Qualitative research is open to multiple sources of data and the researcher can make changes during the research being guided by the participants' responses as they are being probed for data. A qualitative approach is descriptive in nature as it explores and describes the support of midwives in this study, as stated by the following question:

What are the challenges experienced by midwives related to AEs in obstetric units of Tshwane district, Gauteng province?

The above question further indicated the descriptive nature of the qualitative research strand. The qualitative field explores data in a variety of options. In this research, the participants detailed the challenges experienced in order to discover concepts that led to the findings of dealing with the challenges in the phenomenon. The application of triangulation of findings enhanced the validity and credibility of the study (Creswell 2016).

3.5 Study Setting

This study was conducted in Gauteng Province, in the southern part of South Africa. Gauteng province is one of the nine provinces of South Africa. The Gauteng Province is bordered by Limpopo, Mpumalanga, Free State, and North West Province. Tswana, Venda, Tsonga, Pedi, and Zulu-speaking people are the dominant groups with different cultures. Gauteng is the smallest of South Africa's provinces but comprises the largest share of the South African population. Gauteng province, which was previously named Pretoria-Witwatersrand-Vereeniging, has three metro cities, which are Ekurhuleni, Johannesburg, and Tshwane. Figure 3.2 depicts a map of the city of Tshwane which is divided into seven regions namely: Pretoria North, Far North, Central Western, Southern, Pretoria Far East, Eastern, and Bronkhorstspruit. The City of Tshwane stretches almost 121km from east to west and 101km from north to south, making it the third-largest city in the world after New York and Tokyo. The city of Tshwane is 6,298km square meters in size. Tshwane has academic hospitals serving a population of 15 million people of mixed diversity (STATS SA 2023).

The researcher conducted this study in obstetric units of Tshwane district, Gauteng province, which were (Odi Community Hospital, Jubilee Hospital, and Pretoria West Hospital) all public hospitals. These hospitals are small and were chosen because of having higher numbers of AEs, as compared to larger hospitals in the same province. The settings selected offered ante-natal services, intrapartum, post-natal delivery care services, and immunisation. These selected facilities had a delivery rate of 40 mothers per day. This was because these hospitals are the economic hub, preferred by immigrants, and have a greater population of 15.9 million (26.3%) than other provinces (Stats SA 2023). The three hospitals are overly populated housing patients from different cultures which sometimes makes communication to be impossible between the midwives and patients. This had a major impact on the care rendered resulting in AEs.

Figure 3.2: Map of the City of Tshwane

3.6 Research Population

According to Olulube and Kpolovie (2012) and Polit and Beck (2020), the population is defined as all individuals selected with the same characteristics of the conducted study. The target population is a larger group and not easy to manage, as stated by Burns and Grove (2011). The size of the group is determined according to time and place, including factors determined by the relevancy of the study. Practical challenges were considered when choosing the target population. In this study, the population was all managers (line managers and operational managers) and midwives working at the public hospital of Tshwane District, Gauteng Province, the hospitals under Tshwane metro city were targeted as a study site (See table 3.3 below).

Table 3.1: Phase 1 Population

	Setting Population	Participant Population
Population	All obstetric units in the Gauteng province	All midwives and managers in public hospitals
Target population	All midwives and managers meeting the inclusion criteria in the Tshwane district	Midwives who experienced AEs midwives over 1-year experience Managers in OUs with expertise

3.6.1 Sample Selection

After obtaining an Ethical Clearance from the University of Limpopo, the researcher, with the assistance of gatekeepers, identified the sample of the study.

3.6.1.1 Sampling

A sample is the smallest selected group drawn from the population (Olulube & Kpolovie 2012). The researcher decided and planned how the sample would be selected. Firstly, before sampling participants, the researcher sampled the hospitals where the study was conducted. This was followed by sampling of participants.

Sampling of hospitals

A sample is the smallest group of elements selected from the population being studied (Burns & Grove 2011). Non-probability sampling methods were used to select public hospitals for their information-rich cases, including in-depth participants with a broad knowledge of the topic under discussion. Non-probability sampling designs consist of

convenience sampling, purposive, theoretical, and quota sampling (Burns & Grove 2011). In this study, the researcher utilised purposive sampling as it applies in qualitative research to sample three hospitals (Odi Community Hospital, Pretoria West, and Jubilee Community Hospital) that fall under the Tshwane district. Purposive sampling was used as the hospitals chosen experienced high rates of AEs (Table 3).

Table3.2: Maternal Deaths and AE Stats

Hospital	AE Numbers 2020-2021
Jubilee Community Hospital	96
Odi Community Hospital	85
Pretoria West Hospital	71
Total	252

Sampling of participants

The researcher utilised non-probability purposive sampling, which indicated expected judgement in selecting participants for the study. The researcher selected participants based on who was the most appropriate for the study (Babbie, 2020). In this study, the researcher selected participants purposively as participants who were representatives of the population. Convenient sampling was chosen as the researcher identified members based on inclusion criteria. Identified participants in this study were representative of the population and those willing to participate (LoBiondo-Wood & Haber 2021). Sampling comprised line managers, operational managers and midwives registered with the South African Nursing Council and employed at Tshwane district public hospitals. Clark and Creswell (2018) further indicate that in purposeful sampling, the researcher intentionally selected participants who have experienced the phenomenon being explored, which was those who experienced AEs directly or indirectly.

The number of participants was determined by data saturation when no new data emerged (Burns & Grove 2011). In this strand, twenty-two midwives were interviewed. Twelve managers were interviewed separately from midwives on strategies for

supporting midwives. The power of selection in purposive sampling lies in selecting information-rich cases for in-depth information not according to size. Polit and Beck (2020) highlights that convenient sampling is a non-probability sampling procedure as it involves participants who are readily available to participate in the study.

Sampling size

According to Polit and Beck (2020), there are no fixed rules for the sample size in qualitative studies, but the sample size should be based on information needs. Polit and Beck (2020) state that qualitative approaches do not have pre-determined numbers of participants but depend on data saturation. The guidance will be when the same stories, challenges, and topics emerge becoming redundant, then saturation has been reached. Non-probability purposive sampling was used to select twelve managers (line managers and operational managers (OPMS) and 22 midwives. The number of participants was determined by data saturation.

Table 3.3: Population and Sampled Numbers According to Facility

Name of hospital	Midwives	Sampled midwives	OPMs	Number of line managers
Jubilee Hospital	16	5	3	1
Odi Hospital	20	9	3	1
Pretoria West Hospital	64	8	3	1
TOTALS	**100**	**22**	**9**	**3**

Sampling procedure

The sampling procedure indicated the process followed by the researcher to get sample participants who met the criteria for participation in the study (De Vos et al. 2018; Polit & Beck 2021). Once permission was granted, gatekeepers were selected to assist in identifying and linking the researcher with the prospective participants. The gatekeepers were also requested to assist the researcher in setting up appointments. As already indicated above, participants were selected purposively with the assistance of gatekeepers of each OU, who are meet the selection criteria.

3.6.1.2 Inclusion and Exclusion Criteria

Criteria of inclusion or eligibility criteria refer to specific characteristics of the elements of the population selected to participate in a study (Polit & Beck 2021). In contrast, the exclusion criteria refer to those specific elements that are not legible for inclusion in a sample (Polit & Beck 2021).

Inclusion criteria

Midwives who were full-time employed at a public hospital.
Participants who were willing to participate in the study.
Midwives who experienced AEs directly or indirectly.
Who had over one year of experience working in OUs.

Exclusion criteria

Part-time midwives.
Not willing to participate.
Newly qualified midwives with less than a year of experience.

3.6.1.3 Pilot Study

According to Polit and Hungler (2013), a pilot study is a trial run test in preparation for the major study. The questionnaire was pilot-tested at one district hospital to determine the reliability and validity of the study as key components (Bruce, Pope, and Stanistreet 2008). In this study, the researcher conducted the pilot study with a sample of ten registered midwives possessing homogenous characteristics to the population of the study. Participants used in the pilot study and the results of data collected were not included in the main study.

Purpose of the pilot study

The purpose was for early detection of problems that could arise in the actual process of data collection and to test the validity of the questionnaire (De Vos et al. 2018). The questionnaire had to fulfil the following points:

Clarity of the questionnaire and the ambiguity of the questions.
To ensure the questions answered the aims and objectives of the study.
To enable the researcher to refine the questions where it was necessary before conducting the main study.
To deduce information to assess the reliability and validity of the study.
To assess the practicality of the study (Burns & Grove 2011).

The pilot study was conducted in one of the settings and participants who were in the pilot study were not included in the main study. The outcome revealed that it was not necessary to adjust the set questions. One hospital with three participants was used.

3.6.1.4 Data Collection Method

The researcher used an interview guide (Annexure H) to conduct in-depth individual face-to-face semi-structured interviews with the midwives, (Annexure G) for line and operational managers as participants who consented to the interview (Annexure E).

Preparation for data collection

The researcher obtained consent from Tshwane district health offices. Permission was requested from the three hospitals and permission was endorsed by the district office. The researcher visited the facilities to meet CEOs and research committees to present her intentions of conducting research. Research committee members held meetings and then gave permission to the researcher to conduct research after engaging with managers of the OUs.

Data collection procedures

The researcher requested permission to conduct research from the Department of Healthy Tshwane district via an email following the processes that are set by the research department and senior management, which also granted permission for their respective hospitals. Consent was sought from the participants who met the criteria.

All methods of data collection mentioned in the study were followed. Participants were informed of recordings that were to take place and that there were no rewards for participating in the research.

Semi-structured interviews

The interviews started with brief introductions and explanation of the study's aims and objectives. A safe environment was created to promote comfort and a relaxing area for interviews. A trust relationship was created by breaking the ice before the commencement of the interview. All participants introduced themselves as well as the researcher. Data was collected from participants through interviews to elicit rich and detailed information about the phenomenon being researched. Semi-structured interviews are the most convenient and effective method of collecting data. Data collection took place in a room away from the activity of the ward avoiding noise with each midwife who was available depending on the busy schedule of the ward and during their lunch time. Patient care was taken into consideration. The researcher waited for an opportune time for data collection though some days it was impossible, interviews were postponed, and line and operational managers were interviewed separately in their offices depending on their availability. The title of the study was introduced with the biographical information, excluding the names of the participants. Interview questions were asked from the semi-structured interview guide (Annexure G & H), which was constructed in English to accommodate all participants participating in the study. One central question for midwives asked was:

> *What are the challenges you have experienced related to AEs when rendering maternal health care services in the obstetric units of Tshwane district?*

Managers were asked this question:

> *Which strategies do you as a manager use in case of an AE happening in obstetric units?*

This was followed by probing questions, based on how participants were responding, which were in line with the study's problem. Responses from the participants were recorded with a voice recorder with the permission of the participants ensuring that information was properly recorded to be transcribed verbatim. The behaviours of participants were observed and captured through field notes. Interviews lasted between 30 to 45 minutes.

For the manager interviews, data were collected until saturation was reached by the tenth participant, to confirm this, the researcher added another two participants. For midwives, data was saturated by the twentieth participant and two more were added to confirm that no new information came up. The duration for data collection was from March to May 2023. COVID-19 measures were observed during data collection by wearing masks and sanitising hands to prevent transmission of the virus.

In conducting the interviews, the researcher adhered to Okun's (2002) communication techniques, as illustrated by the table below:

Table 3.4: Communication Skills / Techniques During Interviews

TECHNIQUES	APPLICATION
Responsive listening to participant	Attentive to verbal and non-verbal messages Analysis of thoughts and feelings of participants Listening during interviews Understanding the empathy and concern of participants
Clarifying	Giving concentration to a particular statement during an interview
Probing	Ask questions to keep participants talking. Ask another open-ended question to pursue a statement Request more information to clarify an ambiguous statement
Paraphrase	Follow the participant's statement in different wording

	Help to draw additional understanding of the statement
Minimal verbal response	Avoid interruptions allowing the interview to be smooth Nodding during an interview to acknowledge
Summarising	Highlights the major themes in the interview

Field notes

Field notes are the summary of observations observed and written during data collection. Field notes paint a picture of what was experienced by the researcher. Christensen et al. (2015) described field notes as those notes written immediately during or after one's observations in the field. The researcher kept a journal of reflections during the interviews. The researcher's ideas and concerns were analysed during the verbatim transcriptions. The field notes served as a reminder to the researcher of what happened during the interviews.

3.6.1.5 Data Analysis

Data analysis of the qualitative approach was transcribed verbatim from the recorded data. Scripts were read several times to get an understanding of the content. Units identified answering the research questions as indicated in Annexures H & G. Analysis of data was done immediately after the conducted interviews. Tesch's inductive method was used to analyse data, code, and group themes according to identified experiences (Creswell 2016). The eight steps were appropriate as they helped the researcher to identify the categories as follows:

Step 1: The researcher obtained an understanding of the entire transcript carefully to obtain a sense of the whole and to jot down some ideas that came to mind.

Step 2: The researcher selected one interview, the shortest or most interesting, and went through it asking, 'What is this about?' and thinking about the underlying meaning in the information. The researcher wrote her thoughts in the margin.

Step 3: When the researcher had completed the task, a list was made of all themes for several participants. Similar themes or topics were clustered together and formed into columns that were arranged according to major topics, unique ones, and one group.

Step 4: The researcher applied the list of themes or topics to the data. The themes or topics were abbreviated as codes, which were written next to the appropriate segments of the transcripts. The researcher organised these themes to see whether new categories and codes emerged.

Step 5: The researcher found the most descriptive wording for the themes or topics and categorised them. Lines were drawn between categories to show the relationships.

Step 6: The researcher made a final decision on the abbreviation for each category and alphabetized the codes.

Step 7: The data material belonging to each category was assembled and a preliminary analysis was performed.

Step 8: The researcher re-coded existing material if it was necessary (Sengane 2013).

An independent co-coder was involved in verifying the obtained results to ensure the rigour of the study. The coding done was to safeguard the researcher against bias and to have further insight or understanding of the theme towards developing the theory. After all coding had been done a consensus meeting was held between the researcher and the independent coder to discuss the themes, categories, and sub-categories, which emerged from collected data. The final step was to put these categories into a table in preparation for discussion by the research.

3.7 Measures to Ensure Trustworthiness

In this study, the researcher utilised Lincoln and Guba's model (2018), as cited in Polit and Beck (2020). Trustworthiness is a way of authenticating the research methodology principles by adhering to credibility, dependability, transferability, confirmability, and authenticity. Liamputtong (2011) explained trustworthiness or rigour as the quality of qualitative inquiry utilised as a way or process of evaluation of qualitative research.

Credibility refers to confidence in the truth of the findings in the conducted study (Polit & Beck 2020). Credibility was achieved through prolonged engagement, triangulation member-checking, and in-depth semi-structured individual interviews. Credibility, therefore, refers to the researcher making use of observations and field notes to ensure and support triangulation. Interviews were conducted until data saturation was reached (Polit & Beck, 2020).

Dependability refers to evidence obtained if the study was repeated with the same questions with the same participants in a similar context the findings would be the same (Houser 2018; Polit & Beck 2020). In this study, the researcher used the same participants in a setting. The researcher made use of an independent coder to ensure the dependability of the study when the analysis was made.

Transferability is when findings can be transferred to other groups or settings. The researcher must provide enough information to allow judgments about the context of the data (Denzin & Lincoln 2018). Transferability is regarded as the alternative to external validity or generalisability (Polit & Beck 2020).

Confirmability refers to steps taken by the researcher to demonstrate that the findings of two or more independent researchers achieve congruence. Confirmability was ensured by conducting an audit trail, the researcher attempted to measure impartiality by being objective and reducing bias by bracketing methods and procedures (Houser 2018).

Authenticity in a study is considered when the strategies used are relevant and appropriate to report the ideas of the participants. Authenticity as the criterion of trustworthiness refers to freedom from bias in the research results. Objectivity is

crucial in maintaining neutrality keeping a distance between the researcher and the respondent. Fairness to participants, ontological authenticity, educative authenticity, catalytic authenticity, and tactical authenticity by empowering participants with insights into the phenomenon of the study (Holloway & Galvin 2017). Fairness means impartial and just treatment without discrimination. Fairness in the workplace brings about motivation and willingness to exert more effort (Rasheed, Jamad, Pitafi, et al. 2020).

Meanwhile, motivation is defined as the willingness to exert a high level of inspiration to reach organisational goals, conditioned by the effort's ability to satisfy some individual need (Acar 2018). In this study, fairness was demonstrated by the researcher when data was collected using a central question for all three settings to allow participants to express their views on a single question. Expressions made by the participants were from a single interview guide, codes were used not to single out individuals, and participants were treated the same. Data analysis used Tesch's steps of analysis, all interviews were grouped into themes without identifying settings, which indicated the fairness of the study towards participants.

Ontological authenticity is defined by Bunce and Harris (2014) as the nature of 0000 in problem-solving techniques.

Catalytic authenticity refers to how the research process stimulates and facilitates the participants' behaviour to act. Catalytic authenticity, as per Amin, Nørgaard, and Cavaco (2020), is defined as the extent to which *action* (clarifying the focus on an issue) would facilitate problem-solving. The results of the study indicated that some participants did not even know of PSI forms, this brought about training by managers to the midwives who were regarding filling out the forms as a punishment.

Tactical authenticity is defined as the degree to which all participants are *empowered* to take the action(s) that the inquiry implies or proposes. Useful procedures, which are applicable when striving toward authenticity Amin et al. (2019). Recognition of specialties like advanced midwifery showed a lack of support by managers. It could be recommended that these be acknowledged towards achieving better outcomes for the facilities.

The following (table 3.5) explains the application that was used to ensure trustworthiness.

Table 3.5: Application of Strategies of Trustworthiness

Strategy	Criteria	Application
Credibility	Prolonged engagement	Spending more time with participants to explain the aim of the study. Building trust with participants through establishing rapport with participants before the interview. In-depth semi-structured interviews till data saturation. Meeting with selected participants.
	Triangulation (use of different sources to validate the study)	Definition of concepts. Literature review. Observational notes and field notes. Dictionaries.
	Member checking (the continuous process during analysis taking back results to original participants to confirm credibility)	Verifying information with participants.
Authenticity	Reflexivity (giving a fair honest experience of the phenomenon)	Bracketing of own beliefs and assumptions. Empowering participants with the phenomenon.
Conformability	Audit trail	Safekeeping of all documents. Congruence of independent researchers.

Dependability	Theoretical description of the methodology	Dense description of research design. Use of independent co-coder.

3.8 Quantitative Strand

Quantitative research had certain shortcomings that were covered by qualitative research. The strengths and weaknesses of qualitative and quantitative studies concluded that both methodologies were appropriate for yielding complementary approaches for the same research topic that provided better results than using one isolated methodology (Choy 2014).

This approach addressed two objectives that were indicated in Table 1, which are:

To identify the factors influencing proper delivery of care by midwives in obstetric units of Tshwane district, Gauteng province.

To assess the support offered to midwives by their managers' post AEs in obstetric units of Tshwane district, Gauteng province.

3.8.1 Population

All midwives and advanced midwives working in the public hospitals of Tshwane district, Gauteng province were the population of this study.

Sampling

Sampling is described by Burns and Grove (2011) as the selection of people, events, behaviour, or elements with, which to conduct the study. Probability sampling will be used with simple random sampling to select midwives, line managers and operational managers legible to participate in the study. This method was chosen as it gave all the participants an equal chance to participate in the study. The researcher will sample midwives and their managers from one hospital to another until all the participants are sampled (see Table 5). The fishbowl method will be used to sample participants wherein, the slips with Yes or No will be written according to the population of each hospital. Participants will pick the slip with yes and return it to the bowl so that all

participants have an equal chance of being selected. This process will happen until the required number of participants per hospital is selected (Table 5). The participants will be chosen as data is being collected.

Sample size

According to Goyal (2013), determining sample size would be appropriate to yield accurate results and be calculated according to the sample. Slovin's formula was used to calculate the sample size for participants in this study, shown in Table 3.6 below.

$$n \quad \frac{N}{1 \quad N\ e^{2}}$$

n is the sample size
N is the number of **participants of interest** in the study area
e sampling error (5%)

Table 3.6.: Sample Size and Calculation for Midwives (Quantitative Strand)

Name of hospital	Midwives	Sampled number
Jubilee Hospital	16	15
Odi Hospital	20	19
Pretoria West Hospital	64	55
TOTALS	**100**	**89**

Inclusion Criteria

All midwives working in the OU and midwives must have experienced an adverse event directly and indirectly and were willing to participate in the study.

Exclusion criteria

Exclusion criteria would be midwives unwilling to participate in the study. Midwives who were not full-time employed at OUs.

3.8.2 Pilot Study

According to Polit and Hungler (2013), a pilot study is a trial run test in preparation for the main study. The researcher conducted the pilot with a sample of 10% of midwives from another hospital, which was not part of the study setting possessing homogenous characteristics to the population under study, to test the validity of the questionnaire. Participants used in the pilot study and the results of the data collected were not included in the main study.

3.9 Data Collection

Data collection, as defined by (Creswell 2016; Polit & Beck 2021), is interconnected organised events targeting the collection of tangible information to answer emergent research questions. To be able to collect data in this study, the researcher requested permission from the Tshwane district in Gauteng province (See Annexure E). Once permission was granted, managers of selected public hospitals were informed about the intentions to collect data by sending them letters containing all details of the study. Participants were recruited, and after they agreed to participate, they signed the consent form before data collection commenced.

Data collection instrument

According to Creswell and Plano-Clark (2018), a data collection instrument is a tool for measuring, observing and documenting data. In utilised quantitative study, the data collection instrument includes a questionnaire. A questionnaire is a data collection tool completed by the participant where the researcher has the intention to discover what the individual's thoughts are about the phenomenon being studied (Brink et al. 2015).

In this study, a self-administered questionnaire was used to collect data. The rationale for using a questionnaire was to gather a large amount of data at less cost. The researcher developed the questionnaire based on the objectives of the study and participants completed them. The validity of the data collection instrument used in this study was encouraged by the reason that questions were derived from themes and subthemes of the qualitative strand and were utilised to assess the study numerically in the quantitative strand.

Questionnaire design

An English self-structured questionnaire was designed to collect data in this study. The questionnaire (Annexure F, Sections A, B & C) was developed with the assistance of supervisors and an experienced statistician, and given to five Midwifery experts in quantitative research for validation.

Formulated questions were guided by the objectives of the study, which were:

To assess the support offered to midwives by their managers post AEs in OUs.

To identify the factors influencing proper delivery of care by midwives to prevent AEs in OUs.

The questionnaire had three sections composed of closed-ended questions where the respondents had to choose their own answers using the 5-Likert scale. Section A consisted of four demographic questions that dealt with race, nationality, years of service, and level of education. Section B had 11 questions on the support of midwives, and Section C had five questions on factors influencing the proper delivery of care by midwives. The questionnaire was developed because there was no other questionnaire suitable for data collection in this study. The questionnaire comprised questions that took 20 minutes to complete, as respondents should not answer a questionnaire for more than 30 minutes, as explained by Bruce et al. (2008). All questions of the questionnaire were answered and questionnaires were collected on the same day.

Data collection process

Once permission was granted by the Department of Health Tshwane District office and Ethics Committee and senior managers of district offices of the respective hospitals, the researcher started the process. Each hospital was acknowledged with a letter, which was written by the research committee chairperson. The researcher went to introduce herself to the different hospitals, outlining her research proposal. Operational managers were called in for the briefing session and terms were discussed, stipulating times of data collection. The researcher was accompanied by the operational manager to the respective units and introduced to the line managers in the obstetric units. Midwives who were on duty were introduced to the researcher and a day was set for data collection.

On the set days, the researcher had consent forms and some refreshments and was accompanied by the research assistant. Convenience sampling was used in the form of non-probability sampling, which involves recruiting participants by being available and their willingness to participate in the study (Brink et al, 2015). The researcher opted for the convenience sampling method because of the challenges of staff shortages and also assessing the activities in obstetric units, as these hospitals had an average of 40 deliveries per day.

A self-structured questionnaire was used to collect data. The questionnaire allowed the participants to give answers freely without bias. In a quantitative strand, the researcher can collect more data using a questionnaire as compared to qualitative where once data saturation is reached data collection stops. The researcher collected more data from the questionnaires. In completing a questionnaire, the participant is allowed more time to think alone without being influenced, which gives reliable and valid information. The questionnaire observed anonymity as participants did not have to write their names. The anonymity of the questionnaire was an advantage because it eliminated fear or victimisation of participation. The questionnaire was generated in English, without ambiguous words to promote an easy flow of information and understanding. The questionnaires were completed without the influence of the researcher. Data was collected in the participants' workplace, and completion of the questionnaire took between 25 to 30 minutes. Data collection was done in the estimated period of six to eight weeks.

The researcher worked with a research assistant who was trained in data collection. Both were available during data collection so that they could clarify to the participants if there was a need. Participants completed the questionnaire in the presence of the researcher. In a quantitative strand, the researcher collects more data than in a qualitative strand. In the quantitative strand, there is the use of more questionnaires rather than in qualitative study, where during interviews, once there is data saturation, the process is stopped. This is the reason the researcher chose a mixed method for the two methods to complement each other. The developed model of this research was seen as general and can be utilised in different units as the outcome of results was supportive towards the aim of the model development.

3.9.1 Data Analysis

Data analysis in MMR involves the application of analytic techniques (Onwuegbuzie & Teddlie 2022). Data analysis for the quantitative study was expressed numerically to describe and interpret the results (Boswell & Cannon 2017). A biostatistician was involved in the study to accurately calculate the results. Collected data was checked, cleaned, and entered in Excel and then exported into Statistical Package for the Social Sciences (SPSS) version 24 for statistical analysis by a statistician. Data was analysed using inferential statistics, which involved univariate and multivariate analysis. In the univariate analysis, the demographic characteristics of the participants were described and presented in frequencies and tables. The multivariate analysis involved principal component analysis (PCA) which examined the factors related to challenges of delivery of care by midwives as stated in the questionnaires and factors related to delivery of care. The advantage of utilising PCA is to explain complex identified factors of the setting. parametric and non-parametric statistics. In the univariate, Both were suitable for this study as the parametric involves the univariate analysis of variance levels.

In the univariate analysis, the demographic characteristics of the participants were described and the researcher examined the factors related to AEs and support offered by managers to midwives after experiencing AEs in public hospitals. Data was then presented in the form of tables with frequencies and percentages. The researcher

further used pie charts and bar graphs in presenting the collected data. In qualitative data analysis, a co-coder was needed to confirm the themes and subthemes, meanwhile, a statistician in the quantitative data had to analyse data using numerical figures. Findings of both strands in the research had findings that supported one another when analysed.

3.10 Validity and Reliability of the Quantitative Approach

Reliability and validity are the most important concepts in decision-making when conducting research. Validity refers to the extent to, which an instrument can measure the abstract concept being examined. Reliability is defined as the repeatability of results. Validity includes various types such as content and face validity (Boswell & Cannon 2017). Questionnaires were used for the quantitative part of the study to ensure the validity and reliability of the study and the outcome of the analysis of data.

The researcher explained the research process making sure that the participants understood the information. The qualitative data needs to prove the trustworthiness meanwhile the quantitative is focussing on the validity and reliability of the study. These variables of both strands allow the study to be rich in data reaching the validity and proof of reliability as being analysed and found that the findings were overlapping towards the development of a conceptual model.

Content Validity

Content validity involves three major elements relevant to the construct being measured (Grove et al. 2018). These elements were literature, representatives of the relevant population, and content experts. The experts were then given guidelines for judging the appropriateness and accuracy of the instrument. The researcher submitted definitions of the major concepts to the experts to judge how well the theoretical content was explained. A rating scale was provided to measure the accuracy of the instrument.

Face Validity

This is based on the appearance of the instrument, which looks like it is valid or gives the appearance that it was measurable (Grove et al. 2018). Face validity is a subjective assessment without clear guidelines to make a judgement. The research instrument was given to experts in maternal health care services to check whether the instrument will measure what it is supposed to measure.

Reliability

Accuracy is seen as a function of reliability. Reliability relies on the stability and homogeneity of the results produced over a period with the same variable under the same conditions (Grove et al. 2018.) In this study, the researcher conducted a pilot study to measure the reliability of the instrument.

3.11 Triangulation

Triangulation means using multiple datasets, methods, or theories to address a research question. It is a strategy to enhance the validity and credibility of your findings and mitigate the presence of any research biases. Triangulation is mainly used in qualitative research and commonly applied in quantitative research but in the mixed method, methodological triangulation is used (Phillips, Sadeghirad, & Busse, et al. 2022). For example, the National Research Council (Shavelson & Towne 2002) took the position that qualitative methods are for discovery and quantitative methods are for testing causal relationships. Denzin and Lincoln's (2018) second conception of mixed methods is conjunctive and involves triangulation based on the integration of quantitative and qualitative data, not merely to look at agreement or disagreement between the data sets but to put the data into a more comprehensive explanatory framework (Denzin & Lincoln 2018).

The concept of triangulation assumes that bias may be inherent in a particular source, and methods may be neutralised when used in conjunction with other data sources. The use of triangulation reiterates different data sources of information to build a coherent justification for themes that emerge during interviews from different perspectives of the participants (Creswell 2016). The advantage of triangulation

design is argued as competent as it utilises both quantitative and qualitative collected data in one phase. The challenge that lies with triangulation is that much effort, time, and expertise is required to collect data and analyse findings (Creswell and Poth 2016). As outlined by De Vos et al. (2018), the researcher implemented triangulation methods as stated below: Types of Triangulation in Research:

3.11.1 Data Triangulation

Using data from different times, more than one data source like in-depth phenomenological individual interviews and field notes were used in this study, collection of data was done in different public hospitals, and midwives and managers were interviewed. Data triangulation, according to Creswell (2016), is used as a strategy to ensure credibility in building the themes for coherent justification. The researcher interviewed many participants and field notes was written during interviews to reflect and understand the different behaviours during the interviews (Christensen et al. 2015).

3.11.2 Researcher Triangulation

Refers to the use of more than one observer in a single study to achieve intersubjective agreement. This was achieved by involving the transcriber who independently recorded the interviews while the researcher was busy collecting data that the independent coder and the researcher used for data analyses. This opportunity to involve all individuals provided the chance for all members to reach an agreement and interpretation of the collected data.

3.11.3 Theory Triangulation

Refers to the use of multiple theories or perspectives to interpret a single set of data. In this study, the researcher made use of King’s Theory of Goal attainment because the theoretical assumptions of personal, interpersonal, and social facilitated the aim of

the study. Using the theory as a basis of the research enabled the researcher to identify the lack of support for midwives who experienced AEs in OUs of public hospitals in Tshwane district GP.

3.11.4 Methodological Triangulation

The process of converging different data in collection methods is known as methodological triangulation, which validates the research instrument, data, and findings. In this research, mixed methods were utilised, which comprised qualitative and quantitative approaches in which data was collected simultaneously, though different methods were applied. This was found to be beneficial in providing confirmation of findings, increased validity, and enhanced understanding of studied phenomena.

3.12 Ethical Considerations

The National Research Act of 1974 was signed into law and constitutes the Belmont Report. The Belmont Report attempts to propose the basic ethical principles and deliberate ethical guidelines for researching human beings. The Belmont Report defines boundaries between research and practice, this study falls under practice where the intervention's outcome would have a reasonable expectation to succeed and enhance the midwives' well-being.

According to Dhai and McQuoid-Mason (2011), ethical considerations are described following the ethics of research principles. Ethical principles of respect, protect human rights to ensure that the researcher continuously upholds ethical principles, and is engaged in a principled pursuit, characterised by a sense of professional responsibility in line with the ethical requirements of human research. In this study, the Declaration of Helsinki guided the ethical considerations, an international set of standards adopted in 1964 (Polit & Beck 2020). In line with the ethical requirements of human research, the researcher observed the following principles:

Ethical Clearance

Ethical clearance was obtained from the University of Limpopo Research and Ethics Committee (MREC). Refer to REC-0310111-031(Annexure A). Permission to conduct the study was obtained from the Department of Health Tshwane District Gauteng Province (Annexure B). The CEOs of selected district hospitals where midwives were employed also gave permission (Annexures C, D, E).

Permissions

Permission to conduct the study was sought from Gauteng province, DoH, and the CEOs of the three hospitals. The study only commenced after the TREC and DoH had granted permission. All aspects of the research were directed by ethical principles. Consent forms were signed by participants before the commencement of the study.

Autonomy

Autonomy demands that research participants consent to be part of the research project. Respect for individuals entailed that all people must be treated as autonomous. According to the British Educational Research Association (2011), researchers must be aware that certain research designs can advantage a group of participants over another. In this study, autonomy was ensured through written consent before data collection. No coercion or undue pressure was exerted, nor were rewards offered to lure the participants into the study (National Commission for the Protection of Human Subjects of Biomedical and Behavioural Research 1978).

Informed consent

Participants were informed that participation was voluntary and that they could withdraw if they felt uncomfortable without any pressure being exerted. Information was given to participants before signing a consent form, and it entailed the research purpose and procedures. Contact details of the researcher were provided, in case the participants required any clarity during the research.

Beneficence

The construct of beneficence entails that research participants were treated ethically, promoting, and protecting their wellbeing. This principle required the researcher to act in the participants' best interests and aimed at promoting others' interests and well-being (Dhai & McQuiod-Mason 2011). Beneficence implies not harming participants. To achieve beneficence for this study measures were taken to minimize physical and psychological risks and discomfort to participants. During data collection, the researcher posed questions that might not offend the participants and the researcher would adhere to the set times as agreed with the participants. As the study was conducted in the hospitals, the psychologists were informed about the study, and arrangements were made to refer participants who experienced distress during data collection and the process of data collection would be stopped for such participants. COVID-19 measures were adhered to as indicated under data collection.

Right to human dignity

The right to dignity for each citizen in SA is entrenched in the Constitution of the Republic of South Africa Act no 108 of 1996. Participants' rights were upheld in this study. Participants, according to Polit and Beck (2021), have a choice whether to participate or not, and the researcher implemented trustworthiness and ethical principles throughout the research process. Participants were given the right to participate in the study after all the information about the study was explained.
They were informed about their right to withdraw from the study at any time without being punished.

Right to self-determination

Participants voluntarily consented to participate in the study. The right of determination implied that the participants had the right to choose whether they wanted to participate in a research study or decline without fear of punishment or discrimination. The participants were treated as autonomous individuals and not coerced to take part in the study. The participants were informed that they would not be remunerated.

Right to full disclosure

The researcher explained the research study to the participants, objectives, and benefits, informing them that there was no monetary remuneration when participating in the study. The time that was spent with each participant during face-to-face individual interviews and when completing questionnaires was explained so that participants knew in advance and prepared themselves.

Principle of justice

According to the Belmont Report (2022), the question about justice that was asked was, 'Who ought to receive the benefits of the conducted research'? According to Brink et al. (2015), the principle of justice refers to fair treatment and selection of the participants. In this study, the researcher selected the participants according to the inclusion criteria indicated, and the interviews were conducted for only 25 to 45 minutes. The right to privacy and respect for the fair treatment of the participants was observed. The researcher refrained from making judgments, bracketing her ideas, and respecting cultural values.

Fair treatment

Fair, equitable, and non-discriminatory treatment was applied in this study by recruiting a higher number of midwives; approximately 60 from different hospitals. Male participants formed part of the group. Participants were informed that they had the right to withdraw from the study at any time without any consequences, which is considered fair treatment to the participants. The explanation of intent or aim of the study was explained to the participants as part of the fair treatment principle towards participants. Debriefing, if needed after data gathering, would be organized through the services of a psychologist.

Right to privacy, anonymity, and confidentiality

Privacy was maintained by conducting interviews behind closed doors. The researcher promised the participants that their information would not be disclosed to any person. In this study, the anonymity of participants, as well as their hospitals were protected and respected by assigning code numbers. The participants were informed that their

information would remain anonymous and confidential, and their identities would not be linked to their responses (Polit & Beck 2021). Only the researcher and the supervisors would have access, and the information would be kept safe for five years in a locked cupboard and encrypted file electronically. After this period, data would be destroyed by deleting the file and burning all the hard copies.

Bias

Bias refers to the influence of the study on the findings of the study. Bias in research can cause distorted conclusions. In quantitative research, a larger population group must be used to produce quantifiable data to achieve reliable results. In this research, a statistician avoided using data to avoid the improper presentation of the target group. According to Polit and Beck (2021), bias threatens the validity of the study and renders them invalid. In qualitative research, the researcher's subjectivity was bracketed. The measures to prevent any type of bias by the researcher were maintained by allowing questionnaires to be self-administered and using an independent co-coder to analyse the results. Non-probability purposive sampling was used to sample hospitals, midwives, and managers. The developed interview guide and questionnaire were used during data collection, and no leading questions were asked. The information obtained and recorded were transcribed verbatim after being read and re-read using codes after reaching a consensus with the co-coder and analysis from the statistician no leading questions were asked during data collection. Field notes that were written were compared with sub-themes that emerged from collected data. Participants were not coerced during the completion of questionnaires. Sampling was minimised by the selected target group.

3.13 Integration and Merging of Results

Integration and merging of results were done following the analysis and interpretation of both research strands. The researcher then compared the data of both research

strands then merged the ones related. Interpreted and discussed both together (see Chapter 5). This assisted the researcher in the development of the model, which was the second phase of the study that depended on the results of Phase 1.

3.14 Conclusion

In this chapter, the researcher presented the research methodology, the introduction, mixed-method research, convergent parallel research design, setting of the study, population, and sampling of both research strands, data collection and analysis of each, trustworthiness, validity, reliability, triangulations, ethical consideration and conclusion. The next chapter 4 dealt with the presentation of qualitative research results.

CHAPTER 4
PRESENTATION AND INTERPRETATION OF QUALITATIVE RESULTS

4.1 Introduction

A detailed description of the research design and the methods employed to source information from midwives and line managers was presented in Chapter 3. The purpose of the qualitative data collection was to obtain in-depth inferences regarding the experiences of midwives and the support they receive after AEs in OUs. The layout of this chapter presents the results and interpretation of qualitative findings obtained from midwives, line managers, and operational managers.

The findings are based on the narratives obtained through in-depth individual interviews with participants from the three selected public hospitals of the Tshwane district. The researcher transcribed the verbatim recorded interviews, listening to the recordings as agreed with the participants, after internalising the content of the whole interviews. The researcher jotted down the main ideas. Similar topics were clustered together resulting in themes. All data within the same theme were then grouped into sub-themes as needed. Data were submitted to the independent coder for confirmability.

Objectives of this chapter

To describe challenges experienced by midwives related to AEs in obstetric units of the Tshwane district, Gauteng province.

To explore the strategies used by managers in the case of an AE in obstetric units of the Tshwane district, Gauteng province.

4.2 Demographic Data of Participants

Table 4.1: Demographic Data of Participants (Midwives & Managers) – Qualitative

Race	Age (years)	Experience (years)	Level of education
Black = 23	27 to 42 = 11	1 to 3 = 4	Mid. Diploma = 13
White = 2	43 to 58 = 9	4 to 6 = 12	Advanced = 4
	59 and above = 5	10 and above = 9	Degree = 8
TOTAL=25	25	25	25
Managers = 12 (all black)	36 to 42 = 2	1 to 3 = 0	Mid Diploma = 2
	43 to 49 = 4	4 to 9 = 0	Advanced = 5
	50 and above = 6	10 and above = 12	Degree = 5
TOTAL	12	12	12

Table 4.1 above indicates data collected from 25 midwives at three public hospitals in the Tshwane district. The presentation of data shows that most of the participants were Black people (23), and two were White people in the race column. The age selection indicated that most of the participants (11) ranged between 27 and 42 years of age, with nine between 43 and 58 years and five aged 59 years and above.

The level of education section indicated that most participants had Basic qualifications in Midwifery, four had post-basic qualifications in Advanced Midwifery, and only eight had other Degrees in nursing.

Of the 12 managers included in Table 4.1., two participants with ages ranged between 36 and 42 years, four between 43 and 49 years, and the last six participants were above 50 years. The level of education indicated that two had basic qualifications in Midwifery, five had post-basic qualifications in Advanced Midwifery, and five had different degrees in nursing.

4.3 Presentation of Themes and Sub-Themes

Table 4.2 indicates the three themes, which emerged from the findings of the study, namely, challenges experienced by midwives, experienced consequences of AEs, and suggestions made to support midwives experiencing AEs.

Table 4.2: Midwives' Experiences Related to AEs

THEMES	CATEGORIES
1. Challenges Experienced by Midwives Related to AEs	4.3.1.1 Lack of recognition and acknowledgement
	4.3.1.2 Lack of support and equal opportunities
	4.3.1.3 Unconducive working environment
	4.3.1.4 Language barrier
	4.3.1.5 Staff shortages
	4.3.1.6 Burnout
	4.3.1.7 Work pressure and stress
	4.3.1.8 Work centred vs person-centred approach
2. Experienced consequences of AEs	4.3.2.1 Blaming and punitive approach
	4.3.2.2 Psychosocial consequences
	4.3.2.3 Litigation and misconduct cases
3. Suggestions made to support midwives experiencing AEs	4.3.3.1 Equal acknowledgement and recognition
	4.3.3.2 Operational support
	4.3.3.3 Psychological support

4.3.1 Theme 1: Challenges Experienced by Midwives

The first theme, which emerged from the study was the challenges experienced by midwives related to contributory factors leading to AEs. From this theme, participants reported a lack of recognition, and managers did not acknowledge their efforts. Midwives further affirmed not receiving enough support and equal opportunities from managers. The environment in which

they render their maternal health care services is not conducive, leading to burnout. The sub-themes of this theme were indicated in Table 4.2 above and are presented below:

4.3.1.1 Sub-theme: Lack of Recognition and Acknowledgement

Participants in this research mentioned how their selfless efforts of caring for the mothers were not recognised and acknowledged regardless of the specialised qualifications they had acquired. Participants who had extra qualifications were not recognised/compensated financially, which demoralised them, yet used for their capabilities and knowledge were used. This statement was confirmed by the following quotes:

'*We are qualified as Advanced midwives but are not paid as such when coming to work we are expected to perform the duties of Advanced midwives even if our Scope of Practice R2598 has created a gap in this issue, our specialty course is not recognised. We need to be recognised as human beings to boost our morale, we have burnout it is just that we have children to feed some of us are single parents, and there are no incentives like in private hospitals even on Nurses Day nothing is given, the work we do go unnoticed we are not appreciated we don't get remuneration for our specialty but work as shift leaders in OUs'* **Participant 13.**

Participants cited a lack of appreciation for their hard work rendered on the premise, as confirmed by the following statement:

'It is painful doing your best and not being appreciated we deliver more than forty mothers a day, we work like slaves but no recognition' **Participant 8**

Another participant concurred and indicated that her salary did not cater to all her needs. Lack of appreciation by management showed poor support to the already discouraged participants in the work situations.

'As midwives because of our low remuneration, right now you must choose one struggle to deal with, I first need to finish paying for my car before I can afford to move from my mother's place, yet I am a professional person.' **Participant 17.**

From this sub-theme, it was evident that there was a lack of support for the participants, and the efforts of those with specialties were not recognised, leading to a loss of morale and burnout recognised Recognition and acknowledgement to encourage the participants were lacking. Recognition of qualification was an outcry for the participants in this study.

4.3.1.2 Sub-Theme: Lack of Support and Unequal Opportunities

Participants lacked support, and an unequal opportunity point was raised even among themselves. Participants themselves don't support each other. One participant indicated how others laughed at her after she was involved in an AEs. The participants further indicated a lack of support from management and doctors as they were given orders telephonically. This was confirmed by the following quotes:

'Doctors would prescribe telephonically wanting a specific nurse to carry out the prescription, which made me feel bad as all nurses had to work but they created discrimination amongst us, I didn't like it as others had funny comments against me. There are negative attitudes of staff members towards each other as management and doctors don't treat us the same' **Participant 7.**

Another participant concurred and added that they were once involved in strike action, as they were not recognised and there was a preference; others received promotions and had their salaries increased.

'Management doesn't support or take us seriously we downed tools once as midwives but still, the shortage is not seriously taken, others are being promoted to get better salaries, and we are not treated equally' batla utlwa ka letlalo' (meaning that they will take serious action to hurt management.' **Participant 18.**

On indicating a lack of support, another participant reported that they don't always receive remuneration for working overtime, but if managers do, they will get it. The participants further indicated that they receive a warning if they run late by a few minutes, but when they knock off late, nothing further is said about it. The following quote supports the statement:

'When you arrive late even by three minutes you are made to sign a warning form yet when you knock off late nobody recognises you, we hardly have paid overtime, but

management has when they knock off late, we have not treated well the relationship between us and management 'is not lekker' ***Participant 19.***

From this sub-theme, it was evident that there was a lack of support from midwives themselves, doctors, and managers. Some participants were preferred over others. Participants felt disgruntled by the fact that their little efforts were not recognised.

4.3.1.3 Sub-Theme: Unconducive Working Environment

The participants mentioned the poor conditions under which they are to perform their duties related to poor managerial support, dealing with very ill patients without emergency resources, and lack of equipment and staff. These conditions caused employee dissatisfaction, leading to the exodus of staff, psychological stress, and poor interpersonal relations. The following quotes confirmed their concerns:

'We had a maternal death on that day a patient who came at 20 weeks gestation came in pouring blood with a retained placenta, and the doctor tried removing the placenta manually and the placenta was retained she bled and the HB was 4g/dL managers don't care about us, the mother was wheeled to theatre pouring, the whole hospital had 1 unit of blood, no FFP was given, she was done a hysterectomy she died in the postnatal ward, doctors in this facility see patients on the second day post-Caesarean section, vital data were not considered this was poor mismanagement of the patient, the emergency trolley was not equipped for resuscitation, post mortem revealed internal bleeding.' **Participant 8.**

Participants reported how they are expected to perform duties that they are not trained for in their facilities. In this study, participants were forced to do specialist duties, due to a lack of staff, as mentioned by the quote:

'*A midwife goes to receive a Caesarean section baby in the theatre alone without the presence of a paediatrician with an indication of foetal distress you have to come running from the theatre to resuscitate the baby in the ward I don't know if they are afraid of the paediatricians you are told to observe the baby instead of taking the baby straight to neonatal ICU if the baby dies, it is your responsibility. Working conditions here are just not suitable remember you are not an ICU nurse yet you have to do all these I am not happy I need a*

better working place. Even after hours I mean after 16h00 you struggle to get a Dr to come to check on a baby, we work by God's grace our epaulets are hanging in the air ka nnete (meaning truth)' **Participant 9.**

Public hospitals are not properly maintained due to overcrowding, which leads to occupational hazards affecting healthcare personnel and posing a risk of infection. Poor maintenance is associated with a lack of resources like finances from the treasury to cater to the number of patients admitted to the facilities. As such, one of the participants reported that sometimes there was no water and electricity in the ward and the environment was not conducive for patients and the staff.

'The environment exposes us to infection we had two days without water and electricity the wards were smelling we continued to admit patients why couldn't they close and notify the community and transfer patients like other hospitals when they have a crisis, we are exposed to infections.' **Participant 18.**

The sub-theme indicated that public hospitals do not comply with minimum standards and guidelines, as set out by NDoH. In this state, healthcare personnel were exposed to various workplace infections because of poor management of the environment. Public hospitals are highly stressed because of dysfunctional management structures experiencing imbalanced nurse-patient ratios, lack of resources, or broken equipment.

4.3.1.4 Sub-Theme: Language Barrier

Participants were disgruntled by the state of overcrowding by people from other countries coming for health care services in the district hospitals. Some patients could not communicate in English and did not understand the dominant language used in the hospitals, which made it difficult for midwives to deliver proper maternal healthcare services. This was confirmed by the following quotes:

'We have people from other countries who are admitted to our hospital, there is overcrowding, and the language barrier forms another obstacle how do you deliver a woman who can't hear your instructions?' **Participant.16.**

Participants verbalised that their workload was due to the overcrowding created by people from neighbouring countries with different languages that made it difficult to communicate with mothers.

'Our district hospital is in an overpopulated area where health services are not paid for, so everybody comes for free services, people from Zimbabwe come here at the advanced stage of pregnancy, unbooked [sic] putting us at risk and they speak the Shona language that we don't know and understand we can't communicate even during emergencies it makes our lives difficult.' **Participant 20.**

Obtaining consent from all patients before performing procedures is mandatory, and patients' rights must always be respected, which does not always happen, as echoed by the following statement:

' *Health education as a priority for our patients especially during ante-natal clinic classes is hampered as most of our mothers are foreign we even have a woman from Sudan who had female genital mutilation, where we had to prepare her for Caesarian Section for Cephalopelvic Disproportion she had no interpreter we had to insert a catheter because of the language barrier we could not insert it as she also resisted but at the end, we forced, which was against our ethical behaviour, such things demoralise us in this profession you start thinking what if they take legal action?'* **Participant 11**

4.3.1.5 Sub-Theme: Staff Shortages

This sub-theme has highlighted the challenges experienced in public district hospitals. Migration, communication, and staff ratios were identified as adding a burden on the already challenging situations of the participants. Participants looked upon management to escalate their challenges for support of their efforts. During data collection, participants expressed how the Constitution of South Africa contributed to the conditions at the district hospitals by allowing free health services for maternal and child care.

A shortage of staff in all three selected public hospitals was cited as a major challenge by participants, which caused frustration as they became demotivated by working in overpopulated MOUs. Another stated reason was that due to a lack of support from management and their complaints were not addressed, their best solution was absenteeism, as confirmed by one participant who said:

'People get tired and simply become absent from work, which causes overworking others and burnout even though you feel for your colleagues you become mentally exhausted.' **Participant 19.**

Participants admitted that they also contributed to staff shortage through absenteeism, which they sometimes did to spite management or when they were tired, as they were not appreciated or acknowledged for their contribution. Another one said:

'*It is just not fair being two midwives in the ward, especially in the afternoon in these overcrowded wards our profession is at risk if we were well staffed, I wouldn't mind but when you are left being two professional nurses in the ward that's risky anything can happen, and you will be blamed.'* **Participant 16.**

Participants indicated they experienced job stress and anxiety, which exposed them to making critical mistakes like misidentifying babies as they were not coping with a workload, which was confirmed by the following uttered statement:

'*Misidentification of babies sometimes happens when we are very busy, you find yourself alone with so much work, stressed and anxious you can make mistakes as you are overloaded with work.'* **Participation 14**

From this sub-theme, it was clear that participants were unsupported in their efforts to provide care in public hospitals. There is a lack of staff in the overcrowded MOUs, which causes the participants to question or doubt the role of the management during AEs. Shortage of staff, according to the participants, is due to high turnover rates, wherein the hospital management fails to replace staff, and financial constraints of the district lead to the freezing of available

posts. Participants indicated that they would abstain from work when they felt tired, which resulted in even more staff shortages

4.3.1.6 Sub-theme: Burnout

Participants revealed varied perspectives regarding the support by management during AEs. Statements uttered during the interviews indicated that they were experiencing physical and emotional fatigue due to the circumstances they encountered at workplaces. The following statements reaffirm their statuses:

'You know, coming to work immediately you enter at that gate I become frustrated I feel worthless, I no longer have passion for my work and I think that feeling is being transferred to my patients. I no longer see patients as human beings but as subjects, this is not me...(sobbing) **Participant 09.**

When participants looked back at previous employment, there was a comparison as they lacked support and confidence in the employer. There was so much negativity toward management, which caused burnout among participants.

Another participant said: '*What demoralizes us the most is the way management doesn't consider our qualifications as Advanced midwives, not prioritizing our concerns yet our skills are being utilized that's demotivating and causing burnout, you end up not caring just coming to earn the salary without caring which is not according to our profession'* **Participant 18**

Burnout has psychological effects on participants where they end up isolating themselves not interested in any activities displaying negativity even to their colleagues confirmed by:

'When I worked at hospital X there was work ethic and support, what demoralizes me is the management system here and it makes one not even lack empathy and a negative attitude toward patients, you withdraw from your colleagues one has no personal life, you develop a negative attitude towards work that you once had a passion(sighing) but even then, who cares after your AEs you are on your grievances, especially from nurses are seen as being lazy we don't want to work, I lost interest I can't wait to go on pension'. **Participant 11**.

In this study, the sub-theme findings reported a high rate of burnout among midwives corroborated by other studies associated with patient care. Secondly, a lack of confidence in management further created a gap in work ethics as staff were no longer passionate about patient care.

4.3.1.7 Sub-Theme: Work Pressure and Stress

Work pressure is associated with an urge to complete work-related tasks within a specific period within acceptable levels or criteria. Participants mentioned that the high physical and mental demands placed on them by their working conditions are continually subjecting them to stressful work situations as indicated by the participants:

'As a shift leader, every responsibility lies upon your shoulders during a working shift because you have Advanced midwifery, you are expected to have answers for everything when an AE occurs you are the first to answer not being considered that you worked with newly qualified inexperienced midwives. When an incident happens everything is upon you, mentally and physically you are tired as you have to be alerted all the time you have your work and you need to check junior midwives and mothers all the time. You are to be in charge of a ward without being appreciated, I mean no remuneration for it. **Participant 13.**

Stress at work contributes to sleeping pattern disturbances, which cause difficulty in concentration at work, psychologically affecting participants. Such individuals may be vulnerable to drug use as they are mentally affected by the work situation. Overworking at public hospitals contributes to workplace aggression and bad attitudes toward patients, another participant added:

'Right now I work in a combined ward, which is both ANC and Post-natal, you are to immunize babies and give education on different methods of family planning you cannot do it to your satisfaction, you still have to check pregnant mothers because they might be in labour, prepare Caesarean sections, meanwhile mothers can deliver when you are busy with other patients, you know even you reach home your mind is still worried about the work situation you hardly sleep and relax. Mentally we are exhausted even when a patient asks us a simple question we become so irritated that's why the community says nurses are rude

(sighing), your sleeping pattern is affected so we end up taking sleeping tablets'. **Participant 18.**

Participants echoed poor working conditions, even stating that community members said participants regard themselves as better people. Participants are pressured by the community, as in ANC clinics, queues move slowly, and midwives are expected to provide health talks to pregnant women, while other patients are waiting to be attended.

'One of our functions as midwives is to teach mothers, during antenatal sessions pregnant women are not given the attention they need, we rush educating them, the queues are long and our attention towards them is very limited as a midwife you are not fulfilled you wish to work but the pressure is too much.' **Participant 11.**

This sub-theme reiterated that high-stress levels are linked to factors associated with organisational matters, such as poor working conditions. Participants complained about the workload experienced, which affected their sleeping patterns, and felt disappointed that they could not perform their duties efficiently.

4.3 1.8 Sub-Theme: Work-Centred Vs. Person -Centred Approach

There were varied responses regarding the caring of the participants. A participant mentioned the lack of attendance to their health needs, and they were thinking of resigning to private hospitals. Participants mentioned how difficult it was for them to even consult when not well, as they had to work considering the shortage of staff. This was supported by the following statement:

'*We hardly have time to be consulted when not feeling well, I mean they cannot assist you because they want work done with this skeleton staff, our well-being is not considered here, we are the working force, and can't wait to get another job maybe private hospital would be better*.' **Participant 5.**

The overcrowding of public hospitals does not allow participants time to reflect on AEs. Participants felt inhumanely treated, and not given a chance to grieve with their patients after the traumatic experience of delivering a stillbirth. Participants expected time to grieve with mothers after having delivered a stillborn, which is impossible in a public hospital. One participant added by saying:

'*You are even expected to continue with your next chores after delivering a fresh stillborn baby. One has been with the mother during labour when she delivers a stillborn you are there and she expects comforting words from her midwife but you hardly have time to be with her, another one is already delivering no manager will give you time to spend with your patient to comfort her, yours is to continue with others forgetting that as a midwife you grieve when a mother loses a baby.'* **Participant 3.**

Participants expected to be informed about the cause when an AE occurred, and they expected feedback on how the AE unfolded or ended up, or even the findings on the result of causes of death were possible. One of the participants confirmed the statement saying:

'*Nobody told us what the cause of death was, nobody cares for the carer, there are no debriefing sessions, no emotional support we need to know if we also made mistakes to avoid them in the future, we care about our patients too we need to have a closure on a matter that occurred when we were on duty.'* **Participant 2.**

In this sub-theme, participants felt that even when they were prepared to work diligently, participants mentioned that they were not considered as having feelings towards their patients, and concentration was only on their performance. They wished to be briefed on the outcome of an AE if they were involved. The participants suggested that they would appreciate it if they could be afforded some time to grieve with their patients.

4.3.2 Theme 2: Experienced Consequences of AEs

The provision of quality care is the responsibility of the participants and the expectation of the consumers of care. In this theme, participants express a culture of blame and punitive approach by management, psychological consequences, and litigation and misconduct

raised by the participants. The sub-themes were presented in Table 4.2 above and reported below:

4.3.2.1 Sub-Theme: Blaming and Punitive Approach

An outcry of poor support was mentioned by participants. They stated poor work-ethics relations, which resulted in negative attitudes of participants at work. The participants related that blame was put on them once AEs occurred. The straining work-ethics relations mentioned in this study were confirmed by the following quote:

'Coming to the situation of support there was poor support from management, and the interpersonal relationships between us (operational staff) and them (management) was a bit strained as we were blamed, being told that we killed babies, we were blamed for the Klebsiella deaths in the unit, it is painful.' **Participant 7.**

There are strained relations experienced by participants as they are blamed and not encouraged by management. Participants indicated that they rarely get a visit from management, an act regarded as inhumane as supported by the following statement:

'When there are AEs even the CEO comes to the ward, they come to accuse, not to get information from our sides, when the CEO unceremoniously comes to the ward it means *there are serious allegations or you know someone is guilty or something is happening otherwise no friendly visits.'* **Participant 8.**

Participants reported poor communication relations between them and management in public hospitals. Poor communication, as reported by participants, characterised a lack of trust, support, and respect from management. Participants reported how isolated they felt and were treated in their work area. They felt belittled in areas, as they were always rendering care, and felt undermined as suggestions or opinions were not expected from them. Another participant added this statement:

'*During M and M meetings everything is one-sided, doctor's issues are addressed, as midwives who are always on the patient our concerns are not even looked at, nobody is*

interested in your emotions, their main question is 'What you did,' they complain all the time that we don't do a proper job, no encouragement is done.' **Participant 2**

The claims made by participants in this current sub-theme about being blamed indicated there is poor support for midwives in the public hospitals of the Tshwane district. Participants felt that management must engage with them in some discussions of their work situations.

4.3.2.2 Sub-theme: Psychological Consequences

Participants echoed their frustrations, reporting that their feelings are normally overlooked, which affects their personal lives at times when they are psychologically disturbed; this was confirmed by the following statement:

'*As a newly qualified midwife I was involved in a case where a Dr performed a decapitation procedure on a baby who was stuck during delivery, the Dr left after the procedure and as a midwife, I had to continue with a grieving mother, frustrated not knowing what to say, nobody understood how I felt, I was …….(sigh), I wanted to resign, psychologically, and emotionally I was traumatised and felt like knocking it off but I couldn't do it even today it is still in my mind I will never forget that situation. I couldn't come to work the following day…but who cared? I still have shivers thinking of that day.'* **Participant 18.**

Midwifery is an emotionally challenging work as indicated by the participants. Clinical placement in MOUs is demanding and poses challenges for midwives; some patients put the midwives' lives at risk by causing panics, this is supported by the following statement:

'A patient who came fully dilated being unbooked [sic]accused us that we killed her baby, guess what we were to write statements of an event we were not even part, we hardly even knew her status what if she had contagious diseases we were at risk what if we were infected?' **Participant 4.**

During data collection, several young participants expressed their wishes to develop their careers but were not able to, as they were not allowed to study further privately due to the prohibition of the facility rules. Participants verbalised the following statements:

'We are discouraged by the lack of support at our facility, we are still young and want to study further we envy our colleagues but when you register on your own should you be found you are expelled yet you can't be offered study leave.' **Participant 19.**

In this sub-theme, participants felt a lack of support for their plans as they were stifled by the rules of the facilities. Some participants felt disgruntled and ignored, and they attended patients, not being sure of their statuses, and had to account for mishaps they were not involved in. Participants expressed a lack of caring by management after a traumatic experience of decapitation. There is a need for the participants to be recognised and shown empathy.

4.3.2.3 Sub-Theme: Litigation and Misconduct Cases

Participants in this study mentioned that the causes of AEs emanated from poor working conditions in public hospitals, which leads to litigations placing the participant's profession at risk. This is evident in the following quotes:

'We are trying our best, nowadays everybody needs money they sue for everything……yes. Health services are also on social media with court cases, and you can be stripped of your qualifications when you are not careful by SANC, people say nursing has gone to the 'dogs struggle with the equipment our CTGs are broken and sometimes you have to put a woman on a continuous machine for foetal heart monitoring where do you get a machine, a baby does then you have to account, you are seen as incompetent, it is misconduct in the opinion of someone…huuu (sighing)'. **Participant 15.**

Participants complained that other people don't want to work in the maternity units because of fear of the litigations that come with being attached to the MOUs. As such, they are forced to remain in the units and face all the consequences. This is evident in the following quotes:

'*People don't want to work in maternity wards because of these incidents that occur in the wards and their litigations, but ah who must do it? When you choose where you want to work they say you will be comfortable.'* **Participant 1.**

Although midwives are trained to provide total care, they are confronted with multiple patient safety incidents that emanate from medical malpractice, resulting in litigations. The participants mentioned that the media's projection of images of the nursing profession hurts how the public views them and that they are no longer respected. One participant said:

'*The adverse events give negative publicity to the hospital painting us as midwives as bad people with negative attitudes. There is a loss of trust in the organisation by the public, and the hospital becomes all over social media, for example, Life Esidimeni, the National government loses money*.' **Participant 11.**

In this sub-theme, mention is made by the participants that despite their hard work AEs still occur, in which some lead to litigations, and social media portrays them as negative and incompetent professionals. Participants indicated how they feared losing their hard-earned qualifications through litigations.

4.3.3 Theme 3: Suggestions Made to Support Midwives Experiencing AEs

Participants experiencing adverse events are working under difficult conditions, which exposes them to emotional and psychological effects. Participants verbalised a lack of support based on the following sub-themes: equal acknowledgment and recognition, operational and psychological support, as indicated in Table 4.2 and explained as follows:

4.3.3.1 Sub-Theme Equal Acknowledgement and Recognition

Participants desired recognition for their selfless efforts in providing care. Boosting the participants' morale was lacking, as indicated by one of the participants:

'*We need to be recognised as human beings to boost our morale, we came to help people but sometimes you feel so discouraged and helpless even though you love the profession, sometimes you think of leaving but something in you, the little voice refuses I feel so low sometimes.'* **Participant 13.**

Another participant indicated discrimination and unequal allocation of money for all of them, which demotivated them. Participants mentioned favouritism at the workplace recognition was not on merit but favouritism. The participant confirmed the statement by saying:

'Management should treat us equally there are those that get OSD money and others who don't get it, and this is not fair, there is discrimination, well we know others are not dedicated of course but favouritism demoralises people, that must be done away with to encourage people to work harder and explain how it is done to motivate us to do our best.' **Participant 17.**

Individuals strive for recognition, midwives mentioned during interviews that days like ***International Day of Midwives'*** which are special will make them feel good when recognised. One participant said:

'*Motivation and recognition of staff members are of importance to boost the morale, coming to this place was one mistake I regret daily, nobody gives you a pat on the shoulder, there was '**Midwives Day'** just to acknowledge us dololo nothing was done it's so demotivating, my previous employer gave us little gifts for special days we felt so special.'* **Participant 19.**

This sub-theme outlined how respondents wished to be recognised and acknowledged to boost their morale. Respondents mentioned unfair distribution of incentives and poor implementation of OSD. Favouritism was cited as a contributing factor. Managers need to be aware of dedicated special days in the profession to boost the morale of respondents and treat them equally.

4.3.3.2 Sub-theme: Operational Support

Working long hours in a stressful environment affects the participants, resulting in fatigue and risks of AEs in MOUs. These prolonged hours are mandatory in public hospitals. Participants suggested flexible hours and more midwives to relieve the burden. Participants stated the following:

'We work long hours we can't have flexible hours sometimes you have errands you can't wait for days when you are off but if there were flexi hours life would be easier what is difficult in creating such off-duties? **Participant 24.**

Poor communication at the workplace was reported to be a challenge, as most respondents reported a lack of open and clear lines of communication between management and them at the operational level. Participants voiced complaints of not being involved in decision-making, confirmed by the following statement:

'Communication is not satisfactory, sometimes it's flawed and not well disseminated to the lower levels of us in the practical field, you just hear things in the passages, decisions are taken for us we are never involved, or invited to those meetings when decisions are made our representatives are just invited to legitimise the process.' **Participant 19.**

Poor implementation of decisions was a concern to participants sometimes they were invited to the meetings, but the outcomes of those meetings were not implemented**.**

'*We are called to meetings to make recommendations but they are not implemented and the following year the same thing is still being discussed, next time they call a meeting I will never go it is a waste of time*.' **Participant 10.**

This sub-theme indicated that meetings were called but produced no outcome or outputs. Participants stated that even if they participated in such meetings, their input was rarely considered. It is revealed in this subtheme that the decisions of respondents led to further withdrawal of respondents from decision-making meetings as they felt unappreciated. Management needed to support respondents to assume an active role in decision-making processes, as this could promote productivity and creativity in the facility. Proper communication in the organisation helps in sharing information, which could improve in sharing of the values of the facility and the quality of life for the consumers. Long hours have physical and cognitive effects on healthcare resulting in fatigue, which can lead to medical errors by the participants posing risks in caring.

4.3.3.3 Sub-Theme: Psychological Support

Participants mentioned that their situations were demoralising. They felt demotivated by their work conditions. Others complained of constant headaches, fatigue, and low morale and fatigue. Participants explained how they were talked down by colleagues, and not given

support after AEs including bad-mouthing, had a negative effect, which could be relieved by consultation.

'Our work situation is different in a way that once your colleagues know that you consult with a psychologist, you are mentally disturbed, and they treat you differently not supporting you if arranged by management it could yield better results.' **Participant 15**

As such, participants suggested that if they could be given time off work after an incident and referred to psychologists, it could aid in healing. The participant confirmed with the following statement:

'You know even time off after an event could show that you are b being cared for. If only you could be offered sessions to consult a psychologist who could help though your colleagues who don't understand can blame you for the event, you shall feel relieved at a later stage, and that would be appreciated.' **Participant No. 5**

Participants explained that the lack of consultations revealed how stressful their lives were after experiencing AEs. Participants felt a lack of interest from management if they were experiencing AEs. As such, debriefing sessions were suggested for midwives who experienced AE's so that they could comprehend the reality of what had happened and start the healing process. A participant confirmed the following statement by saying:

'I wish our managers could understand what we go through after AEs, you hardly sleep, you need someone to talk to, someone to walk with within this journey to help you heal, and you need debriefing sessions but where are they here…. never had of such services at our facility.' **Participant 23.**

Another participant concurred and added how they are to be supported during an event. Managers must visit the unit, and participants be consulted to relate how the incident happened. Managers must assist with how the situation can be handled and how the same occurrence can be prevented. The following participant confirmed the statement saying:

'*They must come to get details, ask us what we need to make the situation better, and debrief to encourage us as part of learning.'* **Participant 8.**

In this sub-theme, participants indicated how they can be supported psychologically to cope with the AEs and how they can be given time off work to heal. Suggestions were made, that as participants, they needed to be allowed to voice their concerns and be supported by their colleagues.

4.4 Presentation of Manager Results

Table 4.3 below presents manager results, which addressed the following objective:

To explore the strategies used by managers in the cases of AEs in obstetric units of Tshwane district, Gauteng province.

Table 4.3: Strategies used by managers.

THEME	SUB-THEMES
Strategies offered to support midwives in the event of AEs	4.4.1.1 Support in completing the incident report form
	4.4.1.2 Assessment of Incident
	4.4.1.3 Provision of conducive environment
	4.4.1.4 Support through Training
	4.4.1.5 Emotional support
	4.4.1.6 Provision of follow-up

Table 4.3 indicates the sub-themes identified to report strategies used by managers to support midwives experiencing AEs in public district hospitals of Tshwane. One theme with six sub-themes emerged, and was discussed as follows:

4.4.1 Theme 1: Strategies Offered in the Event of AEs

From this theme, participants (managers) reported that in the event of an AE, they support midwives in completing the incident report form, which stipulates step by step what

happened, that led to an incident. Managers assess the gravidity of an incident and provide a conducive environment for the prevention of further occurrence. Participants indicated offering support through training for those midwives who were involved as a mitigating factor to prevent the same from happening again. Apart from training, they offer them emotional support, refer them for psychological counselling, and provide time for follow-up. Below, the sub-themes were presented.

4.4.1.1 Sub-Theme: Support in Completing the Incident Report Form

The managers complained that midwives were reluctant to write incidents regarding them as punishment after an AE, and these new forms were easy when you understand what is needed, they are simple to complete and standardised, as confirmed by the words of the participant:

'Let me open the conversation by saying the NDoH has developed steps that are used as a format to address AEs in public hospitals so that we can all follow the same procedure to address and investigate, AEs.' **M3**

Managers reported how they provided support as the head office had oriented them on how to deal/cope with such occurrences. One manager supported her statement by saying:

'The department has developed what is called the Patient Safety Incident (PSI) form, which makes it easy for us to assist midwives in filling the form as required by the National Department, in so doing we don't have to go in circles because the correct information will be filled and the midwife will know exactly what is required.' **M11.**

The reported information on filling out the PSI form has always been strictly required by the head office, which conducted workshops for uniformity in all public hospitals. This is confirmed by the following statement:

'An incident form is filled out by the midwife reporting what happened chronologically and the times that the incident took place. We as managers must oversee the process and even protect the midwives and the hospital against legalities that occur in public hospitals.' **M2.**

The sub-theme indicated prescribed methods of dealing with or reporting an incident in public hospitals as per NDoH guided by managers, the sub-theme indicated the support of managers to the respondents.

4.4.1.2 Sub-theme: Assessment of Incident

Once an incident occurred respondents had a duty to follow the prescribed processes of their superiors as it is confirmed by the following utterance:

'The analysis of the incident will be done, and the purpose of the analysis of the incident is to identify any contributing factors or underlying causes. This could include equipment malfunctions, or human errors like poor recording, patient records will be reviewed retrospectively checking if all details were filled in. During analysis of the incident, one must check whether it resulted in harm, whether was it serious, moderate or it ended up in a deadly incident.' ***M4.***

Managers elaborated that it was important to understand what caused the AE in the unit and who was affected during the incident, some processes are followed, as elaborated by one manager in the following statement:

'An investigation must happen, to assess what the root cause was for the incident, what actions were taken, and by whom. The incident must be classified as whether it is staff or patient-related and be analysed what was the cause.' **M1**

Managers related how stressful it is to be dealing with an AE as there are timelines or deadlines when attending AEs, the CEO is on your neck for documentation, and sometimes other members involved who were witnesses to the incident are not available, as mentioned by the following manager:

'A manager must investigate sequences of events and involve the Dr, if need be, by sharing the information even with the patient and family as they gather information. Findings must be compiled and an incident report be written about the incident, the whole process must be completed within 30 days of occurrence, which is evaluated by the Quality Assurance team of DoH in the district office to check if it will result in litigation, or not.' ***M9***

This sub-theme indicates the process of how an incident is assessed by identifying the causes of incidents. The incident reporting stages as set out by DoH are followed until the report lands at the district office for record purposes if needed at a later stage should there be litigation by the community member.

4.4.1.3 Sub-Theme: Provision of Conducive Environment

Despite all the negative descriptions of working conditions in public hospitals, some respondents described the environment as good. Managers expressed how they provided a conducive environment knowing that respondents were worried, thus confirming the following statement:

'We prioritise by listening, as a manager you must sit down with the midwife, remember she/he is worried, provide time to listen in a silent environment on a one-to-one basis with you, offer nurturing care, and give some psychological treatment allowing her to narrate what happened step by step, taking them through the traumatic experiences, which will allow them time to heal a bit though not immediately' **.M8.**

Managers reported that they provided work-related assistance during AEs, trying to identify and report occupational hazards according to the policies of environmental health. These policies contributed towards assisting in the identification of AE in a working environment, which was strengthened by the following statement:

'We collaborate with the safety committee, and infection control committee to draft policies of safety to promote and implement them in the wards and allow respondents to be oriented about these to prevent health hazards and provide a conducive environment' **M10.**

The managers highlighted their role in assisting respondents with sick leave, as others even come to work when they are not well, working in a hectic environment.

'At present, we are motivating an occupational practitioner to assist us with health hazards or abnormal conditions for the safety of our workers. Our nurses attend workshops conducted by NDoH to be able to identify hazards at workplaces.' **M7.**

The above sub-theme supports the statements of managers that they offer support to the midwives and care for them. Managers are concerned about the safety of the respondents whenever they are not feeling well, this shows support to the respondents.

4.4.1.4 Sub-theme: Support Through Training

Management felt that it was important to introduce new interventions in the facilities to keep staff updated with new developments. Managers agree that there should be an improvement in monitoring and evaluation after training to facilitate the implementation of duties. The following quote confirms the statement:

'Service training is done frequently utilising the in-service department of the hospital for instance, record keeping must be adhered to, and a monitoring tool must be formulated, a person in charge must be able to give an account of what is happening and submit a written report on the occurrences of her unit to check if actions taken can improve the situations.' **M11**

As a manager, one has a role in trying to prevent the occurrence of AEs by involving available obstetricians in conducting lessons or emergency simulations training on new developments in the obstetric unit. The manager supported the statement by uttering the following words:

'Research is continuous, midwives need to be up-to-date with new developments. We organise training with obstetricians to be able to deal with an emergency in the unit before a doctor arrives. In service, trainings are conducted every month, and legal issues are also looked upon during the trainings, which assist midwives to be aware of negligence factors, which can result in AEs. Assessment of these teachings is done during ward meetings as a follow-up on training.' **M9**

Orientation of new staff is done to familiarise them with the premises and policies applied at the facility. Quarterly training sessions are there to address new developments, which are scheduled by the in-service training department where midwives sign a register to check if the training was attended. The manager confirmed saying:

'New midwives are orientated for two weeks at our facility to acquaint themselves with

the policies and guidelines of the premises. They are taken to all departments to know how these are utilised as a part of training though we have quarterly in-service training for all staff at different sessions to accommodate everybody, control is done by signing a register as we need to make sure everyone has attended the training sessions" **M12**

This sub-theme indicates supervisory support strategies by managers to their subordinates as a positive action taken by managers. Training of respondents by managers showed how they offered support in the public hospitals of the Tshwane district by organising in-service training.

4.4.1.5 Sub-theme: Emotional Support

Managers have the responsibility of showing support to midwives in their difficult circumstances, taking into consideration the emotional and psychological being of participants during AEs. Support to midwives by managers was confirmed by this statement:

'Midwives who are involved in AEs are very emotional they always think that they will lose their jobs, we call them in a quiet place reassuring them that AEs will always happen where human beings interact, but we have to learn from them and move forward, to err is human we only have to be careful and an AE does happen and it does not mean you are that you are a bad person' **M9**

The outcome of an AE affects participants emotionally. Several participants were once involved in disciplinary processes after AEs became depressed, thinking of losing their jobs, others end up with a loss of life due to depression, which makes managers feel very bad as human beings. The following statement supports the statement:

'*We have a responsibility to care for our patients, but when we encounter AEs we feel disheartened, lost, and emotionally drained, some of us end up being admitted for depression, which can easily lead to loss of life in worse situations. As managers sometimes, some of our midwives lose trust in us as they need emotional support from us to the extent of mentioning that nothing will be done when they raise issues, it is very painful as we feel irresponsible and emotionally frustrated we try our best but sometimes AEs just erupt from nowhere, midwives think we are not there for them* **M10**

Managers in district hospitals account to their CEOs every time there is an AE, a thorough explanation from a manager, written incidents of occurrence, which need proper explanation as support offered to midwives. Some family members demand answers from managers who must account on behalf of the participants, which is frustrating as they also have to support midwives. One of the managers said:

'*Being a manager is draining we are expected to support our staff members and not seen as such by our subordinates, we try our best but are frustrated too when AEs occur, we are sometimes expected to account even to the family members when AEs occur it is very strenuous. The more we try our support, we are not appreciated'* **M12**

This sub-theme indicated that though managers are perceived to be less supportive, there is some positivity that they do, and the emotional status of midwives was considered. Managers were themselves emotionally disturbed.

4.4.1.6 Sub-theme: Provision of Follow-up

In this study, midwives placed blame on managers for poor support or follow-ups after AEs, which even classified them as negative managers who failed to escalate their concerns, but blamed them all the time. The following statement shows that matters are being followed up:

'After all these findings and report writing the story must be verified and a follow-up be done if the patient is discharged checking if there was any harm that occurred as it might result in litigation'. **M5**

Reporting of an AE is always followed up, as there are procedures set by the NDoH. Managers are to assist midwives in correctly stating facts chronologically, as required by the Quality Assurance team, which checks the possibility of litigation against the facility.

'*Once forms are written, which are known as Patient Safety Incident (PSI) there are rules stated on the channel to be followed by the Quality Assurance team from us as managers checking and assessing if everything was clearly stated, re-checking if there will be an indication of a litigation in future, if not, a follow-up of the incidence on how the affected*

patient is progressing even after the patient is discharged home' .**M11**

Managers try their best, even though the respondents reported a lack of care and support from them. Participants' frustrations did not even realise the support offered by managers after the occurrences of AEs. A participant uttered the following statement:

'*A managerial position is not just easy as you have to check if all participants are emotionally stable after the occurrence of AEs. We set up a time to check if all involved parties need counselling because you might overlook it only to find that a staff member slips into a depressive state when you don't support them, it is very important .**M6***

This sub-theme on the support of participants highlighted how follow-ups done by managers were important to the participants. Once participants have confidence in their managers, even if AEs occur, corrective measures are already in order with the guidance and support of managers.

4.5 Conclusion

In this study, midwives reiterated the lack of recognition by employers. Employee recognition is a judgment of a worker's performance that motivates them to dedicate their services towards their work. Recognition involves acknowledgment of the results of performance in a working environment. A working environment is considered to be conducive if it includes physical and psychological factors where an individual performs work. Emotional support to the participants can improve challenges faced due to poor working conditions, which leads to AEs. Participants felt that they were not receiving care, which could make it easier to rearrange their work and improve care to consumers and less litigations on the NDoH.

CHAPTER 5
PRESENTATION AND INTERPRETATION OF QUANTITATIVE RESEARCH RESULTS AND DISCUSSION OF INTEGRATED FINDINGS

5.1 Introduction

In Chapter 4, findings obtained from qualitative research were analysed and presented. In this chapter, the findings from quantitative research attained through a self-administered questionnaire from midwives and managers at the public hospitals of the Tshwane district between March and May 2023 are taken to address the following research objectives.

Assess the support offered to midwives by their managers, post AEs in obstetric units of the Tshwane district, Gauteng province.

Identify the factors influencing proper delivery of care by midwives to prevent AEs in obstetric units of the Tshwane district, Gauteng province.

The conclusion of this chapter will discuss the integration between the qualitative and quantitative findings of the study. The rationale is to demonstrate how the quantitative and qualitative findings substantiate and confirm one another

5.2 Sample Description

A self-administered questionnaire was developed to collect data from midwives and managers, as addressed by the respondents in this chapter.

5.2.1 Response Rate

The population rate for the three selected hospitals was 100. The sampled number done through Slovan's formula indicated the n-value (89) regarded as the respondents of the study upon which interpretations and calculations were based. returned. The response rate of the questionnaire varies according to the variables of the question and was clarified under specific

items of the questionnaire. These questions were reflected in Annexures F; and G for midwives and H, which was for managers.

The results were captured in an Excel spreadsheet. The next section presents the distribution of the respondents.

5.2.2 Distribution of Respondents According to Hospitals

Table 5.1 indicates the respondents from three district hospitals included in this study. The majority of respondents were from Hospital 3 n=24 (26,9%), followed by Hospital 2 n=37 (41,6%) and Hospital 1 n=28 (31,5%). The number of respondents in different hospitals varied according to bed occupancy and the status of the hospital.

Table 5.1: Distribution of Respondents According to Hospitals (n=89)

Hospital name	Frequency	Valid %
Hospital 1	28	31.5%
Hospital 2	37	41.6%
Hospital 3	24	26.9%
Total	89	100%

The next section presents the demographic characteristics of the respondents.

5.2.3 Demographic Characteristics of the Respondents

A total number of n=89 (100%) of respondents participated in the study. The respondents were South Africans. As indicated in Table 5.2 and Figure 5.1, most respondents were Black n=87 (97.8%), with n=2 (2.2%) as White. The average age of the respondents was 37, where the minimum age was 25, and the maximum age was 62. All respondents were formally educated, as indicated in Figure 5.1, that is 42.7% with Diplomas in Midwifery, 43.8% were qualified with Advanced Midwifery, and 42.7% had different degrees in nursing.

Table 5.2: Biographical Data of Respondents

Frequency Table		
Race	**Frequency**	**Per cent**
Black	87	97.8%
White	2	2.2%
Total	89	100%

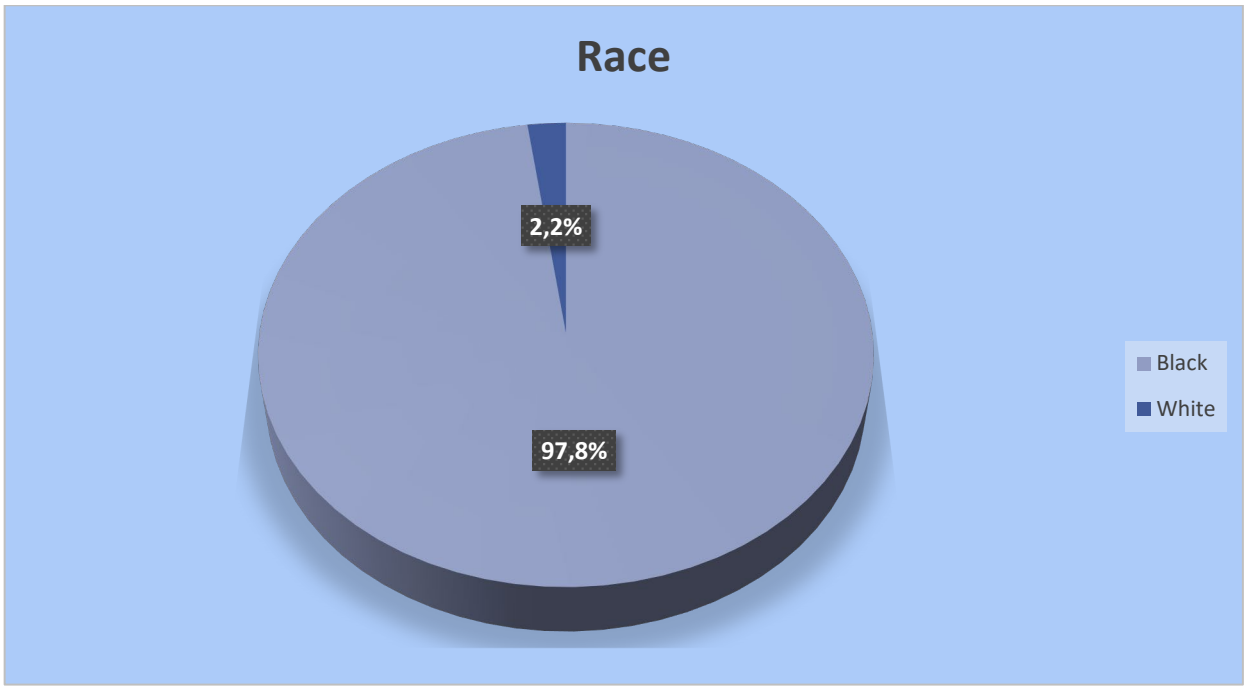

Figure 5. 1: Racial Distribution of the Respondents

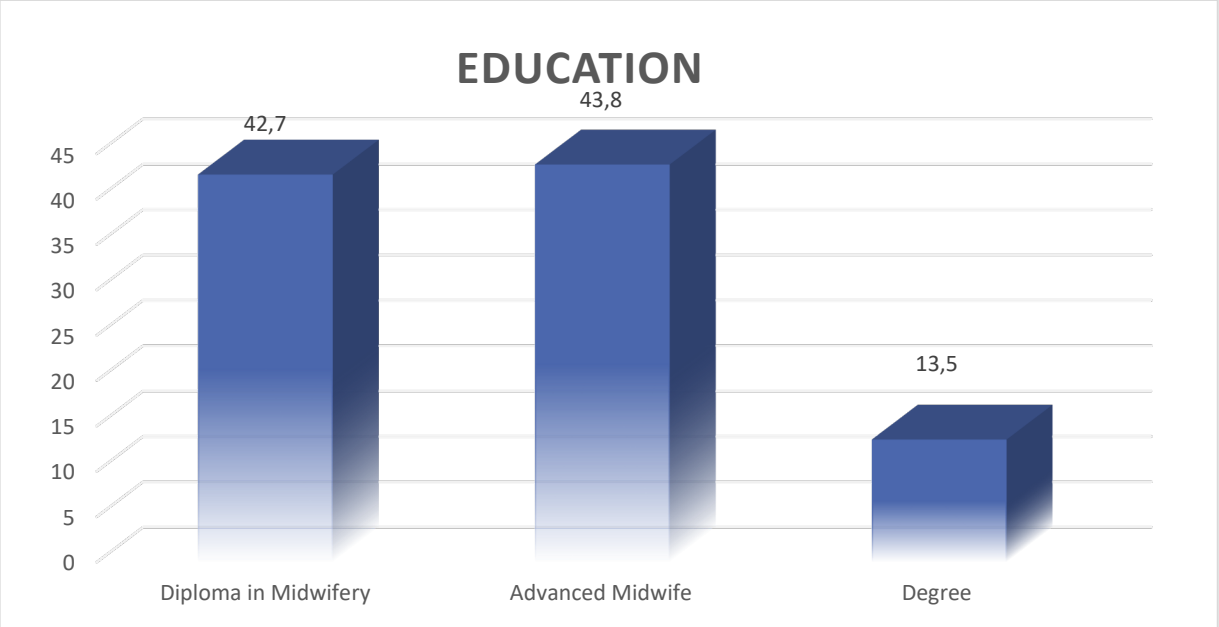

Figure 5.2: Bar Graph on the Education Level of Midwives

Table 5.3: Years of Service of Respondents

		Frequency	Per cent
Valid	Below 1 year	14	15.7%
	4-9 years	38	42.7%
	10 years and above	37	41.6%
	Total	89	100

The above Table 5.3 indicates that the respondents' years of service signify n=14 (15.7%), of them were below one year, n=38 (42.7%) were between four and nine years in the profession and n=37 (41.6%) were more than ten years and above in the profession.

5.2.4 Support offered to midwives by managers in case of an AE

Fig 5.3 addresses the support offered to midwives by managers in case of an AE. The information was presented and categorised as indicated below;

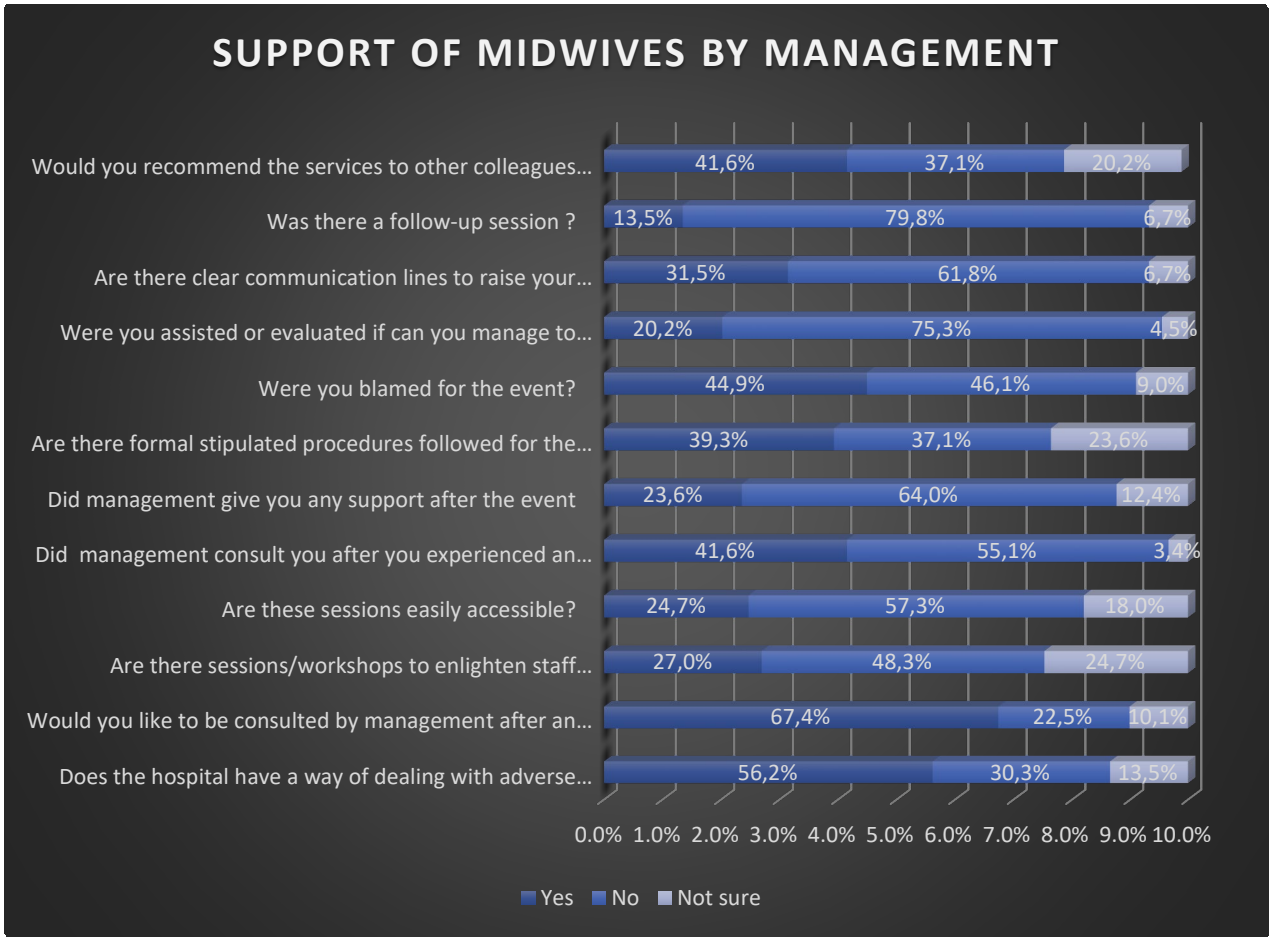

Figure 5.3: Data on the Support of Midwives by Management

As indicated in Figure 5.3 above, the majority of respondents, 56.2%, agreed that the hospital had a way of dealing with AEs whereas only a few 30.3% indicated that they were unsure about the question asked, with 13.5% who do not know. The results from the question of the respondents who wished to be consulted after the AEs were 67.4% of respondents who indicated how they wished to be consulted after AEs, whereas others were not sure if they would like to be consulted, and 22.2% indicated not to be consulted.

Less than a third of the respondents, 27%, indicated that there were sessions which are offered for the midwife concerned and workshops conducted relating to AEs, although 48.3% indicated that such sessions are not available. For the question, regarding the accessibility of sessions or workshops after an AE, few respondents, 24.7%, indicated the availability and accessibility of such sessions, although a majority, 53.7%, indicated 'no' to that question, with 18% who were not sure of the accessibility of the session. In the same breath, 13.5% of respondents indicated that they were followed up after the AE with 79.8% of respondents who were not followed up after an AE by management.

The question of clear lines of communication after an AE was raised by 31.5% of respondents, who agreed that there were clear lines of communication, whereas 79.8% disagreed with the existence or availability of communication with management. Even though there were negative responses, some of the questions yielded little positivity in management commitment, as shown by 56.2%, which indicated that there were ways of dealing with AEs by management. Some respondents were aware that there were policies dealing with AEs, as indicated by 30.3%, although the majority were not sure and not aware of such policies, as indicated by 39.3% of the respondents. The response indicated a lack of proper communication, even when it was done on their orientation day when midwives were newly appointed.

To establish support, respondents needed to be aware of the availability of processes drawn by management. Most importantly, management needed to encourage the use of sessions as more than half, 57.3% of respondents were not aware of the sessions, which indicated a lack of support by management. The findings indicated the gap regarding issues of communication between respondents and management. For the question, which asked if respondents would recommend the services offered to midwives by management after an AE, 41.6% indicated they would, whereas only 37.1% indicated ‘no,’ with 20.2% who were unsure if they would refer their colleagues to such sessions. Respondents were asked if they could continue to work in the same unit after an AE occurred, only a few indicated that they were asked 20.2% with the majority 75.9% for whom they were not evaluated or even asked.

On the question of management blaming the midwives after AE’s, Figure 5.3 above showed that nearly half of the respondents 44.9% specified that management blamed them for the occurrence of AEs, yet 39.3% mentioned the lack of policies drawn on the management of AEs. This was also evident in 67.4% of respondents who had an urge to be consulted, which was not a norm at all three district hospitals. From the results of the current study, it was clear that there was poor support as the question of support, which is offered after an AE was indicated by few respondents, 23.6% whereas the majority 64% clearly stated that no support was offered.

5.2.5 Factors influencing proper delivery of care by midwives

Table 5.4 and Figure 5.4 below indicated the results on factors that influence the proper delivery of care by midwives where the scores ranged from strongly agree, agree, neutral, disagree, and strongly disagree.

Table 5.4: Factors Influencing proper delivery of care by midwives

	Strongly agree		Agree		Neutral		Disagree		Strongly disagree		Total	
	N	%	N	%	N	%	N	%	N	%	N	%
Midwives experience fear when exposed to AEs	40	44.9%	46	51.7%	3	3.4%	0	0.0%	0	0.0%	89	100.0%
Maternity care is jeopardised during AEs	29	32.6%	41	46.1%	13	14.6%	5	5.6%	1	1.1%	89	100.0%
Midwives are faced with poor leadership due to lack of professional development	28	31.5%	46	51.7%	11	12.4%	4	4.5%	0	0.0%	89	100.0%
Midwives feel traumatised post-AEs	38	42.7%	40	44.9%	11	12.4%	0	0.0%	0	0.0%	89	100.0%
Midwives' concerns are not escalated to management	28	31.5%	46	51.7%	13	14.6%	1	1.1%	1	1.1%	89	100.0%
Midwives are psychologically affected, demoralised, and stressed after AEs	52	58.4%	29	32.6%	4	4.5%	2	2.2%	2	2.2%	89	100.0%

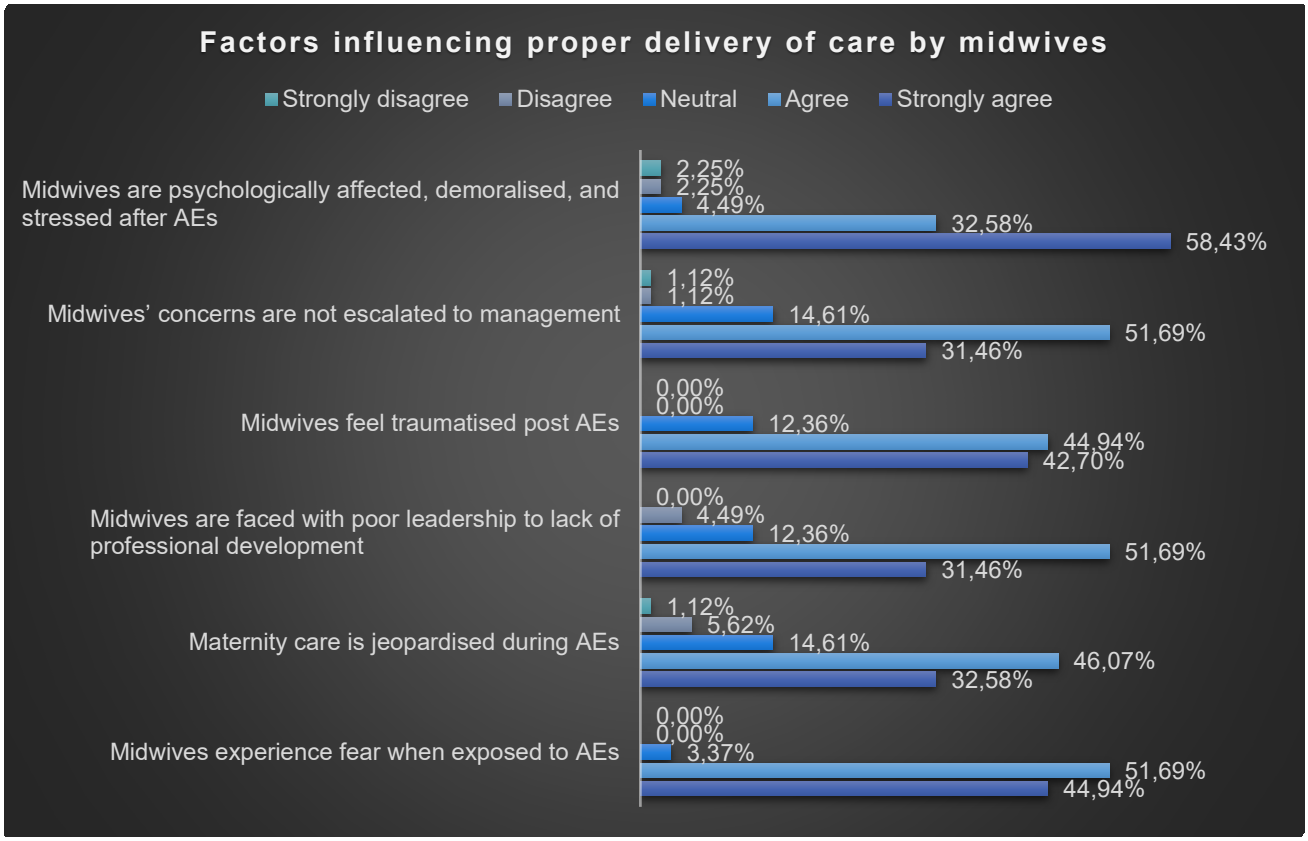

Figure 5.4: Bar graph of factors influencing proper delivery of care

Table 5.4 and Figure 5.4 both indicated that almost all the respondents with n=40(44.9%) and n=46 (51.7%) experienced fear when exposed to AEs as compared to n=2 (2.2%) who disagreed. With the question of maternity care being jeopardised during AEs, more than half of the respondents n=29 (32.6%) and n=41 (46.9%) agreed with n=13 (14.6%) who were neutral and n=5 (5.6%) who did not agree with the statement. Almost all the respondents n=28 (31.5%), n=46 (51.7%) agreed that midwives were faced with poor leadership due to a lack of professional development, which led to AEs, whereas few respondents n=14 (15.7%) were neutral with n=11 (12.4%) who did not agree with the statement.

The majority of respondents, n=38 (42.7%), agreed that midwives were traumatised following AEs, with n=13 (14.6%) being neutral and n=1 (1.1%) who disagreed with the statement. With the question where midwives' concerns regarding AE's were not escalated to management, n=38 (21.5%) agreed with the statement, with n=5 (5.6%) who disagreed and n=13 (14.6%) who were neutral. Almost all the respondents n=81 (90.9%) agreed with the statement that midwives were psychologically affected, demoralised, and stressed after AEs, with fewer

respondents, n=5 (5.6%), neutral, and n=5 (5.6%) who disagreed. Respondents of this study agreed that raised concerns were not escalated to higher management n=37 (41.6%).

5.3 Integration of Qualitative and quantitative results

Tables 5.5 to 5.8 below presented the integration of both qualitative and quantitative results as qualitative was presented in Chapter 4 and quantitative results earlier in Chapter 5. The two data sets were compared for the researcher to identify areas of convergence (similarities) and divergence (differences). Integrated results were presented following qualitative results themes and sub-themes.

5.3.1 Experience of Midwives regarding AEs

As indicated in Table 4.2 of qualitative results, the first theme, which emerged from the objective aimed at exploring the experiences of midwives following AEs was challenges experienced by midwives, followed by consequences experienced by midwives, suggestions made to support midwives and their sub-themes. For better flow and understanding of this chapter, themes from Table 4.2 were used to ensure the integration of results of both findings, with Table 5.5 indicating the first theme on challenges experienced by midwives.

Table 5.5: Theme 1 Challenges Experienced by Midwives

Qualitative	Quantitative findings
Lack of recognition and acknowledgement	Blame
Lack of support and equal opportunities	Poor leadership
Burnout, work pressure, and stress	Psychologically affected, demoralised, and stressed. Maternity care jeopardised.

Language barrier ⟷	Lines of communication
Work-centered vs. person-centered ⟷	Poor leadership

Table 5.5 above presented the merged results from qualitative strands of the challenges experienced by midwives after experiencing AEs (lack of support and recognition, burnout, work pressure and stress, language barrier, work-centered and person-centered) with the support offered by managers to midwives (Figure 5.3) and factors influencing proper delivery (Table 5.5) (poor leadership, blame, psychological impact, demoralisation, and maternity care), which is jeopardised by lack of resources.

5.3.2 Theme 2: Experienced Consequences

Table 5.6: Experienced Consequences

Qualitative	Quantitative
Blaming and punitive approach ⟷	Blame
Psychosocial consequences ⟷	Midwives experience fear

Table 5.6 presented the integration of theme 2 (Qualitative results), where midwives experienced consequences of AEs (blaming, punitive approach and psychological consequences), which were integrated with the quantitative results in Figure 5.4 on factors influencing proper delivery of care and support offered (blame, fear and feeling of being traumatised after an AEs).

5.3.3 Theme 3: Suggestions Made to Support Midwives

Table 5.7: Suggestions made to support midwives

Qualitative	Quantitative
Operational support ⟺	Assisted/evaluated after AEs Support after AEs
Psychosocial support ⟺	Available sessions

Table 5.7 presented the qualitative results of theme 3, on the recommendations made by midwives (operational and psychological support) to support those who experienced AEs, which were merged with the quantitative result in Table 5.5 on the support offered by midwives (assisted in completion of forms after an event of AEs and evaluated after an AEs; available sessions to offer counselling to those who experienced AEs.)

5.3.3.1 Strategies used by managers to support midwives

Table 5.8 below presents the results from managers on the strategies that are used to support midwives in terms of AEs (qualitative results), namely support in completing an incident report, assessment of the occurred incident, provision of a conducive environment for midwives and support through training.

These results were integrated with the support offered to midwives by managers as stipulated in Figure 5.4 of quantitative results, for example, formally stipulated procedures followed during an AE, if midwives are consulted after an adverse event, sessions that are available and their accessibility, and workshops offered after an AE.

Table 5.8: Strategies Used by Managers

Qualitative	Quantitative
Support in completing the incident report form	formal stipulated procedures followed AEs
Assessment of Incident	consulted by management after an adverse event
Provision of a conducive environment	Are these sessions easily accessible?
Support through training	Are there sessions/workshops related to adverse events
Emotional support	management give you any support after the event
Provision of follow-up	was there a follow-up session

5.4 Discussion of the Integrated Qualitative and Quantitative Results of the Study

In this section, the results obtained from the convergent parallel research design of the current study were both qualitative and quantitative in nature. Data were collected concurrently, analysed and interpreted separately, and discussed after being compared and merged. The results of both research strands were utilised to develop a model, which might support midwives who experienced AEs in OUs of the public hospitals of Tshwane district, Gauteng Province. The themes, which emerged from the qualitative results and data obtained from the quantitative research strand were discussed being supported by literature and the theoretical framework of King's Theory of Goal Attainment of Human Behaviour (1989). King's Theory has three interacting aspects namely: personal, interpersonal, and social systems.

5.4.1 Experiences of Midwives Regarding AEs

From this main theme, the following themes from qualitative results as integrated with quantitative results were presented, discussed, and supported by literature namely; challenges faced by midwives following AEs; consequences of AEs as experienced by midwives; recommendations made by midwives to enhance support following AEs and strategies used by managers in case of an AEs. Each theme was discussed in conjunction with the results from the support offered by managers in the case of an AE and factors influencing the proper delivery of maternal health care services (Tables 5.5. to 5.8).

5.4.2 Challenges Faced by Midwives Following AEs

From this theme, it was apparent from the findings of the study, that respondents were not acknowledged and recognised. Their efforts in the management of pregnant women, either pregnancy or labour, went unrecognised, and even their qualifications were taken for granted. This was also obvious from the results in Figure 5.4, where instead of being acknowledged, managers blame them for the AEs as if it was their fault it happened; 41.1% of participants indicated this. The findings of this study were supported by research conducted by Elstad and Vabø (2021), which showed that lack of staff recognition led to work instability, followed by a high turnover rate of health workers, ending with a shortage of staff in the facility. Similarly, another study was conducted among healthcare workers by Takeda and Fukuzaki (2023), where poor recognition and acknowledgment of staff resulted in interpersonal problems leading to staff turnover and the resignation of staff, which jeopardised the quality of care to pregnant women, leading to other AEs.

The results of the current study indicated that midwives were blamed for the AEs, as a study conducted by Muir-Cochrane, O'Kane, and Oster (2018) indicated that blaming the staff had negative consequences, resulting in fear in performing their duties. Fear compromises patient safety at a facility and leads to litigations that might affect the financial status of the health institution. Lack of recognition, acknowledgement, and blame will affect the relationship between managers and midwives, leading to compromised maternal healthcare services, as indicated in King’s Theory of Goal Attainment (2006).

The findings of the study revealed that there was a lack of support and participants were not given equal opportunities. Some respondents were preferred over others, this was seen as poor leadership, which was indicated by 50% of participants, as such, all the staff members must be treated equally and favouritism must be avoided. From the findings of the current study, participants reported that lack of support was not only recognised on the side of managers but among other staff members. If a staff member is involved in an AE, some will laugh at them. This practice might result in poor teamwork and staff members will be demotivated to even come to work.

Remuneration for work done was seen as another hindrance to support, where managers turned to promote others while those who were also due for promotion were not supported as such. This was seen as a challenge as it can also result in staff turnover and increased incidences of AEs in OUs.

Again, this comes back to poor leadership, which was indicated by other participants. Poor leadership style and skills were identified in a study conducted by Kanat-Maymon, Elimelech, and Roth (2020) among staff members, which resulted in poor teamwork, demotivation, and low morale of staff members. Authors recommended that equal opportunities, positive attitude, commitment, creativity, and higher levels of performance will occur if the staff is supported, and this might result in quality maternal care services and fewer litigations. Managers should, therefore, realise that organisational justice and good leadership skills, where respondents are treated equally, can improve the practical commitment of the respondents (Dirks & de Jong 2022). King's Theory of Goal Attainment (2006) is in support of interpersonal relations of interactions within the organisation, which, when utilised, can improve organisational performance.

Burnout, work pressure, and stress are other findings of the study that had a psychological effect on the respondents. Participants experienced relationship fatigue due to the circumstances they encountered at workplaces. Some participants verbalised how they felt demoralised and stressed, as highlighted by 59.8% of participants. Other participants,45.5%, indicated how maternal health care services were jeopardised because of stress and burnout, which was associated with a lack of support interrelated to the shortage of both human and material resources and an unconducive environment. These findings indicated that the

respondents were stressed at their place of work. As such, a study conducted by Cappadona, De Giorgi, Boari, et al. (2021) reported that unrealistic expectations from patients, exhaustion, and a low sense of personal accomplishment contributed to long-term occupational stress. Additional factors like high workload, low staffing levels, and long shifts, were associated with burnout in nursing (Cappadona et al. 2021).

The findings identified by a scoping review study conducted by Sidhu, Su, Shapiro et al. (2020) showed that adverse job characteristics resulted, due to burnout in healthcare workers. Burnout, workload, and stress cause a serious and complex occupational phenomenon as they also affect midwives psychologically and cause chronic conditions. Global migration and linguistic diversity are on the rise in Gauteng. This study was conducted in overpopulated areas of Gauteng, as such language barrier was identified by the participants as one of the challenges in delivering quality care. Language cannot be isolated from culture as mothers behave according to their culture making it difficult to perform some of the procedures, especially in the OUs with units being overly populated. Lack of understanding of each other's as there was poor communication between mothers and midwives.

Miscommunication affects the delivery of care, if not understood, the mother's behaviour can contradict instructions from the midwife. The midwife requires an interpreter, exposing the mother to a lack of privacy in invasive procedures and frustrating the midwife with poor instruction or even a lack of health education. To reduce the incidence of AEs in the OUs, Gerchow, Burka, Miner, et al. (2021) recommended the services of an interpreter for the process of quality care. Midwives in this study are faced with multicultural environments. Some of these mothers who are in SA as refugees have no clue about English, forcing a midwife to get an interpreter. Language barrier has an impact on mothers too, as they feel like troublemakers, which makes it difficult even to seek help. These mothers being in a foreign country is intensified by the inability to seek help, exposing midwives to fall into AEs (Gerchow et al. 2021). These results were also associated with poor communication indicated by 67% of participants between midwives and managers, as when they experienced problems in the units, their challenges were not escalated to higher levels. Poor communication affected the relationship between midwives and managers, as indicated in King's theory of goal attainment (2006), which might lead to dissatisfaction on the side of midwives.

The findings of this study revealed work-centeredness versus person-centeredness related by 50% of the respondents in Figure 5.4 above. Results indicated that poor leadership contributed to these findings. Respondents felt that even when they were prepared to work diligently when AEs occurred, they were not considered as having feelings towards their patients, concentration was only on their performance and inquiry was on 'what' they have done rather than the 'how' affording people dignity, compassion and respect. A person-centered approach environment affords support and care to respondents. In this study, respondents wished to be afforded time to grieve with the mothers in cases of AEs. By supporting and considering respondents during AEs, pressure will be reduced on the well-being of respondents and improve quality care for mothers, which according to Coffey, Saab, Landers et al. (2019), is indicative of compassionate care to mothers.

Good leadership skills, according to Maxwell (2017), guarantee a positive impact on respondents and better outcomes for mothers. Once respondents are supported, positive results and staff retention occur. Midwives who have experienced AEs can become second victims. The midwives are likely to feel guilty and frustrated and experience fatigue and insomnia. During these times, midwives find it difficult to cope with these experiences; some can engage in destructive behaviour, using drugs, nicotine, or even alcohol, which could be necessary to be given time away from the OUs to allow the healing process (Mathebula, Filmalter, Jordaan, et al. 2022) rather than concentrating on shortage, as AEs can continue to happen. The researcher related the findings of the current study with social aspects as indicated by King's Theory of Goal Attainment (2016), which indicated that dignity and respect must be displayed when midwives and managers interact with each other. This aspect at workplaces promotes good working relations needed towards set goals of the unit.

5.4.2.1 Midwives experienced consequences of AEs

The provision of quality maternal health care services is seen as the responsibility of midwives. If an incident happens in the unit, whosoever was responsible for the patient must be accountable for such acts and omissions. In this study, participants express a culture of blame if an AE happens, this was indicated by 50.9% of participants. Midwives have to face a disciplinary hearing, either in the workplace or even as required by the regulating body (SANC), especially if reported by the family. This brought more fear to midwives, which resulted in most healthcare professionals rejecting being allocated to maternity units.

This results in a shortage of staff in the overcrowded units, placing more strain on the already stressed midwives, hence being prone to make mistakes resulting in AEs. In support of the results of the current study, Wolvaardt (2019) reported that penalising or blaming human beings does not help, as human error is inevitable. Some public hospital managers have a culture of blaming individuals, seeing them, according to Ally, Nel, and Jacobs (2016), as having ‘vulnerable system syndrome’, those who cover up their errors and do not report incidences. It was revealed in that study, that fear was the main reason not to report AEs. One of the consequences experienced by midwives revealed from the findings of the current study, was psychological burden, especially if they are still working in the same unit and are not given the time off to grieve.

Experiencing a traumatic event or even an AE in the midwifery context can result in a psychosocial event for the respondents. As informed by the findings of this study AEs, could adversely affect midwives' well-being and contribute to psychological disturbances and fear in performing duties in the OUs (Tam, Wesseling, Wang, et al. 2023). Support during this time is crucial for midwives to deal with the loss they have experienced (Jones, Thompson, Dunlop, et al. 2022). Participants related that they rarely get a visit from management, an act regarded as inhumane by subordinates. The physical presence and clear backing by managers, including those in executive roles, can go far in helping staff cope better and feel supported. As indicated in King's theory of goal attainment (2016), support through training is vital to avoid similar occurrences of AEs, as such there is a need.

5.4.2.2 Recommendations made by midwives to enhance support following AEs

The findings of the current study revealed that participants experiencing adverse events are working under difficult conditions, which exposes them to emotional and psychological effects. Results indicated a lack of operational and psychological support. Poor operational support of respondents and poor implementation of policies hindered proper support when needed. This was evident from quantitative results, where the majority, 75% of participants indicated that they were not assisted when completing the incident report. As such, participants recommended that operational as well as psychological support is vital for them to cope with

AEs. Working long hours was identified as stressful, resulting in fatigue and risks of AEs in OUs.

Participants suggested flexible hours to relieve the shortage of staff that was strenuous on them. Long hours of work increase the risk of reduced performance on the job, which can result in AEs (Caruso 2014). Shifts hurt the health of the midwives, increasing the risks of chronic disease, especially night shifts. Chronic diseases add to absenteeism and long-term disabilities. Behavioural rhythms are disturbed, and failure to have a leisure time with family, and meals are disturbed leading to obesity including sleeping patterns (Boivin, Boudreau, & Kosmadopoulos 2022).

Sleep disorders due to long hours of work predispose midwives to negative effects on their hormonal imbalance, which give rise to negative energy Cappadona et al. (2021) in support of long hours, described how these result in negative energy, which can create negative emotions and negative actions. Once there is negative energy, poor performance of duties and negligence occur. Negative energy coupled with fatigue gives rise to negligence of care, exposing mothers to AEs. Midwives, in their plea to be supported, suggested flexi-hours as they reported being fatigued working long hours.

Open lines of communication between management and participants at the operational level were suggested to encourage decision-making on factors related to their care. The researcher thinks that flexible hours, once introduced, could alleviate absenteeism challenges in public hospitals of the Tshwane district. For psychological support, participants suggested that if they can be given time to be out of work after an incident and be referred to psychologists, it can help them to heal. Contrary to the results of midwives, managers verbalised the availability of psychosocial support provided to participants, and counselling sessions during AEs. Even though 53.6% of participants in a quantitative study disagreed, 28.6% acknowledged the existence of such facilities.

A study by Summerton, Mtileni, and Moshabela (2021) indicated that counselling guidelines must be designed and implemented, in cases of workers who are in distress to assist in the healing process. If operational and psychological support can be offered to those who experienced AEs, it might improve speedy recovery and reduce absenteeism and a trusting relationship will be established. In one study it was established that the relief of both can be

both pharmacological and non-pharmacological and even extended to include emotional feelings. Nurses in this study of Malenfant, Jaggi, Hayden, et al. (2020) felt that a supportive environment would assist them in reflecting on the innate qualities that they had before AEs. Expression of thoughts was that there is a lack of unity even among colleagues when one undergoes depression after AEs.

The concentration of care in public hospitals given to the organizational culture during AEs rather than the vulnerable midwives contributed to the augmented quality of care.
Midwives felt worthless, incompetent, and in need of support. If proper counselling fails, delivery of care is affected, and the low self-esteem of the midwife increases. The midwife must understand the purpose of counselling in attaining the goal of present and future problems. Dr. Neha Mehta (2022) delivered a paper that stated that counselling is an effective way for people who have problems understanding how they can be assisted, indicating that counselling was a talking and listening session, with probing questions toward healing. A manager, in assisting to counsel the midwife, should organise a counsellor who will actively listen to the problem(s) and ask probing questions. By counselling the midwife, she could develop coping skills to soothe emotional pain and suffering, successfully dealing with the AE.

5.4.2.3 Strategies used by managers in case of an AE

Lack of cognisance about adverse reporting plays a major role in the recording of such events. Managers raised concern during the study that midwives were reluctant to complete the incident reports. The National Department of Health has set guidelines on completing Patient Safety Incidence (PSI) forms in public hospitals. To maintain uniformity in all settings, workshops were conducted regarding documentation of PSI. It was evident from the findings of the current study, that managers do provide support in case an AE happens by assisting midwives to complete it, as the head office has oriented them on how to deal with such occurrences. Regardless, the findings of the current study indicated that midwives regarded completing PSI as they are being punished or blamed for AEs. This was also supported by 39.3% of participants who reported that there were formal stipulated procedures available in case of an AE and also by 54.5% who indicated that the hospital had a way of dealing with AEs. Liukka, Steven, Vizcaya Moreno, et al. (2020) thought that once the implication of the PSI forms is established and understood in organisations, participants can speak openly about

issues and events without fear of blame or punishment. More training and workshops on filling PSI forms could assist and educate participants on the understanding of AEs versus litigations.

If healthcare settings of public hospitals were better managed and lacked no resources, complaints from healthcare receivers were not going to impact too much on the financials of the facilities. Van Dael, Reader, Gillespie, et al. (2020) established in qualitative research conducted that managers' strategies would be easier rather than having to check even causes of organisational non-compliance of poor resources. Managers' role of emotionally supporting the midwife and assistance in completing the PSI forms would be achieved in a standardised organisational manner. This review has established a range of evidence-based, short-term recommendations to achieve this. A steady rise in patient complaints has been accompanied by increasing efforts to effectively analyse complaints for quality improvement. Public hospitals are overpopulated, and follow-ups after an AE are expected to be done even on the affected family members. Combining organisational learning and complaint handling has previously been suggested in non-healthcare organisations, yet remains conceptual in nature. Existing literature gives little insight into how this would work in practice, and yet it has to be achieved by managers (Van Dael et al. 2020).

The findings of the study revealed that managers must assess the incident once it happens in the unit. Managers elaborated that it was important to understand what caused the AE, time, people involved, witnesses in the unit, and who was affected during the incident, this is done to assess the severity of AEs. The majority of participants, 67%, agreed with the results of managers and confirmed that they are consulted if there is an incident in the unit as managers wanted to know what happened. Assessment and reporting of AEs are critical as they might result in the death of a patient (Hoffer, Smith, Parlow, et al. 2016) statistics are involved once mortality occurs. Assessment and analysis of AEs are not without challenges, moreover, some even end up with litigations. AEs can sometimes be seen as a lack of progress by the affected parties. Randomised controlled trials (RCTs) are seen as relevant in evaluating the interventions taken in assessing events (Phillips, Sauzet & Cornelius 2020). Perceptions of adverse events by Healthcare professionals can ease the reporting systems, which play a role in the reporting practices. Healthcare workers regard reporting as a punishment as the correct steps of reporting were not emphasized (El-Zoghby, Soltan, and Salama 2020). In this study,

the Gauteng Health Department has standardised its AE reporting by utilising PSI forms, which are uniform in all public hospitals.

Despite all the negative descriptions of working conditions in public hospitals, some positivity was recognised by participants. A conducive environment was created by managers when participants were involved in AEs. Managers expressed how they provided a conducive environment knowing that respondents were anxious after experiencing AEs. Participants were taken through the process of AEs in a quiet conducive environment. The Occupational Health and Safety Act,1993 is considered in the assessment of the environment evaluating if the environment contributed to the AEs.

Participants must be interviewed in an area that is decluttered for the participant who is already disturbed to concentrate without disruptions. A conducive environment according to the Cambridge Dictionary (2016) would yield results of a good thing to happen. Regardless, the findings of quantitative research in the current study indicated that 53.6% of participants in Figure 5.4 above had no idea of such sessions that are conducted in cases of AEs, meanwhile, 17.9% were neutral and only a few participants, 28.6%, were aware of these sessions being conducted at the facilities. Hospitals are microclimatic in nature (Facciolà, Pellicanò, Visalli, et al. 2019) with chemical smells that could easily nauseate a psychologically disturbed midwife and would remind her of the situation where an AE happened rather than speeding up healing. A conducive environment at a stressful time would assist the affected midwife in returning to work. Managers could consider placing her in a different unit, other than the one where the event was experienced.

Management felt the need to support respondents through training and introduced new developments in the facilities to keep respondents updated on matters related to AEs (Calvert 2014). Once assessment was done, managers agreed that there should be an improvement in the monitoring and evaluation of AEs. Strategies were then developed. These strategies were in line with and offered as training to facilitate the implementation of the set guidelines. Only a few, 28.6%, of participants in Table 5.5 above agreed that there was a workshop session that was offered for those involved in an AE yet 53.6% of participants were not aware of such sessions in the facilities. Contrary to the findings of the study from midwives and in line with managers' results workshops, training, and orientation of new staff and those involved in

AEs are done to familiarise them with the policy applied at the facility (Kusumaningsih, Hariyati, Hutahaean, et al. 2020).

Quarterly training sessions are there to improve on new developments, which are scheduled by the in-service department. In this section, the results indicated poor communication and lack of awareness of important developments at the facilities as most participants are not oriented about these sessions. Contrary to the sessions some participants 24.1% agreed that these sessions enlighten staff as compared to 50,9% of participants who considered these sections invaluable. From the findings of the study, it was revealed that managers offered emotional as well as psychological support to midwives during AEs. Regardless, only 31.4% of participants indicated that support was given with the majority 62.5 % indicating no support was offered after an AE.

Findings observed from the previous statements of this research indicated a lack of support to respondents by managers. According to a study conducted on the support offered to healthcare workers by Raetze, Duchek, Maynard, et al. (2021), barriers formed by lack of support led to unresolved feelings of grief and emotional distress. Distress of participants further indicated that midwives needed their spirit of safe practice relying more on their colleagues than on the managers. Respondents lamented how they longed to be consulted after an AE with a result of 67% in Table 5.5 above. Abd-EL Aliem, Aliem, et al. (2021) in a transformational study on leadership reiterated the importance of mentoring subordinates, which contributed to organisational management and retention of staff. Mentoring brings the development of staff and growth. Nurse managers play a vital role in the success of midwives who in turn look forward to delivering quality care as they are being supported.

Reporting of an AE is always being followed up as there are national health procedures set by NDoH. In cases of AEs, the manager's role is to assist the participant to chronologically state facts as required by the Quality Assurance team, which checks the possibility of litigation measures against the facility. The barriers set by participants about the poor support, blame, and lack of follow as indicated by 78.6 % of participants by managers make it impossible for the participants to acknowledge the support offered by managers. Rafter et al. (2015) suggested that patient safety tools must be built into electronic databases using knowledge of

the local context, to make a follow-up on the development of an AE making it easy for respondents to follow up on cases of AEs. The findings of the above information incorporated King's Theory of Goal Attainment (2016) concepts. On the personal system, participants were attended in a conducive environment, allowing the manager to understand the effects of AEs and concentrate on caring with the participants. The interpersonal concept of the theoretical framework dealt with the life experiences of the participant during AEs, narrating chronologically the occurrences. The human interaction aspect is integrated with the social system when the manager is the authoritative figure who has the status and powers to make decisions and offer support to the participant.

5.5 Discussion of Data, which Was Not Integrated

Litigation and Misconduct

The findings of the current study revealed that the majority of participants are faced with litigations when an AE has happened, as such, litigations are thorny issues and have become a concern in the public sector. Litigations are legal actions taken due to AEs. According to Bloom (2021), the Gauteng Health Department has received litigations amounting to R1.6 billion for medical negligence. These litigations are a huge challenge to financial sustainability, diminishing the departments' capability to render health services to patients as obliged by terms of section 27 of the Constitution. Types of litigations include misconduct, which may involve harm to another person's health or well-being. Misconduct is of particular importance in professional settings, in the workplace, and in various institutions. Unethical misconduct that gives rise to negligence normally ends in litigation.

Respondents in this study lamented fear of being sued due to poor performance of their job as they have no proper equipment to provide care. In addition, according to Mammbona and Mavhandu-Mudzusi, (2019), some litigations are due to the inadequacy of midwives to perform quality care as they lack resources. According to King's theory (2006), the context will entail social systems, which are the NDoH, selected district hospitals management, and legal structures of the hospitals including the regulatory body of midwives known as SANC.

Support of midwives in selected hospitals needed to come even from NDoH as the controlling body that allocates resources. Required resources entail the recruitment of human resources,

legal structures drawn by NDoH, SANC, and hospital management. SANC, being the regulatory body that regulated the training of midwives by the Nursing Act, 2005 (Act No. 33 of 2005), is liable for the training of midwives, in failing to do so, penalties are instituted. Penalties that are given due to misconduct are the following: removal from the register, suspension from practicing or training; a reprimand; a fine; or payment of the costs of the proceedings. The Nursing Act, 2005 – Section 42 of the Act makes it illegal for any institution in South Africa to provide education and training intended to qualify a person to practice as a nurse or a midwife unless accredited by SANC.

Staff shortages

The reasons to stay in the profession are both personal and professional. Shortage of staff is not strange to public hospitals. Many respondents cited staff shortages as one challenge, as staff were not replaced when they retired or resigned. Shortage meant that work was to be distributed among the smaller number of available respondents, adding responsibilities and strain to those who were on duty. Shortage of staff hurts the delivery of care, and migration of respondents to other countries for greener pastures has paralysed the healthcare system, aggravating the shortage. Shortage of staff, as indicated by respondents, affects the physical and emotional statuses of respondents. Participants indicated that most employees were chronically ill, which added to the absenteeism resulting in a ‘skeleton’ staff being on duty. Shortage of staff, inclusive of midwives was found to be a problem in developed countries, as well as in middle-income countries (Pugh, Twigg, Martín, et al. 2012). In another study conducted by Asegid, Belachew, and Yimam (2014) the lack of career opportunities reiterated how staff members needed to further their studies to develop themselves, but due to a shortage of staff, they were not offered the opportunity. In this study, retention of staff could happen if managers of the district hospitals, together with the NDoH as a social or legislation division of the context can support respondents by replacing staff members that vacated posts, this could ease the shortage of staff.

Respondents further cited the availability of resources as part of that, which made them leave. In the study conducted in Malawi, the common reason for the intention to leave was poor management (Chimwaza et al. 2014). According to Chipeta, Bradley, Chimwaza-Manda et al. (2016), staff retention improves when staff feel supported by the nurse manager and is often linked to the manager's approachability, openness, and balance when dealing with problems

that arise during work. Bateman (2010) indicated that the former Minister of Health, Dr Aaron Motsoaledi, acknowledged the dysfunctional system of public hospitals in South Africa, which leads to staff exodus to other countries. According to the minister, the freezing of posts resulted in staff shortages due to financial constraints also caused by the increasing number of foreigners not budgeted for in SA.

Shortage of staff is a global problem. Kwesigabo, Mwangu, Kakoko, et al. (2012) conducted a study about the shortage of staff in Tanzania as a crisis that led to task-shifting. Task shifting occurs when lower ranks of staff are given tasks that they are not qualified for to mitigate the shortage (Breier, Wildschut & Mgqolozana 2009). As the shortage of staff results in stress as respondents are overworked, such a challenge led to utterances during interviews that there was no consideration of the wellbeing of the respondents. The poor support, as stated by statements of respondents, could be relieved if the social and personal aspects found in King's theory could be combined and applied to alleviate the stress stated by the hospital management. The outcome could be the support of respondents, since the staff ratio to mothers would balance if NDoH is engaged, cascading down to the district hospitals in the Tshwane district, Gauteng province.

Results

The study findings revealed the lack of support for midwives from managers after experiencing AEs. Midwives wished to be consulted after the event, as indicated by 67.4%, while 58.4% felt demoralized as their concerns about the challenges they faced were not escalated. Participants highlighted shortage of staff, which led them to be overworked in overpopulated district hospitals. In the same context, equipment was either unavailable or broken for them to deliver quality care to patients. Managers were mentioned as contributors to poor morale in the settings, as 79.8% of midwives concurred that even if they raised concerns to management, there was no follow-up. Recognition plays a role in boosting the morale of respondents, midwives lamented the lack of remuneration for their specialisation courses, yet their skills were being utilised. From these results, a model to support midwives should they experience AEs was developed. Hence, the researcher recommended using the model to support midwives who might experience AEs in obstetric units of the Tshwane District, Gauteng province.

5.5 Conclusion

The conclusion of this chapter discussed the findings from qualitative to quantitative data, which was analysed and interpreted. Both results of qualitative and quantitative strands were supported by literature, incorporating a theoretical framework. The quantitative strand produced evidence statistically, which strengthened the qualitative findings on the following themes: challenges experienced by midwives related to AEs, experienced consequences, and suggestions made to support midwives experiencing AEs. The next chapter discusses concept analysis.

CHAPTER 6
CONCEPT ANALYSIS

6.1` Introduction

The purpose of Chapter 6 is to conceptualise the main concepts that developed from empirical data from the findings of data collection of previous Chapters 4 and 5. The main concept central to the development of a model was to support the midwives who experienced adverse events from the following themes:

Challenges experienced by midwives related to AEs,
Experienced consequences of AEs,
Suggestions made to support midwives experiencing AEs.

Conceptualisation was defined by Sequeira (2014) as a process of breaking down intellectual ideas into practical concepts that will be achieved through the eight-concept analysis as suggested by Walker and Avant (2018).

6.2 Concept Analysis

Walker and Avant (2018) defined concept analysis as a strategy that allows researchers to examine the attributes or features of a concept. Concept analysis is further attributed to a formal, linguistic exercise to determine those defining attributes. Concept analysis aims to distinguish, define, and specify key concepts in research to avoid misinterpretation by simply breaking down complex concepts into common usable language. Walker and Avant's (2018) clarification of a concept analysis is not only concerned with discovering definitions and meanings but also clarifies why those meanings have developed.

Concept analysis, therefore, selects a concept from its irrelevant attributes (Walker & Avant 2018). Chinn and Kramer further state that concept analysis clarifies the meaning of a concept in nursing practice. The researcher in this study modified the eight steps in the Walker and Avant Method (2018) to elucidate and differentiate the definition of the main concepts to be able to simplify the operational and theoretical concepts of the study. The last step in the

process of concept analysis is the identification of empirical referents or ways to measure the concept.

The definitions of the main concepts are as follows:

1) Selecting a concept.
2) Determining the purpose of the analysis.
3) Identifying all the uses of the concept.
4) Determining the defining attributes.
5) Contrasting the model case.
6) Contrasting additional cases, borderline, related, contrary, invented, and illegitimate cases
7) Identifying antecedents and consequences.
8) Defining empirical references.

6.2.1 Selecting a Concept

Concept analysis commences with the selection of a concept. The chosen concept must be of interest to the researcher associated with the study. The selected concept must be of importance in the development of the model (Walker & Avant 2018). In this study, the findings from data collection revealed that participants longed for psychological support, institutional support, resources support, training support, and litigation support as the desired outcomes of support.

The researcher selected the concept '*supporting midwives in AEs,'* as the key to the study. Therefore, '*experience'* was selected as part of the concept of '*supporting midwives in AEs.'* The selection of concepts and classification will be followed according to Dickoff, James, and Wiedenbach's survey list (1968), which identifies six aspects of activity: the agent, the recipient, the context, the procedure, the dynamics, and the terminus. Concept classification is explained in Chapter 7.

6.2.2 Determining the Aims and Purposes of Analysis

The analysis results in a study should draw attention to improve the understanding or meaning of a selected concept consenting towards the suitability of both practical and theoretical situations (Walker & Avant 2018).

6.2.3 Identifying Uses of the Concept

The opinions of Walker and Avant (2018) deduce the use of concepts from experiences or respondents, literature related to the concept, and meanings from dictionaries. In this study, different strategies were utilised to search for uses of the concepts from online databases, relevant journals, and textbooks.

Internet sites, Medline, EBSCOhost, Google Scholar, Science Direct, journals, and articles were explored extensively to try to describe and understand the conceptual meaning of the concepts as recommended. Dictionary definitions are authentic because they convey accepted ways in, which words are used. Positive support strategies of midwives by managers after AEs can yield better care reducing the strained relationship between midwives and managers in the selected facilities thus reducing the negative psychological effects on midwives.

Table 6.1: Sources for Literature Review

Author(s)	Year	Type of article	Search terms	Inclusion criteria
Hastings-Tolsma M, Temane A, Tagutanazvo OB, Lukhele S, Nolte AG	2021	*PubMed Journal-supporting midwives*	Midwife-experience	All articles and studies that deal with issues of supporting midwives
Cape, B. F	2017	*Bailliere's nurses' dictionary*	Midwife, midwifery, midwifery-led care	
Phillip Lief Group	2023	*Thesaurus dictionary*	Adverse event	
South Africa	2016	*Maternity Guidelines in SA*		
Veiel H, O: Baumann U	2014	*The meaning and measurement of support*	Support	
Webster, M Co	2023	*Webster dictionary*	Support	
Liukka M	2020	*National Institute of Health*	Experiencing	

The researcher proceeded with the procedure of defining the conceptual meaning using different literature reviews as set by Walker and Avant (2018). The concept reviews from search engines for a better understanding of the concepts of '*supporting midwives experiencing AEs in OUs.*' (Walker & Avant 2013).

6.3 Midwife

The word 'midwife' is a Latin word meaning 'to be with 'woman.' Figuratively, it means a woman trained by schooling or experience to bring forth something new; this indicates that midwifery is the profession or practice of assisting women in childbirth (World Books Dictionary 2020).

Taxonomy of the midwifery category will include:
'Professional practice' advocates for Midwifery philosophy and model of care in all aspects of care, education research, and policy-making to the rest of the professional community, communicating effectively, keeping clear and accurate records, and sharing skills, knowledge, and experience where appropriate (Nursing Act, 33 of 2005).

'*Caring*' is a midwife's role of providing prenatal and postpartum care, caring for women during childbirth, including labour, assessing labour progress, assisting with pain management, and delivery of a baby (Webster Dictionary;2023).

'A*dvocacy*' patient advocacy is how a nurse speaks up for patients to ensure they get the best or liaison on behalf of the patient (Nursing Act,33 of 2005).

'*Health promotion*' is a process of enabling people to increase control over and improve their health and disease prevention that views pregnancy as a normal life event (WHO:2018). According to SANC, it assesses, analyses, and screens streams of health care users of Reproductive Health Services, Preconception Care, Antenatal Care Intrapartum, Postnatal Care, and the Care of Neonates to maximise the health during these periods (Nursing Act,33 of 2005).

However, ICN (2017) defines midwifery as the care provided by an autonomous midwife. Midwifery competencies (knowledge, skills, and attitude) are held and practiced by midwives,

educated through a pre-service midwifery education program that meets the ICM global standards for midwifery education. According to SANC, midwifery is a specialty. The researcher selected the concept of 'midwife' to include all taxonomy categories to define 'midwife.' However, (WHO:2018) defines a midwife as a trained health professional who helps healthy women during labour, delivery, and after the birth of their babies.

6.3.1. Synonyms of Midwife

Accoucheur
A nurse skilled in aiding the delivery of babies
Birth Attendance

A regulatory definition of the 'midwife' is endorsed by the International Confederation of Midwives (ICM), the World Health Organization (WHO), and the International Federation of Gynaecology and Obstetrics (FIGO), which delineates the knowledge, skills, and behaviour that would characterize the domain of competencies of the midwife (Fullerton, Thompson, & Severino 2011). The Nursing and Midwifery Council sets standards of behaviours, performances, and ethics for midwives. Following this code of conduct (last version 2008), the midwives who meet these standards are expected to give high-quality care throughout their professional lives.

6.4 Support

Support comes from the Latin word *supportare*, which means to bear, endure or sustain.
The concept of support is the central concept of the study. The researcher developed and presented the conceptual and operational definitions as follows:

Dictionary definitions of support

The World Book Dictionary (2018) defines support as an act or instance of supporting or serving as a foundation for a person needing encouragement or assistance.

Oxford Dictionary (2021) defines support as helping or encouraging somebody by showing that you agree with the individual.

Webster's Dictionary (2020) defines support as upholding or defending a valid right to bear, sustain, or advocate for someone.

The Thesaurus Dictionary's (2020) meaning of support is assistance, which also includes backing someone.

Cambridge Dictionary (2021) states support as agreeing and encouraging someone because you want them to succeed.

Dictionary.com defines a midwife as a trained person who is not a doctor who assists women in childbirth.

Operational definition of supporting.

An operational definition of the concept implies that there could be a change in the public hospitals' environment when factors influencing the support of midwives could be considered and applied.

Conceptual definition of support

The researcher defines the 'support' of midwives as a process that would develop in delivering change in OUs of Tshwane district public hospitals. The support of midwives would yield quality care to mothers and improve the well-being of midwives emotionally and psychologically. The researcher, in developing the model of this study, has categorised support into psychological support, institutional support, resources support, training support, and litigation support.

Psychological support means to get a desired effect on the mind (World Books Dictionary 2020), which forms therapy for an affected individual, to find solutions of comfort.

Institutional support This means activities that provide support offered by a large institution like a hospital, bank, or university to fulfill their obligations (World Books Dictionary 2020). Institutional support would mean expressions of empathy, love, trust, and caring in this research.

Resources support The level at which the institution would provide essential or procure materials, to perform required activities of the institution. Resources in this study would also mean human resources.

Training support Assessing, monitoring, or even conducting training of midwives according to the protocol of the institution. In this study, training was based on AE facts, training support contributes to best practices through improved staff retention and success.

Litigation support A process of consulting or assisting attorneys for court cases. Support in this study is needed for the mental well-being of the midwife. Psychological support according to Rangara-Omol (2019) would reflect on the values, beliefs, and abstraction of the understanding of support as a concept that constitutes a positive impact on the retention of midwives. Providing support, in this case, was having to provide counseling when needed.

Psychological support further promotes the well-being of individuals in totality, promoting resilience within the affected midwives. Resources of support in this study were looked at as ongoing support from institutions. Resources were expected to be provided by managers, which would mean equipment to provide care like cardiotocograph machines, linen, or even medication for mothers. Provision of staff would mean human resources to relieve the shortage to allow midwives to perform required duties regarding the patient ratio, which is 1:218 patients in Gauteng hospitals and the required ratio is 1:6 for an ideal situation according to NDoH. Once support was established it would contribute to best practices through improved staff retention and success rate of the facility in supporting midwives and reducing litigations from the communities. Training support meant that midwives would be able to identify AEs even before they occurred as in-service training would be conducted to update staff on matters relating to AEs, and how to fill PSI forms. Litigation support would mean everything from retrieval of records of an incidence, and subpoena services to an investigation and provision of legal services.

Meaning of 'Provision' In this study 'provision' according to the law from Webster's Dictionary (2016), the provision means a particular thing that needs to happen or be done and Oxford Dictionary (2013) means planning to deal with something. Theologically it would mean depending on God for provision. In this study, provision would therefore mean supplying midwives with resources like staff, and equipment to prepare them to deal with factors influencing the provision of care and counselling when experiencing AEs. Midwives in this study depended on managers to provide them with support to deliver quality care to mothers in public hospitals of Tshwane district, Gauteng province.

The philosophical definition means that support should be part of facility training, a well-designed support system will contribute to best practices through improved staff retention and success. The philosophical meaning of support would reflect on the value, beliefs, and abstraction of the understanding of support as a concept that constitutes a positive impact on the retention of midwives (Rangara-Omol, 2019).

6.4.1 Types of Support

6.4.1.1 Psychological Support

This means support, which forms therapy for an affected individual, to find solutions of comfort. Psychological support involves guidance by a psychologist to relate challenges to find solutions. This study would involve even a conducive quiet environment for a stressed midwife during counselling sessions to prevent PTSD. Psychological support ensures a sense of safety, hope, and calmness when trying to investigate the cause of an AE to prevent anxiety and post-traumatic stress disorder. A midwife could be offered some time off or be placed in a different ward during healing to allow her to be away from a stressful environment. Listening to the midwife and showing feelings of empathy according to Kunzler et al. (2020) reduces levels of stress and depression and results in resilience. Resilience (Bayri et al. 2021) is the result of coping or quick recovery of mental health during a traumatic stressful situation.

6.4.1.2 Institutional Support

Institution (district hospital) as the micro-level context of this study is expected to provide support, facilities, equipment, and personnel for the delivery of quality care by the midwife. Assessment of the incident is done in a conducive environment for reporting that is in a neutral environment away from where the incident occurred. The information is captured using a PSI form. A review of the incident and investigation is done. The investigation is in line with the review of whether the incident will end up being a litigation. Data analysis of the information engaging patients and families is done and assessment of the incident would be classified as to whether it will be a possibility of a litigation case or not. The Quality Assurance team is notified within 30 days of the occurrence of the incident as per NDoH guidelines.

6.4.1.3 Resources Support

A study by Cramer and Hunter (2019) indicated that there is evidence of a relationship between the emotional distress of midwives and workloads.

Resources in this research would mean human and material resources. The participants in this study echoed the lack of resources in the selected facilities. These include staffing and material resources, which cause barriers in the delivery of quality care and contribute to challenges faced by midwives in the facilities. Both managers and midwives need to work together toward the retention of staff to alleviate the shortage of staff caused by absenteeism. Severe shortages of midwives have hampered the public hospitals of the Tshwane district even towards failing to achieve Sustainable Development Goal No. 3. Identification of challenging factors that relate to AEs could be resolved when there is cooperation between both parties (Mashiloane 2022).

6.4.1.4 Training Support

The training process in this study would mean that managers would provide information on how to identify and assess an AE. The defined steps of reporting an AE would have to be followed according to the set guidelines of DoH. In service, training schedules will have to be adhered to, so that every member of the facility is informed by signing an attendance register. Information on the training support would include the following details:

Date, time, and location of the incident.
Name and address of the facility where the incident occurred.
Names of the patient and any other affected individuals.
Names and roles of witnesses.
Incident type and details, written in a chronological format.

6.4.1.5 Litigation Support

Litigation is the process of taking a dispute to court; it causes stress to the affected individual. Once litigation is affected, managers need to support the midwife towards the issue. Litigation causes emotional and psychological stress on the individual. Support in assisting the midwife to seek a union or lawyer representative would assist the midwife. A time-off was suggested by participants to come to terms with the event. Managers could support in retrieving and analysing the documents. Court accompaniment is important.

Synonyms of support

Carry

Reinforce

Help

Aid

Keep up.

Encouraging

Approving

Back

Attributes of support

From the attributes of the concept, which are encouragement, comfort, and defence. The researcher raised the theoretical definition of the concept as follows:

Support is a process of bearing the weight of something or giving encouragement to someone because you want them to succeed.

Uses of concept 'support' in this study

The researcher's meaning of support of midwives is that they need to be encouraged in their improper working conditions in public hospitals rather than being punished or blamed for events that occur beyond the measures of their capability as indicated by:

'The security in this unit is not taken seriously, doors are not locked babies can be easily stolen, and we as staff are also not safe nowadays nurses are being attacked and killed look at the Tembisa and Bara hospitals issues where nurses were killed and raped, it is easy to enter into the hospital with these securities armed with knobkerries (a small stick with a head or knob at the end) our lives are at stake too, we get no support from management, if anything happens it will be unfortunate' ***(Participant 14).***

In this case, the respondent expressed emotional feelings of fear in a work environment indicating the lack of safety, and afraid of being attacked at work, as it happened in other facilities showing poor security and support. It is important to involve midwives in decision-making, as challenges that are encountered could be pointed out during meetings for support by management. Therefore, it was found that involvement and application models that can

improve the quality of care and increase midwife support can improve positive outcomes (Thornton 2013).

6.5 Determining the Defining Attributes

The attributes of a concept are seen as the heart of the concept analysis. Attributes according to Walker and Avant (2018), are the features of a concept as they appear repeatedly in the analysed concept. The researcher chose more than one meaning and continued analysing concepts through different connotations (Walker & Avant 2013). In this study, the researcher acknowledged attributes through literature control and multiple search engines before expressing or categorising such concepts that appear frequently throughout the analysis process. Identified characteristics of supporting midwives experiencing AEs in OUs, which were found repeatedly are midwife support. Characteristics of support include caring, encouraging, assisting, approving, and reinforcing. For midwives, characteristics would be midwifery, midwifery-led care, caring, professional practice, and advocacy defined as follows:

Midwifery: A specialised training course conducted by a regulatory body to assist women from the intrapartum stage to the postnatal stage.

Midwifery-led care: A practice that is led by midwives only catering to low-risk pregnant women (Fikre, Gubbels & Teklesilasie 2023).

Caring: the ability to provide companionship, kindness, empathy, to be friendly to someone, or to recognise other's needs and feelings (Oxford Dictionary 2021).

Professional practice -would mean how registered nurses collaborate, communicate, and develop professionally to provide the highest quality care for those served by the organisation (SANC).

Advocacy is the act that speaks in favour of or recommends something (Cambridge Dictionary).

In this study, the researcher chose midwifery care as a paradigm case for the taxonomy of the fact that it affects millions of women, neonates, and families every year. It is a field, which

debates around the risks and benefits of risk aversion for the well-being of mothers and their baby's existence (Chervenak, McCullough, Brent, et al. 2013).

6.6 Identifying the Model Case

The model case describes a real-life example, literature, or from the researcher's ideas and all of the critical attributes of the concept. A model case can be constructed from a real-life situation, literature, or the researcher's ideas (Walker & Avant 2018). Walker and Avant (2018) advocate that the model case is one in, which the analyst can agree, which allows them to state, '*if this is not X, then nothing is'*. In addition, the model case may be constructed by the researcher or maybe actual case examples from real life. Walker and Avant (2018) point out that it is always advisable to identify a model case as an example of the concept usage demonstrating all the defining attributes. In this study, the researcher developed one or more model cases that signify a real-life example of the use of the concept that includes all the critical attributes of the concept (Walker & Avant 2018). An example of contrasting the model case:

'As a shift leader, every responsibility lies upon your shoulders during a working shift because you have Advanced midwifery, you are expected to have answers for everything when an AE occurs you are the first to answer not being considered that you worked with newly qualified inexperienced midwives. When an incident happens everything is upon you, mentally and physically you are tired as you have to be alert all the time, you have your work and you need to check junior midwives and mothers all the time. You are to be in charge of a ward without being appreciated, I mean no remuneration for it.' **Participant 13.**

In this case, the midwife expresses emotional frustration due to lack of support, which is brought about by a lack of appreciation even when working with newly qualified inexperienced midwives in a busy ward, which rests the whole responsibility on the midwife. Support of the midwife by providing resources, and better remuneration for the speciality of courses can ease the frustration of midwives and increase better care towards patients.

'*A midwife goes to receive a Caesarean section baby in the theatre alone without the presence of a paediatrician with an indication of foetal distress you have to come running from the theatre to resuscitate the baby in the ward I don't know if they are afraid of the paediatricians you are told to observe the baby instead of taking the baby straight to neonatal*

ICU if the baby dies, it is your responsibility. Working conditions here are just not suitable remember you are not an ICU nurse yet you have to do all these I am not happy I need a better working place. Even after hours I mean after 16h00 you struggle to get a Dr to come to check on a baby, we work by God's grace our epaulets are hanging in the air ka nnete (meaning truth)' **Participant 9**

In this extract, the midwives are exposed to a risk of an AE in case any medicolegal event can happen because the midwife takes the sole responsibility of a distressed neonate where a paediatrician is supposed to be available but because of the shortage of medical staff, the midwife risks her profession receiving a high-risk baby not even protected by her Scope of practice. Midwives lack resources as they have to run to another ward to resuscitate a baby from a theatre that does not have adequate equipment. Midwives are frustrated by poor management support as it is a norm to struggle to find a doctor after hours, midwives experience fear at the selected facilities as their complaints are not being escalated.

6.7 Identify Borderline related, contrary invented, and illegitimate cases

Walker and Avant (2018) argue that analysis cannot be completed until there are no overlapping attributes and no contradictions between the defining attributes and the model case. The model case is divided into contrast additional cases, borderline related, contrary, invented, and illegitimate cases. According to Walker and Avant (2018), contrary cases are the direct opposite of a model case. The model case demonstrates all of the defining attributes of the concept while the borderline case includes some, defining attributes, that articulate the concept's meaning. Illegitimate cases are those where the concept is used unsuitably or out of context (Cronin, Ryan, & Coughlan 2010). The borderline case includes some, but not all, of the defining attributes.

In the examples of the chapters that follow, in each borderline case each of the defining attributes that is present is identified in parentheses. Walker and Avant (2018) further state that invented cases are those that are constructed using ideas outside researchers' own experience. Authors have further indicated that invented cases are useful when examining a similar concept that is common to get a real picture of a concept (Walker & Avant 2018). Walker and Avant defined illegitimate cases as those that give an example of a concept term used

improperly or out of context. In addition, researchers Walker and Avant (2018) have further shown that these cases are useful when the researcher comes across with meaning that differs completely from others. In this study, once the model cases have been constructed, the researcher will compare the defining attributes, decide, which characteristics or attributes additional cases will be used for the concept of interest, and finally identify attributes that influence the model case to be stronger (Walker & Avant 2018).

Public hospitals are not properly maintained due to overcrowding, giving rise to occupational hazards, which affect healthcare personnel and pose a risk of infection. Poor maintenance is associated with a lack of resources. Public finances from the treasury cannot cater to the number of patients admitted to the facilities. As such, one of the participants reported that sometimes there was no water and electricity in the ward and the environment was not conducive for patients and the staff. Shortage of staff is the main concern leading to practices that instill fear of even losing their profession.

Example of A Contrary Model Case

'*A midwife goes to receive a Caesarean section baby in the theatre alone without the presence of a paediatrician with an indication of foetal distress you have to come running from the theatre to resuscitate the baby in the ward I don't know if they are afraid of the paediatricians you are told to observe the baby instead of taking the baby straight to neonatal ICU if the baby dies, it is your responsibility. Working conditions here are just not suitable remember you are not an ICU nurse yet you have to do all these I am not happy I need a better working place. Even after hours I mean after 16h00 you struggle to get a Dr to come to check on a baby, we work by God's grace our epaulets are hanging in the air ka nnete (meaning truth)'* **Participant 9.**

In this case, the midwife expresses her disappointment and fear at the occurrences that are illegitimate or against her scope of practice because of practices that occur due to challenges encountered at a facility, shortage of staff, and poor application of policies. The related cases are cases that are related to the concept but do not necessarily include the defining attributes. Related cases may include some of the defining attributes, but also may include some attributes that are commonly mistaken for the defining attributes of the concept.

6.8 Identifying Antecedents and Consequences

Antecedents are defined as the events that preceded the identified concept (Walker & Avant 2018), and consequences are regarded as the outcomes of the studied concepts.

6.8.1.1 Antecedents

Antecedents are those factors, derived from the literature, that precede the occurrence of the concept (Walker & Avant 2018). Antecedents are seen as the 'triggers' of the concept events that must occur before the occurrence of the concept. Antecedents may be related to emotional, psychological, or lack of material or human resources in a setting. Antecedents helped the researcher to identify the underlying assumptions about concepts of supporting midwives experiencing AEs. Certain antecedents must be in place to provide support to midwives who experienced AEs, these are listed below:

Implementation of policies, guidelines, and standards of care.
Established open lines of communication between midwives and managers.
Involvement of midwives in decision-making.
Recognition of all staff members.
Equal opportunities at facilities.
Provision of resources both human and material.
Provision of a conducive environment.
Provision of support to midwives.
Provision of a safe and secure work environment.
Remuneration of specialised courses.
Training of staff.

6.8.1.2 Consequences of 'Support of Midwives Experiencing AEs

Consequences are the outcomes that occur because of the occurrence of the concept. The consequences are also derived from the literature and represent those factors that result from the concept. In this step, the researcher used consequences to neglect the support of midwives, lack of resources poor leadership skills, and relationships that may direct new research fruitfully (Walker & Avant 2018). In this study, the researcher identified predisposing

factors contributing to poor 'support of midwives experiencing AEs' as illustrated in Table 5.2. The consequences of improved support, are listed below:

Improved quality patient care.
Improved support of midwives.
Adequate resources both human and material.
Open clear lines of communication.
Safe and good working environment.
Support.
Improved morale of midwives.
Fewer litigations.
Work ethics relationships.

6.8.2 Define Empirical Referents

Empirical referents are defined as actual categories of phenomena that present or demonstrate the existence of a concept (Walker & Avant 2018). Empirical referents are needed to make abstract concepts to be measurable. In addition, the model of supporting midwives implies that quality care will improve and midwives will be emotionally stable. When midwives are supported by managers even if they experience AEs, this will alleviate anxiety and emotional distress. For the support to be effective and efficient, the process should be practically emphasized within the OUs. Therefore, empirical referents of support of midwives in public hospitals of Tshwane in this study are:

Recognition of midwives.
Provision of resources.
Implementation of policies and guidelines.
Involvement in decision-making.
Equal opportunities-no favouritism.
Provision of midwives' support.
Conducive working environment.
Good working ethics relationship.
Good leadership skills.

From these selected concepts, the results of concept analysis helped the researcher to develop a conceptual model with guidelines. Walker and Avant (2018) indicated that referents were of importance once identified as they operationalise concepts of interest in a study and are beneficial in instrument development. Based on this information of concept analysis, the researcher developed a conceptual model with guidelines integrated with the model of King's Theory of Goal attainment to measure empirical referents.

Each of these referents will be integrated within King's Theory of Goal Attainment (2006) to measure identified concepts. From these selected concepts, the results of concept analysis helped the researcher to develop a conceptual model with guidelines.
A summary of terms used in this chapter is in Table 6.2 below

Table 6.2.: Terms, attributes, uses, antecedents, and consequences of supporting midwives in AEs

<table>
<tr><th>Terms</th><th>Attributes</th><th>Uses</th><th>Antecedents</th><th>Consequences</th></tr>
<tr><td rowspan="4">Supporting midwives</td><td>Support</td><td>Managers giving emotional support to midwives experiencing AEs to deliver quality patient care to mothers</td><td rowspan="5"><u>Supporting midwives in the AE process</u>

<u>Phase One</u>- conduct a situational analysis

<u>Phase Two</u>- develop collaborative strategies to support midwives

<u>Phase Three</u>- implement developed support strategies</td><td rowspan="5">Open lines of communication involving midwives in decision-making

Emotional support of midwives during AEs

Provision of resources for better care of mothers

Fewer litigations of facilities

Boosting morale of midwives
Empowered knowledgeable</td></tr>
<tr><td></td><td>Motivating and empowering midwives to recognise their strengths and weaknesses in their role of providing care</td></tr>
<tr><td>Midwife</td><td>Midwifery</td><td>Specific nursing care done through training</td></tr>
<tr><td></td><td>Midwifery led-care</td><td>Care rendered by midwives only for low risk pregnancies</td></tr>
<tr><td>Adverse event</td><td>Medical side effects</td><td>Unintended symptoms, circumstances arising from care of unsafe acts</td></tr>
</table>

				midwives in dealing with AEs
Adverse	Prevent	Prevent success towards a development Harmful or conflicting outcome Unfavourable situation that causes troubled or inauspicious situation		Recognised and acknowledged midwives Improved mutual trusting relationship between midwives and managers
Event	Occurrence	Anything that happens or takes place Planned occasion or episode/occurrence Occurrence of importance frequently following antecedents		

6.9 Conclusion

Chapter six deliberated on concept analysis which used the eight steps in the Walker and Avant method. This chapter explains and distinguishes the definition of the selected concept of 'supporting midwives experiencing AEs in OUs.' These concepts were defined using various sources which gave clarity on the support of midwives based on the model that will be initiated to improve support of midwives experiencing AEs. The next chapter emphases on model development.

CHAPTER 7

A MODEL TO SUPPORT MIDWIVES EXPERIENCING AEs

7.8 Introduction

Chapter 6 of the study described the conceptualisation. This chapter focuses on the development of a model to support midwives experiencing AEs in public hospitals in the Tshwane district of the Gauteng Province. The chapter also discussed the steps adopted during model development, ending with model validation in Chapter 8.

7.2 Objectives of the Model

To develop a model to support midwives experiencing AEs in OUs of the Tshwane district, Gauteng Province.

7.3 Purpose of the Model

The purpose of the conceptual model is to support midwives who experience AEs in public hospitals of the Tshwane district. The conceptual model was developed after the researcher explored the experiences as well as the support offered by managers to midwives. Secondly, the model was developed to establish recommendations that could be made to support midwives. The implementation of developed guidelines from the model would assist in the improvement of quality care and support of midwives in the Tshwane district. Implementation of policies and open lines of communication would improve interrelations between midwives and their managers, providing a conducive working environment for staff and continuous support in times of need. In this study, the development of the model was achieved by aligning the main concepts from the study findings and the application of King's Goal Attainment theory within the healthcare setting and the Dickoff et al. (1968) cited by Meleis (2012) as a basis to form a theoretical framework. The theoretical framework is applied illustrated below (figure 7.1).

7.4 Theoretical Framework

A theoretical framework, according to Chinn and Kramer (2018), is a grouping of related concepts relevant to a complex situation. In this study, a model to support midwives after

experiencing AEs in an OU of a public hospital was developed. Its foundation was based on King's Theory of Goal Attainment of Human Behaviour, which has three interacting systems namely: personal, interpersonal, and social interaction (1989).

King's theory focuses on the interpersonal relationship, which indicates that concepts are interrelated and could be used across systems to identify the essence of nursing, general systems orientation, and expand the concepts. King's theory specifically addresses how nurses interact with their patients. These concepts, which are widely used in nursing today (Alligood 2013; Bond et al. 2011; Sieloff et al.2007), are of significance because they indicate the following:

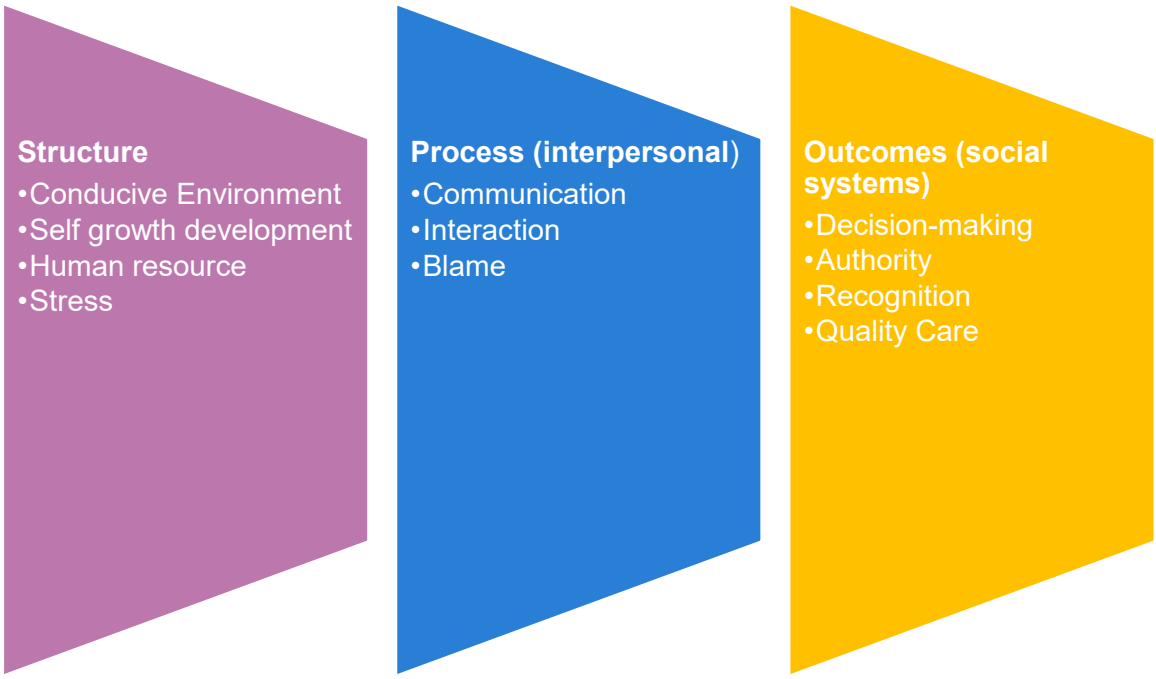

Figure 7.1: Kings Conceptual System Components (King 2006)

- **Structure component (Personal)**

The concepts for the personal system are a conducive environment, self-growth development, and human resources. Lack of appropriate knowledge and skills among midwives increases the chances of poor-quality care, which prompts AEs. As such, the training of midwives plays an important role in delivering quality care. A conducive environment with resources allows the midwife to perform her duties diligently and gain expertise. A study that alluded to the importance of the empowerment of nurses by Mutshatshi, Mothiba, and Malema (2022) confirmed that regular in-service training of nurses improves quality care, contributing to the self-growth of the midwife. Human resources in this study would be involved in assisting in recruiting midwives to curb the shortage of midwives. The results of the study highlighted that

midwives needed support from managers suggesting study leave to improve their qualifications. One assumption in King's goal theory indicates that the focus of nursing is based on caring for a human being in an interactive environment. The environment addressed in the assumption by King's goal theory would have to be conducive for midwives to be able to render maternal health care services. In this study, the environment would mean the obstetric units where midwives render maternal health care services to women. The environment must be conducive in terms of having enough staff and the provision of training where midwives would be able to render quality maternal health care services using the acquired skills and knowledge to prevent and reduce the rate of AEs in the OUs.

- **Interpersonal concepts (Process or procedures)**

Interpersonal concepts involve processes or procedures, which are interaction, communication, transaction, role, and stress. Concepts in the interpersonal system involve the human interaction between two or more people (King 2006). In this study, interpersonal concepts refer to the interactions between the patient (mother) and the midwife, as depicted in Figure 7.1 above. However, the midwife's human interaction also involves her OPM and line manager. According to King's theory (2006), health involves dynamic life experiences with stressors in the internal and external environments. Goal attainment recommends optimum use of resources to achieve maximum potential care for daily living. In this study, the midwife experiences AEs, which stresses her in the OU and lacks the support of the OPM and line manager, as such, it was evident from the results that they are sometimes blamed for the AE. Support provided to the midwife by her OPM could encourage growth and development.

- **Social system**

Concepts in the social system refer to the outcome of the theory, which are organisation, authority, power, status, and decision-making. King’s theory of Goal Attainment derives from the personal and interpersonal systems of a process model of human interactions (Kings 2006). In this study, the decision-making bodies, which are the OPM and line managers, the Chief Executive Officer, the SANC, and the Department of Health, have the power to make decisions in cases of AEs involving the midwife as indicated in Figure 1. The initial concepts of the theory (perception, communication, interaction, transaction, self, role, and decision-making) represented the essence of nursing (King 2006). The model of human interaction defines the observable behaviours in nurse-patient interactions that lead to transactions.

Furthermore, the components of the goal attainment theory approach will guide the construction of the conceptual model. As previously stated, the concepts in the theoretical framework guiding this study were integrated with the associated concepts from the classification list by Dickoff et al. (1968), cited by Meleis (2012), illustrated in Figure 7.2. The classification list is also referred to as components of the model.

7.5 Components of Model Structure

According to Dickoff et al. (1968), a conceptual framework is used to integrate the results of the concept analysis, which forms the building blocks of the model. The researcher classified concepts using the results of the current study as well as concepts selected and defined in the concept analysis. From the identified concepts, six components, as described by Dickoff et al. (1968): context, agent, recipient, dynamics, procedures or process, and the terminus were applied in the development of the module to support midwives who might experience AEs in the Ou of Tshwane district, Gauteng province.

Context

Dickhoff et al. (1968) refer to context as ‘in what context is the activity performed?’. The study context is divided into three levels, which are macro-level (National), meso-level (district hospital), and micro-level (OUs). The context is the optimal midwifery practice setting, where the study took place, and it refers to a natural setting of OUs of public hospitals in the Tshwane district, Gauteng province. The macro-level context of this study is the National Department of Health under the Minister of Health in terms of Section 35 of the National Health Act 2003 (Act No. 61 of 2003), responsible for the budgets of the health department. The meso-level, which are the district hospitals, are categorised into small, medium, and large district hospitals. These are classified according to the number of beds in their settings. A district hospital must serve a defined population within a health district and support primary health care, providing care on a 24-hour basis to obstetrics, gynaecology, internal medicine, general surgery, and paediatrics.

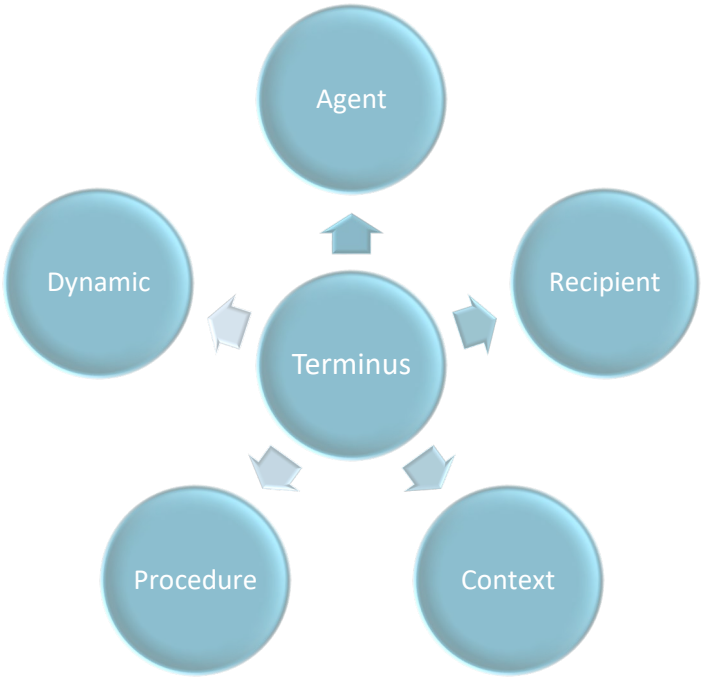

Figure 7.2: Dickoff's Classification List

Agent

Dickoff et al. (1968) refer to the agent as the person (structure), according to King's theory of goal attainment (2006), who is performing the activity. In this study, the agent refers to the managers who are experts in the field of midwifery and the managers of the hospitals, like the CEOs who are managing or in charge of the setting.

Recipient

Dickhoff et al. (1968) refer to the recipient as 'who or what is the recipient of the activity. In this study, the midwives are the main recipients of support from the 'agents' as they deliver quality care to the secondary recipients, the mothers. The term 'midwife' refers to a 'person registered under section 31 of the Nursing Act, who supports, cares for, and treats a health care user to achieve or maintain health where this is not possible' (Nursing Act No 33 of 2005).

Dynamics

According to Meleis (2012), dynamics are the driving activities or factors that drive people to react in a manner that they influence each other in a setting. Dynamics refer to the foundation that drives the activities of the study (Dickoff et al.1968).

Procedures

Dickoff et al. (1968 cited Ngunyulu 2012; Malesela 2016; Phiri, Madalane, & Chetty 2017), a procedure is the guiding technique of the activity. These researchers concur that the 'procedure' does not determine the activities in detail but offers guidance on how the activity should be performed (Dickoff et al. 1968). The procedure safeguards the agent, recipient, and context in that it provides knowledge, and therefore, comprehensive support is attained (Dickoff et al. 1968). Dickoff et al. (1968) state that the procedure refers to the trial and stages needed to achieve the objective. The procedure in the context of the 'supporting midwives in AEs' model refers to the 'process' that will guide the agent to support the recipients, which will be discussed in conjunction with the component of the theoretical framework guiding this study. The types of support included are psychological support, informational or institutional support, empowerment (training) support, provision of resources, and litigation support (figure 7.7). In this research, the procedure had the duty of providing support to the midwives who needed the support of the managers after experiencing AEs in the selected setting.

Terminus

Terminus refers to a stop or station at the end (World Book Dictionary:2020). It refers to the situation produced at the end of the process, an activity that brings about a feeling of satisfaction. In this study, the final aspect of Dickoff et al. (1968) integrates the support of the agents to recipients as they will be supported. If midwives are supported, there could be fewer litigations, NDoH could save money and use it for service delivery. In OUs with reduced litigations, Sustainable Developmental Goals (SDG) 4 and 5 will be achieved. In this study, the terminus is improved quality of care, support and recognition of midwives, fewer litigations, the commitment of midwives, and open lines of communication within the context of the research process.

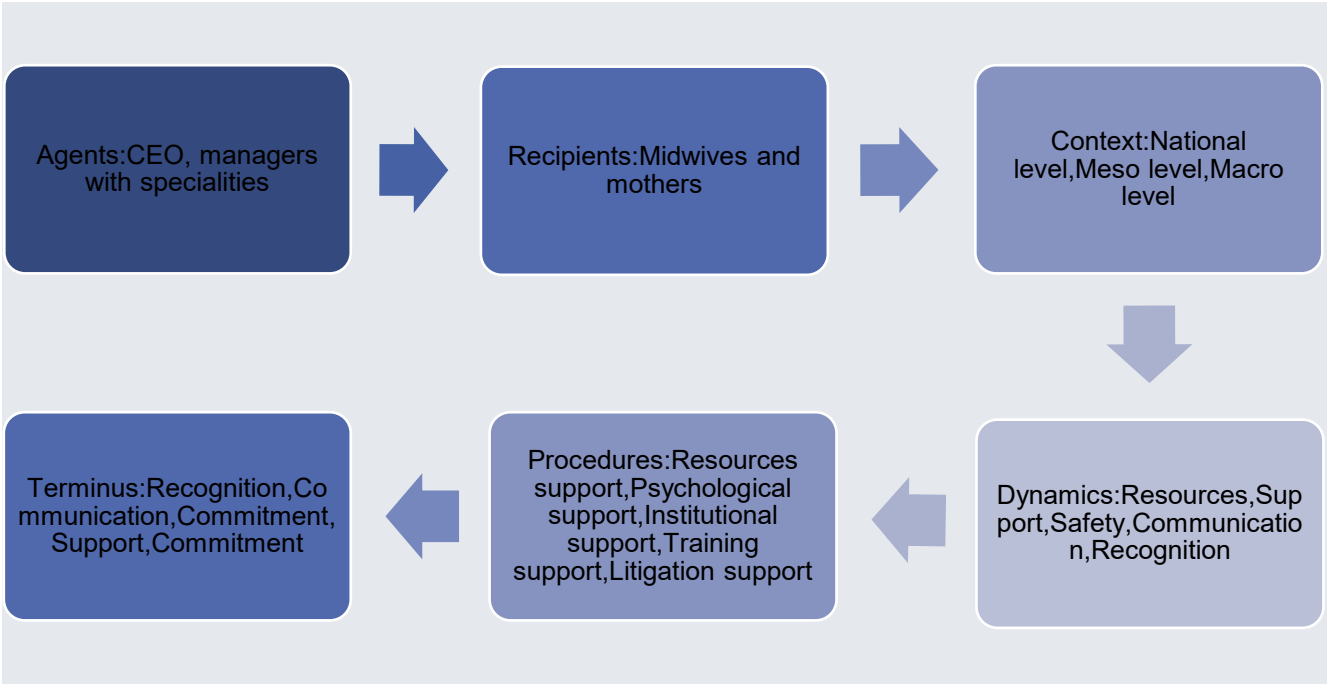

Figure 7.3: Main Concepts classified using Dickoff's List (1968)

7.6 Development of a Model to Support Midwives Experiencing AEs

The purpose of the model is indicated in Figure 7.2, and in this section, the researchers explained the nature and relationship of the model, the description of the model, the components used in the development of the model, and guidelines for how the model can be implemented.

7.6.1 The Nature of Relationships in the Model

According to Dickoff et al. (1968), the conceptual framework is used to integrate the results of the concept analysis, which forms the building blocks of the model. The researcher classified concepts using the results of the current study, as well as concepts selected and defined in the concept analysis integrating with King's Theory of Goal Attainment indicated in Figure 7.1.

7.6.2 Description of the Structure of the Model

From the identified concepts, six components, as described by Dickoff et al. (1968): context, agent, recipient, dynamics, procedures or process, and terminus (Figure 7.3) were applied in the development of the module to support midwives who might experience AEs in the OUs of Tshwane district, Gauteng province.

7.6.2.1 Context of the Study

The context refers to the hospital setting environment, in particular the OUs in this study. The study context is divided into three levels, which are macro-level (National), meso-level (district hospital), and micro-level (OUs). The variables considered in this context are between the agent and the participant, which are namely: a conducive environment, resources, availability of support and training, equal opportunities, and recognition. The context is the optimal midwifery practice environment situation, in which the study took place, and it refers to a natural setting of OUs of public hospitals in the Tshwane district of Gauteng province. Dickhoff et al. (1968) refer to the context as the area where the activity was performed.

Macro context

The macro level refers to the national level and its contexts, including the legal, political, and professional framework, encompassing various legislations that guide the healthcare system. The WHO, NDoH of South Africa, and SANC Scope of Practice control the practice environment for quality care to mothers. There are also Patients' Rights Charters, Batho Pele Principles, National Core Standards, and Millennium Developmental Goals (MDGs) that the midwives must adhere to as midwives are responsible, accountable, and answerable for their acts and omissions under Rule R387 of the SANC's code of conduct (SANC, 1985a). This level of context is governed by the policies of the NDoH and the rules and regulations of the SANC, including the WHO regulations. As district hospitals are public entities, they fall under the guidance of NDoH as the mother body of healthcare, as the national body is needed to provide resources to the meso level to support midwives.

Meso context

Meso context refers to the district level where national legislation and policies are executed. This context includes values of care towards the recipients and is classified as level 1 hospitals, which are obliged to provide quality midwifery services within their limited resources, performing a pivotal role in reducing maternal and perinatal mortality rates as targeted by the MDGs.

Micro context

The micro context includes OUs where care is provided. It comprises policies and guidelines. At the micro level, policies are implemented. The facilitation of supporting midwives will be facilitated at this level. The micro level consists of midwifery practitioners and mothers. The CEOs manage the public hospitals to ensure optimal midwifery practice. These cater to low, intermediate, and high-risk pregnant women in 24-hour delivery services. The public hospitals in the level 1 category are found to be overburdened and resource-limited based on the existing evidence. Numeric data outlined by the statistician with meaning known by respondents in their specific environment indicated a negative impact on the support of the respondents. These maternity units are expected to achieve within constrained resources, significant improvements in the quality and continuity of care as required by government policy. Therefore, based on the existing evidence, the nature of the midwifery practice environment in these public hospitals was found to be sub-optimal with litigations and yielded a negative impact on the support of midwives by management during AEs. Furthermore, the context of the model includes the guidelines, laws, policies, principles, protocols, regulations, and standards formulated by the governance nationally and internationally, which the midwives must tolerate. Figure 7.4 below depicts the context of the study.

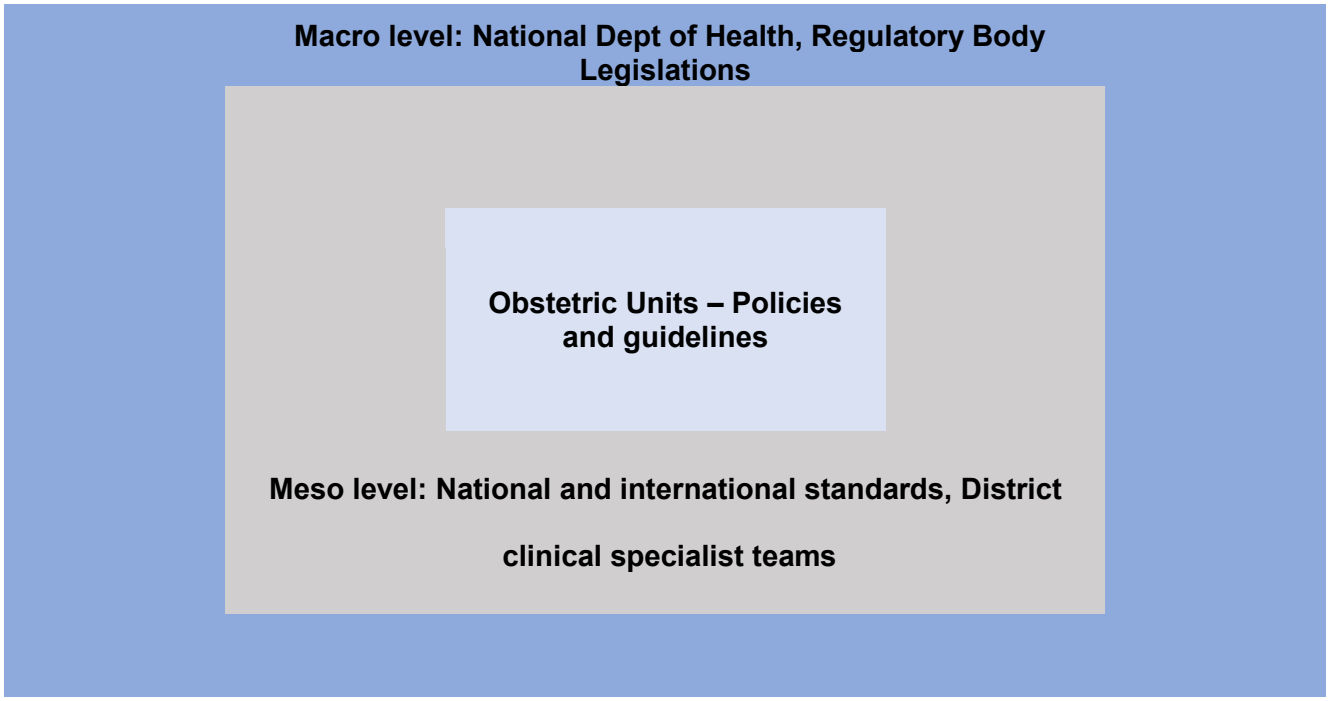

Figure7.4: Context of the Study

7.6.2.2 Agent to Support Model

Dickoff et al. (1968) refer to the agent as the person (structure), according to King's theory of goal attainment (2006), who is performing the activity in the field. They are qualified as advanced midwives and knowledgeable in the management of obstetric conditions, the unit, and resources (human, material, and financial) in Ous. They are responsible for the provision of a conducive environment whereby they provide midwives with guidelines, protocols, policies, and procedures. They are responsible for the process of interpersonal relationships by communicating and orientating midwives on how policies, protocols, and guidelines are implemented as such, they ensure that quality maternal health care services are provided all the time. They monitor, supervise, and evaluate the care given by midwives to patients. They are responsible for assessing and evaluating the occurrences happening in the unit. In the case of AEs, they have to decide whether the incident is minor or severe and have the authority to decide about the event, though sometimes midwives are blamed for the occurrence (Figure 7.1) agents are persons who perform activities or different designated towards attaining a goal (Malesela 2016). Figure 7.5 depicts the agent.

Figure 7.5: Agents as Managers

7.6.2.3 Recipient of Support Model

Who is the recipient of the activity?

The Longman Dictionary of Contemporary English (2003) defines a recipient as someone who receives something. The recipient is the person who is receiving the activity. The recipient of the activity receives the prescription of the activity from the agent to bring about a desired outcome (Dickoff et al. 1968). In this study, the recipients would be midwives working in the obstetric units of the three selected public hospitals of Tshwane district hospitals. The midwives

are guided by SANC so that they are accountable for their actions and omissions and do not put the lives of mothers in danger. A recipient is a midwifery practitioner who is responsible for self-growth and development, a clinician, who is competent, an expert in midwifery who is skilled in providing care to mothers. They are obliged to give quality midwifery care by applying guidelines, and protocols provided by managers during the management of pregnant women from intrapartum to post-partum stages. They interact with managers and mothers when delivering maternal health care services in OUs although sometimes the condition they operate in is not conducive. As discovered, midwives sometimes experience a shortage of resources, are overworked, stressed by the unfavourable conditions they operate in. Sometimes they come across AEs unexpectedly. Some indicated that they are guided by managers on the completion of AE forms, although some indicated that such processes were not clear. Participants indicated that they are not supported if an event occurs as such, they are blamed. Regardless, Mokgothu, Du Plessis, and Koen (2015) indicated the NDoH utilises internal strengths in supporting midwives who render care to mothers. Furthermore, managers should acknowledge the strengths and challenges of midwives to ensure that they render appropriate support to them when needed. In this model, the primary recipients who are midwives would benefit from the action, which is support which is depicted by Figure 7.6 below:

Figure 7.6: Recipients as Midwives

7.6.2.4 Phase 1: Dynamics of Support Model

According to Meleis (2012), dynamics means the driving activities or factors that drive people to react in a manner that they influence each other in a setting. Dynamics refer to the foundation that drives the activities study (Dickoff et al. 1968). Evidence from the respondents indicated limited material and human resources and poor support by management. In this study, the identified concepts indicate managers as agents who must ensure the delivery of quality within the obstetric unit. The midwives are the recipients of the activity, which are the processes (guidelines, policies) provided by the managers. Dynamics in this study would mean the power

sources for an activity that motivates goal relationship, necessary for the procedure to be implemented. The dynamics of this study will involve

- Poor communication: between management and midwives on matters that involve them rather than decisions taken on their behalf without their input or suggestions. Participants should be given a platform to raise their concerns
- Lack of recognition: In a workplace, recognition plays a role in motivating staff and boosting morale to perform the activities required. Motivated staff in this study can assist in reducing AEs as psychological and emotional stability would be at hand and support rendered. Participants' grievances of lack of recognition of their qualifications should be considered to motivate participants.
- Poor support -ongoing support of participants based on training on identification of incidents, writing reports, emotional, psychological, and litigation support when AEs occur is of importance to midwives showing support by management.
- Lack of resources: The provision of human and material resources in obstetric units supports midwives as they would not be overworked as indicated during data collection. Midwives would not have to compromise in delivering quality care due to a lack of resources which could end up with AEs because of poor care.
- Unconducive environment: A conducive and safe environment indicates caring by management. The lack of a safe protected environment in OUs is a risk for the occurrence of AEs as highlighted by participants during interviews.

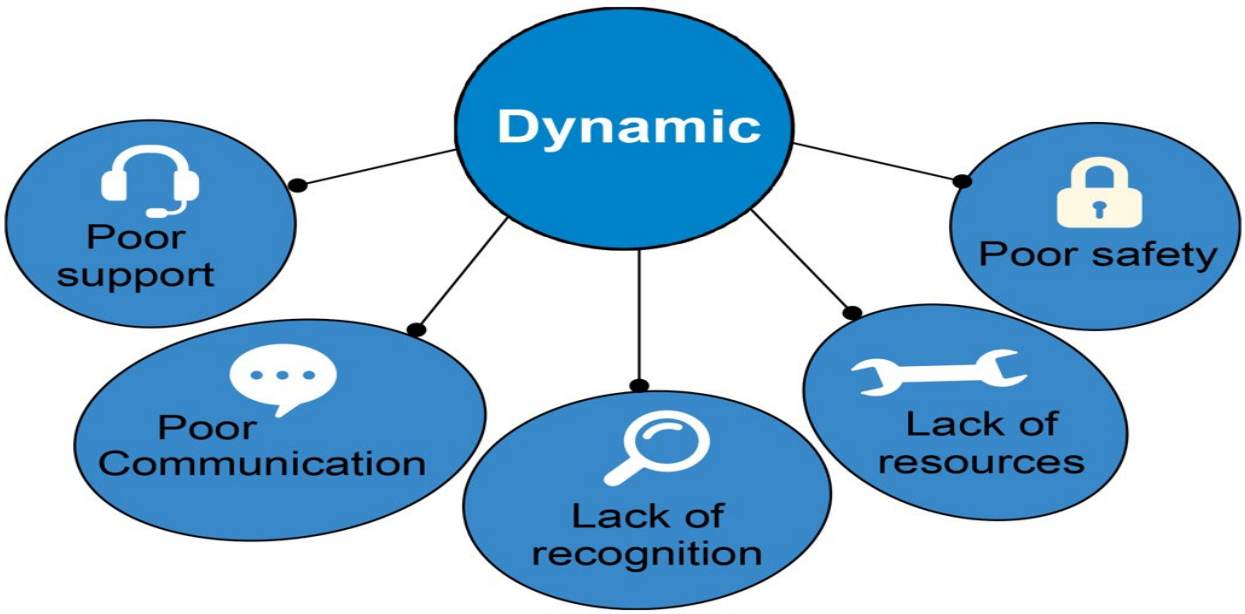

Figure 7.7: Dynamics of the Social Support of the Study

7.6.2.5 Phase 2: Procedure of Support Model

According to Dickoff et al. (1968 cited in Maputle 2010; Ngunyulu 2012; Malesela 2016; Phiri et al. 2017), these researchers concur with the 'procedure' guidance on how the activity should be performed. In the procedure context, therefore, comprehensive support is attained (Dickoff et al. 1968), state trial, and stages needed to achieve the objective. The procedure in the context of the 'supporting midwives in AEs' model refers to the 'process' that will guide the agent to support the recipients, which was discussed in conjunction with a component of the theoretical framework guiding this study. The types of support included are psychological support, informational or institutional support, empowerment (training) support, provision of resources, and litigation support (Figure 7.8).

With psychological support, this type of support involves counselling, offering of therapeutic environment, recognition of recipients' needs, and provision of follow-up. If an AE happens, the managers as agents must ensure that they offer counselling to midwives as a form of support so that they come to terms with the event. There is a need to assess if the environment will still be therapeutic for them and if they will be able to carry out their daily activities in the same unit or if there is a need to move them to another unit to ensure that they continue to provide care to patients.

A work environment that is safe for agents and recipients provides emotional, physical, and mental well-being helping them to improve communication skills. A therapeutic environment assists the recipient in making healthier choices and having coping strategies to manage distress in a work environment. Agents must recognize the recipients in need. In this research, recipients previously mentioned how they were not recognised for their extra qualification of Advanced midwifery.

Lack of recognition demoralised them, which affected the delivery of quality care. Henderson, Schoonbeek, and Auditore (2013) postulate that nurses should be recognised, empowered, and appropriately rewarded for their contribution to the work context. The researcher thought that once components of the model are identified consensus would be reached and recognition be considered to boost the morale of the agents. The midwives, as recipients, must be given time out of the workplace while continuing to attend counselling

services from psychologists, family members, and colleagues who can offer support to facilitate the healing process.

Informational or institutional support

This type of support involves lines of communication and reporting, assessment of incidents, and provision of a conducive environment, as also stipulated in the theoretical frame in Figure 7.1. Communication refers to giving information through speaking or writing, exchanging meaningful words or human actions (Oxford Dictionary 2013). Communication plays a major role in a work environment. The agent must communicate with the recipients so that they understand the gravity or severity of the AE; the recipient must know how to assess the situation for severity. The manager (OPM) of the OUs must also know the processes involved in the case of an AE. Because she is in an authoritative position, she must assess the AE, and decide whether it is minor, moderate, or severe.

The agent, who is a manager, must follow the lines of communication and report the event within the stipulated time following PSI policy. This policy must be made known to all the staff under their care so that they know what to do in case of an AE. The agent must provide a conducive environment for the recipient involved in an AE, for example, counseling, which was stated above. The incident form must be provided, and training must be offered for the recipient to complete all the steps thoroughly. The agent must report the incident and forward all the completed forms to the quality assurance office as stipulated in the adverse events policy. This will be followed by reporting the incident to the district office to prepare in case the family can take legal steps against the hospital and the recipient. The agent also has a duty and responsibility to visit the family involved in an AE to support and learn what they intend to do with the incident related to legal measures they might take.

Support about resources

This involves the provision of resources, in addition to the training of midwives. As also indicated under the King's conceptual system components, resources must be provided by managers to midwives so that they can render maternal health care services in a therapeutic, conducive environment. Material and human resources are to be provided in the management of pregnant women during intrapartum and post-partum periods to reduce AEs in OUs. Training support must be provided following an AE so that the same occurrence be avoided.

Litigation support

The involvement of a representative during an AE, a time off to the midwife to attend the case as well as emotional and psychological support. If a family decides to pursue a legal route, the recipient (Midwife) must be supported. They are to be advised to seek a representative who will stand for them and be their mouthpiece during the trial. Continuous psychological support and follow-ups must be provided to the recipient.

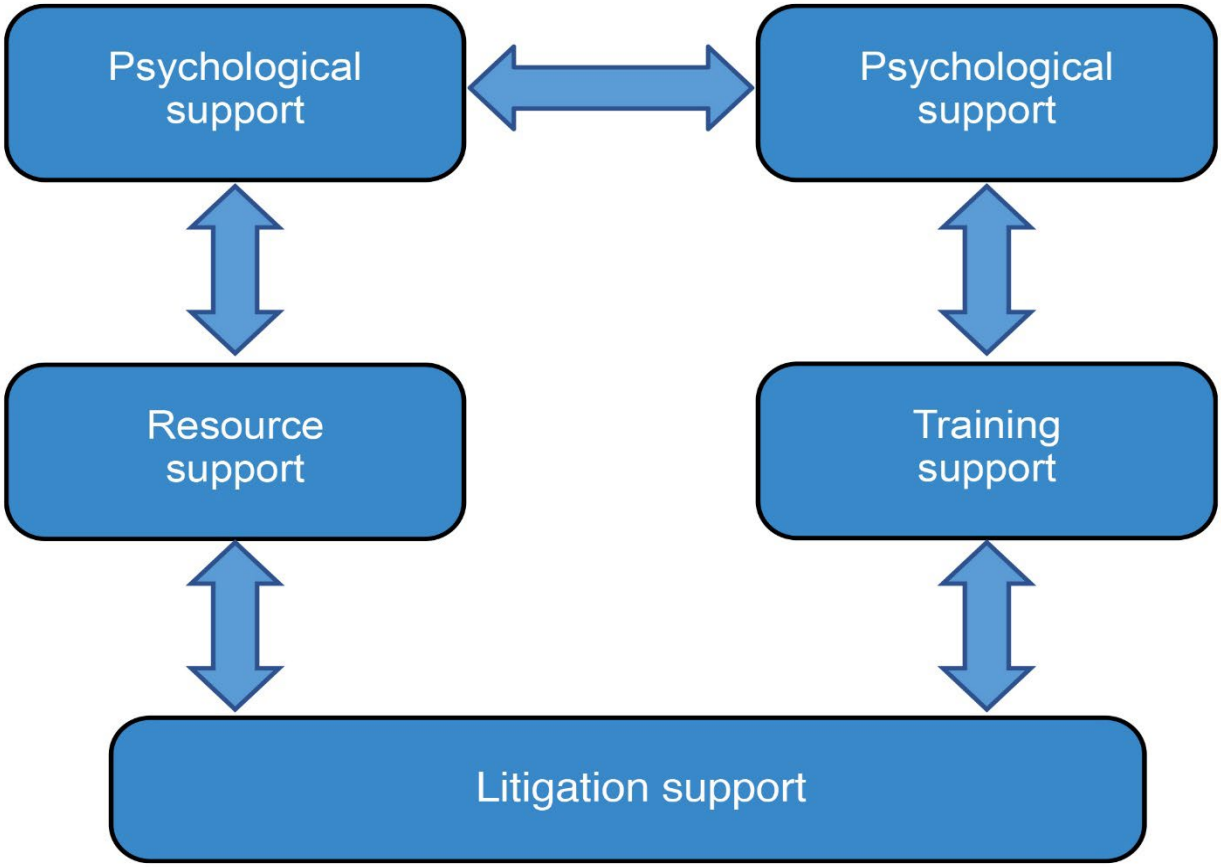

Figure 7.8: Procedure to be followed during support of midwives during AEs

7.6.2.6 Phase 3: Outcome of Support Model (Terminus)

The final phase refers to the outcome of the activity known as the terminus, also known as the endpoint. The researcher believes that the model will be utilised by the district hospitals to improve skills in supporting midwives and taking control of the situation during adverse events.

By using the model as a frame of reference, the researcher believes that it will facilitate interventions that will bring desired outputs identified during findings and empower the tool to mitigate the conditions the midwives find themselves in. The tool can bring changes in improving working conditions, health, and safety of employees in general in public hospitals. Once conditions improve, litigations would be minimal, and the shortage of human resources would improve as an exodus of midwives would be minimal.

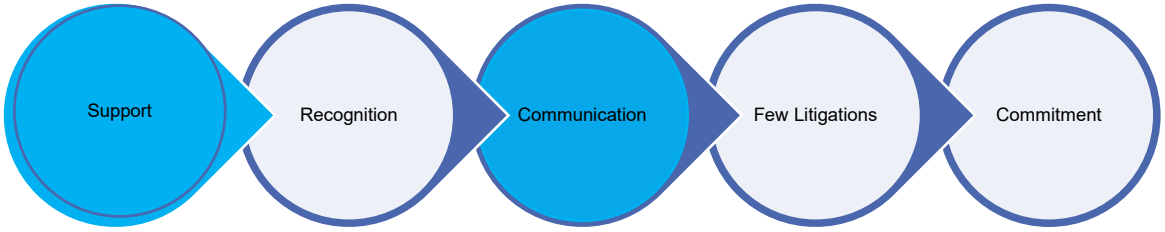

Figure 7.9: Terminus or incorporation of consequences toward a goal

Table 7.1: Process of Model Development

	Avant & Walker (2014)	Chinn & Kramer (2018)	Model development
Statement development	Statement analysis, synthesis, derivation	Generating and testing relationships	Synthesis of statement specifying relationship of statements
Concept development	Concept analysis, derivation, and synthesis	Concept meaning creation	Concept synthesis.
Model/Theory development	Theory analysis, synthesis, derivation	Application of theory	Theory synthesis expresses new sights in the phenomenon and presents a model

The process of model development, as alluded to in Table 7.1 above, conducted steps of theory generation as proposed by Walker and Avant (2014), Chinn and Kramer (2018), and Dickoff, James, and Wiedenbach (1968). These steps are concept synthesis, statement synthesis, and theory synthesis (presented as a model).

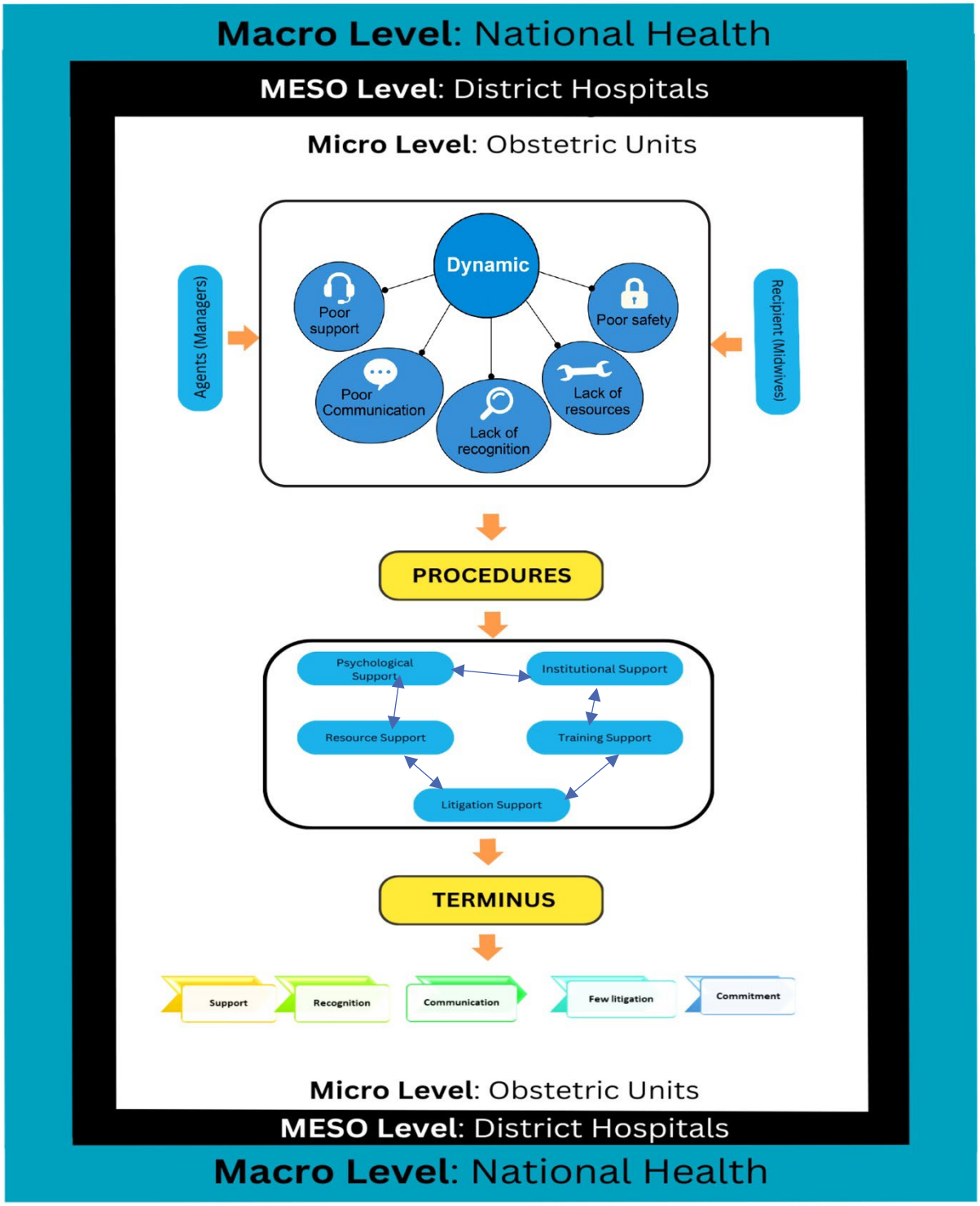

Figure 7.10: Model to support midwives.

A model was developed with the assumption that if adopted it will alleviate the challenges faced by midwives as it will be a point of reference for support by management in district hospitals of Tshwane. Once adopted, the model would contribute towards improving the relationship between management and midwives in a working situation. The primary assumption is that the

midwives and management together can improve the working situation through communication and assessing the conditions continuously towards a common goal. The researcher believes that for midwives to function optimally, the environment must be conducive as they work in overpopulated areas. The researcher has established through this study that midwives can function optimally rendering quality care when their challenges are attended to under the formulated guidelines.

7.7 Guidelines to Operationalise the Model

Chinn and Kramer (2018), indicate submission of the model as the final step in model development. Application of the model entails formulating guidelines to describe how the model will be operationalised in the practical area (maternity units). The guidelines were formulated following the components of the model and indicated a detailed description of how each level must operationalise it, i.e., (meso, macro, and micro levels). Once implemented, the guidelines would assist the managers and the midwives in achieving the goals of the institution by providing quality care and reaching the set objectives. The suggestions of the midwives would be taken into consideration. Midwives who experienced AEs would be supported and be able to stay at their workplace rather than resigning. The turnover rate will be reduced, the working environment will be conducive for midwives who experienced AEs, as they will be supported.

Table 7.2: Guidelines for Supporting Midwives

GUIDELINES	OBJECTIVES	STRATEGIES
Guideline 1(Macro-level) **Provision of budgets** **(Institutional support)**	Objective (i) Provision of institutional support to midwives with needed resources.	Allocation of funds by NDoH to public hospitals for the provision of equipment and smooth running of the facility including maintenance for a healthy environment Provision of funds will allow recruiting and replacement of staff reducing the shortage of staff. Availability of funds to increase remuneration and recognition of specialty courses of midwives, will boost morale.

		NDoH to allocate budget for provision of human resources, which includes recruitment of staff and training colleges. NDoH is responsible for building hospitals to reduce overpopulation in public hospitals that causes overworking of midwives. To establish a budgetary committee with a Chief Financial Officer accountable for finances of the setting and liaison with NDoH on monetary processes and procurement of the hospital needs as set out by NDoH guidelines. Tendering an apology to a family affected by AE on behalf of the midwife.
Guideline 2(Macro-level) **Policies and guidelines** **(Training support)**	Objective (II)Periodical monitoring of policies and procedures	To standardise policies through facilitators training at hospitals from the Health Department National according to Health Amendment Act 2013(Act 12 of 2013) To prevent and reduce harm to patients while undergoing medical care at public facilities by continuous training of staff on medico legal challenges. To standardise the degree of severity and clarification of AEs to all public hospitals through training at workshops and appointment of facilitators and Quality Assurance Committee

		To standardise the completion of Patient Safety Incidents to all hospitals.
Guideline 2 (Meso-level) **Implementation of policies** **(Institutional support)**	Objective (I)Periodical check-up and evaluation of the hospital Objective (ii) Prevention of injuries at hospital premises	Provision of health inspectors to check the omission standards and status of the facility according to Occupational Health &Safety Standards aiming at safety of midwives and patients.

Guideline 3(Micro-level) **Safety and Security measures** **(Psychological support)**	Objective (i) Provision of safety measures Objective(ii) Implementation of guidelines Objective (iii) Monitoring and evaluation of safety standards	Provision of a safe working environment for midwives who experienced AEs by doing the following: Offering support in the completion of incident report forms Offering counselling and referral to a psychologist for further support Allowing midwives time to be out of work either by completing annual leave Changing the working environment by allocating midwives to other units for a while for them to come to terms with the AE. Conduct follow-up sessions and encourage midwives to attend further counselling.
Guideline 4(Micro-level) **Resources (Human)** **(Resources support)**	Objective (i) to provide human and material resources.	Human resources to have a recruitment drive of staff. Replacement of retired staff members and those that resigned and to improve on patient-midwife ratio to reduce the shortage. Have exit interviews to evaluate their standards towards staff retention to reduce shortage of staff. Allow time for healing by allocating them in a different setting from the one that the AE occurred.

		Give midwives a chance to advocate for resources required and used by them for their support. Human resource department to have a comprehensive plan for staff performance and provide feedback on institutional matters. Observe special days for staff at the facility e.g., 'International Nurses and Midwifery Day.' Areas that need correction and weaknesses identified during data collection like having flexible shifts to reduce burnout and shortage of staff.
Resources (Material) **Resources support)**		Purposeful maintenance of equipment and proper use per manufacturer's instructions to last longer. In-service training of staff to keep up to date with new developments on new equipment to use equipment for the right purpose. Proper marking of equipment to prevent theft and Set up security measures to curb theft of equipment. Provision of functional equipment in a therapeutic environment

Guideline 5(Micro-level) **Involvement in decision-making** **(Psychological support)**	Objective (i) to encourage the effective commitment of midwives. Objective (ii) to improve performance at OUs. Objective (iii) Maintaining a bottom-up decision approach.	Improved employee performance due to teamwork To provide better quality care as they have decision making powers and involvement on their matters. Referral to psychologists after AEs when needed and a time off from work for healing purposes. Organised work performance and innovation To establish regular meetings with staff where all parties discuss challenges and solutions. To enable self -organisation, and involvement in organisational matters Midwives' involvement in meetings increases commitment and positive attitudes. Establishment of team meetings in OUs to identify challenges at an early stage. Follow up on reported matters of the unit and give feedback.

Guideline 6(Micro level) **Support through training** **(Training support)**	Objective(i) to provide training on policy guidelines. Objective(ii) to establish follow-up strategies.	Orientation of new staff members to familiarise themselves with the policies and guidelines of the hospital. Regular in-service training to keep them updated with new developments.,. Managers to provide a conducive training environment. Update or follow up on AEs that occurred and giving feedback to the team that was involved. Inservice training on filing PSI forms National Health Amendment Act,2013 (Act 12 of 2013)
Guideline 7(Micro level) **Assist during the litigation process.** **(Litigation support)**	Objective(i) Support of managers during litigation	To provide support in seeking legal representatives approved by the facility or a union member of the midwife. To check records to identify gaps in the matter being investigated. Provision of a union representative from the facility To establish psychological support for the midwife To provide time off from work to avoid the environment where the incident happened.
Guideline 8(Micro-level)	Objective (i) Open lines of communication	

Open lines of communication **(Psychological support)**	Objective(ii) Flow of communication from bottom-up and vice-versa Objective(iii) Establish open door policy	Create lines of communication for continuous engagement between midwives and managers To establish clear communication systems at the workplace by having representatives of midwives Open door policy in facilities for the flow of information with managers Distribution of policies to all OUs and acknowledgment by midwives of having read them by signatures will make it easier for follow-up on raised concerns. Regular meetings could benefit staff as their suggestions are analysed and feedback is given in meetings.
Guideline 9 (Micro-level) **Equal opportunities** **(Institutional support)**	Objective(i) To recognise midwives in the workplace Objective (ii) To motivate midwives	To create equal opportunities for all members of staff and treat them equally based on performance. To motivate midwives towards career development. To recognise and appreciate their hard work. To create teamwork among midwives to achieve institutional goals. To reduce litigations as quality care would be delivered.

		To save on NDoH finances when litigations are reduced.
Guideline 10 (Micro level) **Conducive environment** **(Institutional support)**	Objective(i) To provide a conducive working environment	To maintain a therapeutic context in, which midwives will recognise that they also have the power to make decisions. To maintain the environment in a safe and clean condition working in a clean environment was a concern of them being supported.
Guideline 11(Micro level) **Recognition** **(Institutional support)**	Objective (i) To recognise midwives	To boost the morale of midwives To adopt a culture of respect towards each other as the efforts of the midwives are recognised. To promote loyalty and ownership towards the institution

7.8 Structural Description of the Model

The model (Figure 7.10) portrays the context, which indicates the interaction of colours, indicating the support of midwives experiencing AEs. The main feature of the model is that it has a flow chart format. The steps or actions are written inside the diagrams and usually, an arrow points to the direction of flow from one step to the next. Dynamics that would facilitate the support of midwives in public hospitals of the Tshwane district, Gauteng Province, were

identified from the themes. As indicated, the procedure to support midwives was organised through psychological support and informational support. The process of implementation starts with the agents showing a single direction of influence. Once the process begins, it becomes cyclic or continuous.

The stakeholders must, therefore, apply strategies to support midwives. The pink colour of the arrows indicated toning down or feelings of comfort, warmth, and hope, including a sign of good health. From the aspect of toning down the psychological disturbances of midwives, the mothers would receive comfort, warmth, and hope of good health. The stakeholders would, therefore, take responsibility for implementing the identified concerns of the midwives. Midwives in this study are the recipients expecting the flow of support from the agents. The arrows in the model indicated the interrelations of the structures. The arrows showed the flow of support leading to the terminus. The identified dynamics would be implemented to provide support by improving clear lines of communication, improved safety, and security.

Quality patient care, involvement of midwives in decision-making, and teamwork will be achieved. Fewer litigations would occur from the communities. The terminus indicates that continuous assessment of challenges would yield better results towards quality care, teamwork, fewer litigations, and support of midwives. The powder blue colour of the structures indicates the context or environment in which the activities are taking place. The powder blue colour refers to trustworthiness, reliance, and peace. The context indicates that the respondents, once supported, would have peace and trustworthiness towards their job. The arrows indicate inspiration, stability, and intelligence. These arrows give the impression that there would be stability when the identified concepts in this study are put into place, the outcome being of working together giving the result to support, safety, recognition, resources, and open lines of communication.

7.9 Conclusion

In this Chapter, the overview of the support model, purpose, concepts, and relational statements was constructed as a frame of reference to support midwives who experience AEs in public hospitals of the Tshwane district, Gauteng province. The model was constructed using

Chinn and Kramer's (2018) and Dickoff et al. (1968) survey lists. The structural components of the model were outlined to be trailed when assessing the model. The following chapter is based on an evaluation of the model.

CHAPTER 8
VALIDATION OF THE MODEL TO SUPPORT MIDWIVES EXPERIENCING AEs IN OUS

8.1 Introduction

The previous chapter analysed the overview, purposes, relationship, structure, context, assumptions of the support model, and guidelines for the operationalisation of the model. The present chapter discusses the validation of a model that supports midwives. Validation is engaged in the stage where there is a need for evaluation of a model that guides a practice-oriented approach contributing to empirical knowledge development (Chinn & Kramer 2018; Vemer, Corro Ramos, Van Voorn, et al. 2016). The purpose of evaluating the model is to determine how well the model serves the purpose. The final step of the development of the model was to have the model evaluated by experts in the field of maternal care to identify its relevancy and effectiveness. Therefore, this chapter discusses the model validation based on the criteria offered by Chinn and Kramer (2018) (Annexure R).

8.1.1 Objective of this Phase 1

The validation, effectiveness, and relevancy of the developed model by maternal healthcare experts in obstetric units of Tshwane district, Gauteng province.

8.2 Research Methodology

The researcher described the methodology, which was used in this phase, which included the technique, design, population, sampling, data collection, and analysis.

8.3 Research Design

The Nominal Group Technique (NGT) together with quantitative and qualitative research designs were used in validating the developed model to support midwives who experienced AEs in OUs of public hospitals of Tshwane District, Gauteng province. The NGT was chosen as it allowed each participant to state their views or thoughts without being judged and allowed

for voting with the final decision being taken through consensus. In this way, the model was validated.

8.3.1 Population and Sampling

The population for this phase was all midwives and managers working in OUs of Tshwane district, Gauteng province. Purposive sampling was utilised to recruit participants, and only those who participated in the main study were selected as they were familiar with the study and were relevant for this phase. The model was validated by six midwives (with specialty and those with basic midwifery) and two managers who are experts in maternal health care services in OUs. To be included in the study, the participants had to have more than two years of experience. The participants were recruited face-to-face at their respective places of work, and invitation letters were issued to them. Therefore, experts included in this study had the required characteristics to provide relevant information regarding the validation of a model as they also participated in the main study. The rationale for selecting eight participants was based on the NGT process, as it allows 5 to 12 participants in a group (Tran, Wood, Humphrey-Murto 2021).

8.3.2 Data Collection

Data collection and data analysis processes happen simultaneously when one is using an NGT. Respondents were requested to validate a model for the support of midwives. The researcher personally recruited 12 participants to participate in the NGT session. The results of recruitment were that only eight participants were available for participation. The researcher checked their availability and recorded their contact details for further communication about the venue, date, and time of the meeting.

The researcher thanked the experts for their willingness to participate in the study. The researcher briefly presented the findings of the study and the developed model, including explaining the purpose of validating results, the main study, and the developed model a week before the date of the meeting to acquaint themselves with the model.

8.3.2.1 Stage 1: Introductory Phase

On the day of the meeting, the researcher meets with the group in one of the hospitals in the Tshwane district. A large room was prepared to accommodate ten people, eight participants,

and two facilitators. The researcher greeted the participants, and the meeting started with a short prayer. The researcher thanked the participants for consenting to participate in the study. The researcher introduced herself and the assistant, and then the participants followed. The aim of the meeting was explained, as well as the role of the researcher and the assistant. When using the NGT, participants are also referred to as researchers, this role was cleared and participants were referred to as researchers, the researcher as a facilitator, and the assistant as a scriber. Pens and papers were provided to researchers so that they utilise them during the NGT process. The facilitator explained the ethical aspects of the study, voluntary participation, and confidentiality. Researchers, as participants were told not to expect any reward and asked if they had objections or questions; all had none. Like any other methodology where participant consent is required, consent forms were signed. A summary of the background and findings of the model was explained. A flip chart and different coloured pens were made available to list the ideas by the scriber. Although it is not explicitly stated by Delbecq, Van de Ven, and Gustafson (1975), the facilitator needs to provide instructions in each stage to avoid confusion among the participants. It was at this stage that researchers were offered time to ask for clarity before validation of the model could begin. After a summary of the model, Chinn and Kramer's (2018) theory to validate the model was utilised to guide the process of validation. Participants were asked to critically reflect on the questions asked. Questions were also reflected on the board for them to remember the task they were to perform.

How clear is the model?
How simple is the model?
How general is the model?
How accessible is the model?
How important or relevant is the model?

Researchers were allowed 25 minutes to reflect on each question silently, which was now the Silent Generation. This introductory stage lasted for 15 minutes.

8.3.2.2 Stage 2: Silent Generation

At this stage, researchers were instructed to generate ideas silently and to write down their thoughts in the provided paper related to the five questions asked above.

They were discouraged from sharing their ideas. Any discussion was avoided during this stage. After the allocated time elapsed, stage three started, which was a round-robin.

8.3.2.3 Stage 3: Round Robin

At this stage, the scriber had to write the answers given by the researchers. One researcher at a time was requested by the facilitator to state a single idea at a time until the whole group had a chance to state what they thought about the five questions asked. Once participants had new ideas, they had to wait for their turn before stating the idea. During the rounding robin, new ideas developed, which were mentioned in the second round after the researchers answered the question of how simple the model is.

Researchers were asked to elaborate on their answers. This method was conducted until all the answers asked were exhausted. This step was done until no new ideas were raised. When they had no new ideas, it was realised that saturation was reached. This stage lasted for 1 hour 30 minutes.

8.3.2.4 Stage 4: Clarification and Consensus

Once saturation was reached, there was a need to clarify the ideas raised. The clarification of the ideas to validate the model was adopted through Chinn and Kramer's (2018) theory of validation. This phase ensures that participants understand the meaning of each idea, thus enabling individuals to make an informed decision to reach a consensus. At this stage, grouping of similar ideas was done, and duplicates were removed. According to Delbecq et al. (1975), at this stage, the role of the facilitator was to oversee the group to avoid arguments on raised ideas rather than discussing them. A consensus at this stage was needed on the amalgamation of similar ideas involving every researcher. Researchers had to agree that even though ideas were raised, not all of them were similar, or even be adopted as such consensus was reached. This stage was allocated 50 minutes to clarify all ideas. To confirm and validate the consensus, a Likert scale was formulated for the researchers to indicate if they agreed with the questions adopted from Chinn & Kramer (2018), the same, which were used in the silent generation, round-robin, clarity-seeking, and consensus.

8.3.2.5 Stage 5: Use of Likert Scale

All participants were encouraged to participate to make an informed decision during this stage (McMillan, Kelly, Sav, et al. 2014). The model validation instrument was developed according to the Chinn and Kramer (2018) approach. The attached questionnaire (Annexure F1) consisted of the leading questions, which required respondents to tick 'yes' or 'no' responses, and a column for remarks was also provided. Researchers were encouraged to answer all the questions and to avoid sharing.

At this stage, anonymity was observed so that the names of the researchers did not appear on the Likert scale. The facilitator provided the researchers with a questionnaire where they provided the facilitator with the answers. Researchers were allowed ten minutes to answer the questionnaire. The facilitator collected these questionnaires for data analysis, which was done at the same time. The results were announced to researchers (table 8.3). This stage lasted for 45 minutes.

At the end of the session, participants were thanked for their time and participation in the validation of the model and the meeting was again closed with a prayer. A summary of the NGT process is indicated below in Table 8.1.

Table 8.1: Description of the NGT Meeting Layout

TASK	RESPONSIBILITY	TIME
1. Introduction: Stage 1	Facilitator & Scriber	15 minutes
2.Stage2: Silent generation	All	25 minutes
3. Stage 3: Round Robin	ALL	1hour 30 minutes
4.Stage4: Clarification & Consensus	ALL	50 minutes
5. Stage 5: Scoring and reporting	ALL	40 minutes 5 minutes
Total Hours used for validation		3 hours 45 minutes

8.4 Results and Discussion

The results of the entire process of the NGT were presented below and Table 8.3 was incorporated into each of the questions and discussions.

8.4.1 Demographic Data of Participants

Eight participants were selected to form part of the validation team of the current model. All participants were Black, three with basic midwifery qualifications, three with advanced midwifery, and two managers in charge of maternal health care services at Tshwane were selected. All had an experience of more than four years.

Table 8.2: Demographic Data of Participants n=(8)

Race	Age	Level of education	Experience
Black (Midwives)	29 to 39 years = 1	Diploma = 1	4 to 11 years = 1
	40 to 49 years = 3	Adv. Mid = 3	12 to 23 years = 3
	50 and above = 2	Degree = 2	24 years and above = 2
Black (Managers)	40 to 55 years = 2	Degree = 2	15 years and above = 2
TOTAL	8	8	8

8.4.2 Results of Model Validation

Below are the results of the validation, which followed the following questions:

How clear is the model?

How simple is the model?

How general is the model?

How accessible is the model?

How important is the model?

8.4.2.1 How Clear is the model for Midwives who experienced AEs?

The clearness of the model is goal-focused, as Chinn and Kramer (2018) refer to clearness as to how well the model can be understood and how consistently ideas are abstracted. All experts in this study agreed that the support model was clear. One advanced midwife said, 'The model is graphically well portrayed and is cohesive. It contains the context, inputs, process, as well as the expected outcomes.' Another midwife added that the concepts were clearly defined and applied to the study to connect with the process. Concepts were conceptualised and classified according to Dickoff et al. (1968). One manager said: 'The structure is simple; concepts were conceptualised and classified.' Another added: 'The structure is clear, easy, and simple to follow starting from the national level, where policies of NDOH have been formulated for public health, at the district level and at OUs, where policies and acts are then implemented. The OUs are where the model will be implemented. The structure is clearly stated and the diagrams support one another.'

One advanced midwife mentioned that the model was clear because it has been divided into phases. All phases were well defined and explained, and everyone could read and understand all structures.' The researcher used the model development process, which guided the phases of the model as highlighted in Chinn and Kramer (2018), Dickoff et al. (1968), and Walker and Avant (2018). All researchers n=8 (100%) agreed that the support model was simple to follow (table 8.3).

Semantic clarity

The researcher defined concepts utilising phrases that have familiar connotations within the health profession, to provide a meaningful understanding of the theory. A clear, well-written definition was important for the interpretation and understanding of the concepts used (Chinn & Kramer 2018).

Semantic consistency

Semantic consistency ensures that concepts are used accurately. The researcher used concepts in a way that is consistent with defining basic assumptions and clarifying the meaning of other components of the model (Chinn & Kramer 2018).

Structural clarity

The researcher described elements of structures in the model and their relationships to provide a clear understanding of how these structures are integrated (Chinn & Kramer 2018). Different structural forms with different colours were used so that the concepts could be easily distinguished from each other.

Structural consistency

In this stage, the researcher used different structures in the model consistently to guide and provide an overall profile for major relationships of concepts. This developed structure would serve as a conceptual map that improves the clarity of the model. In determining how logical a model is and to create an understanding of the model, the panel of experts was asked how clear the model was for midwives who experienced AEs in public hospitals of Tshwane district hospitals. A total of eight researchers n=8 (100%) agreed that the model for midwives who experienced AEs was clear. Another researcher added that the concepts were clearly defined and applied to the study to connect with the process. One researcher said that 'the structure is simple, clear, and easy to follow, the structure is clearly stated, and the diagrams support each other.' One researcher indicated that the concepts of agent and recipient were not clear unless properly explained. As indicated in Table 8.3, all researchers n=8 (100%) agreed that the model was graphically portrayed and cohesive, it contained the context, inputs, processes as well as expected outcomes, however, agent and recipient concepts were not very clear.

8.4.2.2 How Simple is the model for Midwives who experienced AEs?

According to Chinn and Kramer (2018), simplicity is regarded as the minimal number of components within the descriptive classification, particular concepts, including relationships among them. All researchers n=8 (100%) agreed that the model for midwives who experienced AEs in public hospitals was simple to follow, as evidenced by one who said: 'The number of elements and concepts are minimal and were used accordingly, it showed the flow of the model. The discussion was clear about the purpose of the model. The schematic presentation was easy to follow, explaining details and their relationship in formulating the model. The relational components were discussed from the main concepts of the study. The results from the NGT process by eight of the researchers agreed that the model was simple. The researcher ensured that the model was not cluttered with many interconnections and pointers.

8.4.2.3 How General is the model for Midwives who experienced AEs in Public Hospitals?

The generality of the model, as highlighted by Chinn and Kramer (2018), indicates how general and broad the scope of concepts and purpose within a model are understood. This study addressed the significance of the purveyance of empowerment to midwives. A total of eight experts agreed that the model for midwives who experienced AEs, in general, can be applied to a broad selection of situations. The same number of participants suggested that the model should focus on midwives working in OUs in general even though they uttered that it could assist other units. The researcher thought that developed principles on the developed model could be generalised in other disciplines as was concurred by two of the experts who evaluated the model.

8.4.2.4 How Accessible is the model for Midwives who experienced AEs?

According to Chinn and Kramer (2018), accessibility is the degree to, which the concepts within the model theory are approached. This approach clarifies the state in which the expected outcome can be evaluated, by assessing the accessibility of the model. The defined concepts were the guide to the accessibility of the model. One expert stated how the model could also be used by other categories in the nursing profession, not to be concentrated in OUs only, as other units experienced almost the same AEs. The results of the meeting indicated that all eight of the researchers n=8 (100%), as indicated in Table 8.3, acknowledged that the model was accessible. The researcher realised that from the comments of the participants, the model could be of value to other units of the public hospital. A developed model must be able to achieve the purpose that it was meant to address in the study (Chinn & Kramer 2018).

8.4.2.5 How Important and relevant is a model for Midwives who experience AEs?

Chinn and Kramer (2018) conclude that the importance of the model grounds is based on professional values in nursing practice, education, and research. The current study addressed the extent to which midwives' support would contribute to the enhancement of the provision of quality midwifery care and the reduction of litigations. Experts of this study reached a consensus that the

developed model for midwives who experience AEs was of importance and relevant to public hospitals in the Tshwane district, Gauteng province.

One expert indicated that 'supported midwives will be productive and caring, of mothers will be improved.' Eight of the researchers reached a consensus that the model was important. A model was refined according to the uttered comments of the experts. A developed model must have clinical significance and implications, adding value to the body of knowledge within a discipline. As indicated in Table 8.3, researchers n=8 (100%) agreed on the importance and relevancy of the model in supporting midwives who might experience AEs in OUs. A model developed to improve nursing practice must be practical in practice, education, as well as research (Chinn & Kramer, 2018). The summary of the validated data is presented in Table 8.3 below. In the same table, the researcher added a question if addresses all the concerns n=6 (80%) agreed with n=2 (20%) who disagreed, in their comment, those who did not agree indicated the need for concepts of 'agent', which meant the managers and 'recipient', which meant the midwives to be indicated. The researcher went back and modified the model for two concepts to be indicated.

Table 8.3: Model Validation data n=8

Data distribution					
	Agree		Disagree		Comments
	Y	%	N	%	
1. Is the model simple to understand?	8	100%	-	-	Yes
2. Does the model yield clear results?	8	100%	-	-	Well presented
3. Is the model accessible and easy to use?	8	100%	-	-	User friendly
4. Does the model give clear instructions?	8	100%	-	-	Well-illustrated
5. Do you think the model is important/ relevant?	8	100%	-	-	Very important
6. Does the model need further modification?	-	-	8	100%	It is clear
7. Does the model address all concerns of midwives?	6	80%	2	20%	Agent and recipient need

					to be indicated

8.5 Summary

In the previous chapter, a model for supporting midwives who experienced AEs in public hospitals in the Tshwane district was constructed using Chinn and Kramer (2018) and Dickoff and Wiedenbach's survey list (1968). Validation of the model in this chapter was based on the steps to check the operationalisation of the designed model and the steps followed for evaluation. The following Chapter 9 focuses on the conclusions, limitations and recommendations.

CHAPTER 9
CONCLUSIONS, LIMITATIONS AND RECOMMENDATIONS

9.1 Introduction

The previous chapter presented the validation of a conceptual model for supporting midwives experiencing AEs in public hospitals of the Tshwane district in Gauteng province. The research approach, design, population, sampling, data collection, and analysis together with the results and discussions were presented. This chapter presents the study's conclusions, limitations, recommendations, and summary.

9.2 Purpose of The Study

The purpose of the study was to develop and validate a model to support midwives experiencing AEs in obstetric units of Tshwane District, Gauteng province.

9.3 Research Objectives

The objectives of this study were described following three phases.

Phase 1: Empirical phase

To explore the strategies used by managers in the case of an AE in obstetric units of Tshwane district units of Tshwane district, Gauteng province.

To describe challenges experienced by midwives related to AEs in obstetric units of Tshwane district, Gauteng province.

To identify the factors influencing proper delivery of care by midwives in obstetric units of Tshwane district, Gauteng province.

To assess the support offered to midwives by their managers' post AEs in obstetric units of Tshwane district, Gauteng province.

Phase 2: Development phase

To develop a model to support midwives experiencing AEs in OUs of Tshwane District, Gauteng province.

Phase 3: Model validation

To validate the developed model to support midwives who might experience AEs in OUs of Tshwane District, Gauteng province by experts in maternal health care services.

9.4 Research Design and Method

The researcher chose a mixed methodology design. The rationale was that the quantitative and qualitative approaches would complement each other. A convergent parallel research design was selected, in which data was collected concurrently, analysed, compared, and merged during interpretation and discussions. In MMR, problems are solved through the use of numbers and words (Creswell & Plano-Clark 2018).

The settings were three district hospitals in which the population was all the midwives employed full-time at these facilities. The selection of the sample was through the non-probability purposive sample that gave rise to 22 midwives and 12 managers for the qualitative strand, as the number in the qualitative strand is determined through saturation. The quantitative sample was selected through simple random sampling, and the sample size was calculated through Slovin's formula calculation; 89 midwives were sampled. All the participants were registered with SANC and employed at Tshwane district public hospital. An interview guide was used to collect data for the qualitative strand. Data was collected until data saturation. For the quantitative strand, a statistician was involved in the development of the close-ended questionnaire, which was completed by midwives in the presence of the researcher. Ethical considerations, trustworthiness, as well as validity, and reliability were followed in this study.

Data analysis for the qualitative approach involved eight steps of Tesch's coding method. An independent co-coder was involved to verify the obtained result, and consensus was reached between the researcher and the co-coder on the identified themes and sub-themes, which were elaborated. Quantitative data analysis was presented using frequencies, percentages, tables, and bar charts. A statistician was consulted during the development of the questionnaires and data analysis. After analysis of the two data sets, data were compared, followed by the presentation of merged data and discussion of both together as the convergent approach was selected. Unmerged data were discussed separately.

9.5 Conclusion of the Study Findings

The findings of the current study were concluded as merged in Chapter 5 and followed the following theme and sub-themes as presented below.

9.5.1 Experience of Midwives Regarding AEs

It was evident that midwives experienced AEs at OUs of Tshwane district hospitals that affected maternal health care services. As such, when they experience AEs, some experienced consequences of the evidence, such as resulting litigations. Midwives made some recommendations during the study on how they can be supported in the case of AEs. From this theme, three of the findings of three themes that emerged in the study were concluded, as integrated in Chapter 5; the integration included quantitative findings.

9.5.1.1 Challenges Experienced by Midwives

From this sub-theme, it was evident that there was a lack of support from managers when participants raised issues of favouritism. Unequal opportunities existed as some participants were offered better opportunities than others. Recognition was not made on merit. Participants were disgruntled by the fact that their efforts and qualifications were not acknowledged through remuneration like their colleagues in other institutions as such, poor leadership was raised. There was a shortage of staff, which led to work pressure on midwives caused by wards that were populated. These increased the stress level of midwives as in some cases, it resulted in AEs in the Unit. Midwives were blamed when an AE happened as such they were affected psychologically as they did not receive the support they required, for example, they were not offered time out or even allocated to another unit apart from the one where an AE happened, which further distressed them.

Language barrier was experienced by other people from other countries who did not understand the language of the country as such, it affected care to patients by midwives. This caused a communication barrier as the advice of midwives was not heard by women who were in labour, in a case where an AE happened, lines of communication on what to do were not clear posing poor decision-making by midwives in the unit.

9.5.1.2 Midwives Experienced the Consequences of AEs

It was evident from the findings of the study, that blame and psychological disturbances came out strongly in both research strands as a consequence of AE. As a result, midwives experienced fear of being punished and litigations from the SANC. This result aggravated shortage of staff in maternity units as other midwives refused to work in the maternity unit because of fear of being sanctioned.

9.5.1.3 Recommendations Made by Midwives to Enhance Support Following AEs

Emphasis was made on operational support, as such midwives lamented for a conducive environment that includes (sufficient staff, equipment, infrastructure, and support from managers and support amongst themselves) where they can render maternal health care services sufficiently. Support was also suggested in case an AE happened as midwives indicated the need to be assisted in completing the incident report. The need to be given time off after the event for them to reflect and come to terms with the AE was indicated. Counselling services were also recommended with follow-ups to assist those who had experienced AEs.

9.5.1.4 Strategies Used by Managers in Case of an AE

Managers offered support to midwives in completing incident reports when an AE has occurred. They assess the gravity of an incident and provide a conducive environment, as training is offered after an AE to prevent its re-occurrence. Managers indicated that emotional support is offered to midwives, by referring them for psychological counselling, with follow-up support provisioned. Regardless, the findings of a quantitative study from midwives indicated a different story, where the majority suggested a lack of consultation by managers after the incidents, training workshops not provided and poor support.

9.5.2 Conclusion of Objectives of Phase Two

The model was developed to support midwives experiencing AEs in public hospitals of Tshwane in Gauteng province, with the application of King's theoretical framework and according to Chinn and Kramer (2018). Components of the model were developed from the

identified defined concepts. Finally, guidelines to operationalise the developed model to support midwives who might experience AEs were described.

9.5.3 Conclusion of Objectives of Phase Three

The model was evaluated by researchers for relevancy and effectiveness through the NGT process together with quantitative and qualitative research design. The researchers reached a consensus that the model was simple, clear, accessible, general, important, and relevant. Findings revealed that the model would serve as a frame of reference for the support of midwives who might experience AEs in the OUs of public hospital, Tshwane district in Gauteng province.

9.6 Limitations of the Study

The study was conducted in three district hospitals of Tshwane in Gauteng because of financial constraints as such, the findings of this study cannot be generalised to other settings. Some CEOs took too long to respond to the researcher's request to conduct the study at their facilities, this affected the timeline set as the researcher had to wait three months before collecting data. Some midwives, though willing to be interviewed, raised concerns that management should not know that they participated in the study for fear of victimisation. The researcher had to reiterate that no names were used, they would remain anonymous, and coding was used instead of their names.

Some midwives did not agree to be audio-taped, though willing to participate, the researcher had to take notes, which made it difficult during the writing of transcripts as some information might have been lost during conversations. The researcher took a long time at other facilities to collect data as they were very busy and had to go even during the night for data collection.

Some hospitals did not have research committees and were reluctant to grant permits to conduct the study as the importance of conducting the research could have raised concerns that imparted information exposing incompetency in the administration of the district hospital.

9.7 Recommendations of the Study

Based on the findings of the study the researcher proposes the following recommendations:

Recommendations for Midwifery Practice by NDOH

Avail funds to increase the remuneration of midwives to match the private sector to retain them to avoid high turnover, which causes a shortage of staff.

Recognition of speciality courses like Advanced Midwifery through remuneration to encourage midwives with the speciality and to encourage those without as their specialised skills might reduce the rate of AEs.

Budget for building new hospitals to reduce overpopulation in Gauteng hospitals as it is the hub, centrally situated caring even for foreigners.

Monitoring implementation of National Policies like Maternal Guidelines from NDoH to follow guidelines for competency when dealing with complications, hence reduction of AEs in the Ous.

Facilitation of training teams from the National Health Office to district hospitals on new developments nationally and communicable diseases as declared by WHO.

Provision of both human and material resources to curb a shortage of staff and equipment for better delivery of care, which might lead to a reduction of AEs.

Designing a 24-hour online counselling service and promoting awareness of those services to all midwives so that they can utilise them in times of distress to promote healing.

Recommendations for Managers, Provincial Health Department

Monitoring of District hospital budget by Chief Financial Officers accountable to NDoH for implementation of funds at district level hospitals.

Provide a conducive environment by checking the safety conditions of district hospitals, and establish a maintenance team, to service equipment and maintain the infrastructure to ensure healthy conditions for midwives and their patients.

Establish in-service training teams for staff development, conducting workshops for staff and assessments. Managers to train and guide staff on completing PSI forms according to NDoH requirements.

Provision of litigation support during AEs, providing a conducive environment during the completion of the PSI form, assessment of the event, and provision of a representative during the hearing process of litigation.

Motivate midwives to go for special courses like Advanced Midwifery for career development and experience in quality care.

Recommendations for Managers, Public District Hospitals

Recognition and remuneration of Advanced Midwives for their extra qualifications as their qualifications and skills are used during the shortage of doctors.

Refer midwives to higher levels, like psychologists, when stressed because of AEs and even move them to other wards for healing purposes, when necessary, in times of distress.

Inservice training of staff; keeping them updated with requirements from NDoH, educating them on methods of reporting incidents.

Recognise nurses' special days to boost their morale, days like Midwifery Day and International Nurse Day, appreciating their services.

Enhance institutional, psychological, litigation, and training support for midwives who have experienced AEs, so that they don’t feel isolated and alone.

Allow open lines of communication by involving midwives in meetings to have input in matters related to their challenges and allow them to raise their issues.

Update staff on new developments and give feedback on their suggestions at meetings, and give feedback on developments of AEs when involved.

Create a safe therapeutic environment by maintenance teams and cleaning of the premises and provide a safe environment for all through security systems from the entrance of the hospital to the units of care.

The human resources department to have recruitment drives for new staff and advertise open posts to address staff shortages, which might lead to the reduction of AEs.

Replace retired or resigned staff to address the shortage of staff for quality care, by filling all vacant posts.

Recommendations for the Operational/unit managers

Teach new procedures to keep staff updated and use new equipment, to maintain all equipment in working condition to last longer.

Monitoring the implementation of policies and guidelines in the unit as recommended to keep staff updated on new developments.

Affected midwives to be given time off to assist them to recover emotionally and psychologically and be referred to specialists.

Conduct and audit maternal healthcare records to identify gaps and to alert staff in case of the identified deficiencies to ensure improved care.

Encourage the implementation of Maternity Care Guidelines as a teaching tool, and point of reference when providing maternal health care services to prevent AEs.

Teach staff about incident assessment and identification, filling out standardised PSI forms, and the importance of reporting an incident.

Recommendations for Midwives in the unit:

Teach mothers about maternal and post-natal care on discharge and the importance of history-taking during pregnancy to verbalise all information for pre-assessment to avoid complications during deliveries.

Monitor, check, and guide newly appointed midwives, mentoring them on procedures in the unit, to acquaint them with the routine in the unit and cases of AEs.

Update oneself on policies and changes that are taking place to be in the know of new developments both in the setting and nationally, like new medications.

Implementation of maternity care guidelines and other protocols in the provision of maternal health care services to reduce the rate of AEs.

Familiarise themselves with channels of communication and processes to know what to do in case of an AE.

Recommendations for the developed model

The model for supporting midwives will be presented to various hospitals where this study was conducted. The model can be used in all settings of public hospitals in Gauteng. As such, all stakeholders involved in maternal health care services will be made aware of its existence through workshops. Stakeholders must familiarise themselves with it and, where applicable, apply it in cases of midwives who experience AES.

Recommendations for further research

Further studies can be conducted on additional research to refine the model and evaluate the impact it has on supporting midwives.

9.8 Contribution of the Study to the Body of Knowledge

The exploration of challenges experienced by midwives after AEs in the public hospitals of Tshwane district revealed a lack of support by managers. The suggestions raised by participants rested on the implementation of policies, and equal recognition of participants. Communication plays a vital role in an organisation, the inclusion of participants in decision-making meetings on matters that affect them would assist in curbing high turnover, which contributes to the shortage of staff.

This study contributed to the body of knowledge as the researcher developed the model that might be used to support midwives who will experience AEs, as up to date, no model related to that was developed in South Africa. Furthermore, the conceptual model developed may serve as a point of reference in mapping out better care in OUs and the support of midwives. The conceptual framework could improve the interrelationships at workplaces. The use of the conceptual model validated through the NGT process can be recommended for other units of public hospitals.

The findings of this study might contribute to the scientific body of knowledge as further research at other public hospitals can be conducted for further implementation of the identified guide.

9.9 Summary

The purpose of the study was to develop a conceptual model to support midwives experiencing AEs in public hospitals of Tshwane district, Gauteng province. The overview of the study, the methodology, and the objectives all have been achieved. The three phases of the study were integrated, and the challenges of support of midwives were identified. The suggestions and recommendations that emanated from the findings led to the conceptualisation of a model. The model was validated and found to be relevant, simple, clear, general, and accessible.

Guidelines for the operationalisation of the model were identified for the support of midwives who experience AEs in the public hospitals of Tshwane district, Gauteng province. Therefore, the study achieved what was supposed to be addressed. The developed guidelines if adopted could improve the quality of care in public hospitals and improve relations between managers and midwives. Recognition of midwives would assist in reducing turnover as they would be

supported with the provision of staff and equipment. The NDoH would benefit financially because there would be fewer litigations in public hospitals through the commitment of midwives who would be supported. In considering the findings of this study, the developed model serves as a point of reference, the constraints in delivering quality care could improve and implementation of King's theory of personal, interpersonal, and social systems could be implemented. The model would serve as a point of reference to support midwives and improve the quality of care.

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ANNEXURES

ANNEXURE A – UNIVERSITY ETHICS CLEARANCE

University of Limpopo
Department of Research Administration and Development
Private Bag X1106, Sovenga, 0727, South Africa
Tel: (015) 268 3935, Fax: (015) 268 2306, Email: anastasia.ngobe@ul.ac.za

TURFLOOP RESEARCH ETHICS COMMITTEE

ETHICS CLEARANCE CERTIFICATE

MEETING: 29 November 2022

PROJECT NUMBER: TREC/588/2022: PG

PROJECT:

Title:	Development of a model to support midwives experiencing adverse events in obstetric units of Tshwane District, Gauteng Province.
Researcher:	RV Morobe
Supervisor:	Prof. T.I Ramavhoya
Co-Supervisor/s:	Prof. M.A Bopape
School:	Health Care Sciences
Degree:	Doctor of Philosophy Health Science

PROF D MAPOSA
CHAIRPERSON: TURFLOOP RESEARCH ETHICS COMMITTEE

The Turfloop Research Ethics Committee (TREC) is registered with the National Health Research Ethics Council, Registration Number: REC-0310111-031

Note:
i) This Ethics Clearance Certificate will be valid for one (1) year, as from the abovementioned date. Application for annual renewal (or annual review) need to be received by TREC one month before lapse of this period.
ii) Should any departure be contemplated from the research procedure as approved, the researcher(s) must re-submit the protocol to the committee, together with the Application for Amendment form.
iii) PLEASE QUOTE THE PROTOCOL NUMBER IN ALL ENQUIRIES.

Finding solutions for Africa

ANNEXURE B – TSHWANE RESEARCH COMMITTEE CLEARANCE

GAUTENG PROVINCE
HEALTH
REPUBLIC OF SOUTH AFRICA

Enquiries: Dr. Manei Letebele-Hartell
Tel: +27 12 451 9036
E-mail: Troy.Mashabela@gauteng.gov.za

TSHWANE RESEARCH COMMITTEE: CLEARANCE CERTIFICATE

DATE ISSUED: 07/03/2023
PROJECT NUMBER: 12/2023
NHRD REFERENCE NUMBER: GP_202301_040

TOPIC: Development of A Model to Support Midwives Experiencing Adverse Events in Public Hospitals in Tshwane District

Name of the Lead Researcher:	Mrs Rebotile Violet Morobe
Name of the Supervisor:	Prof. T.I Ramavhoya Prof. M.A Bopape
Facilities:	ODI District Hospital
Name of the Department:	University of Limpopo

NB: THIS OFFICE REQUEST A FULL REPORT ON THE OUTCOME OF THE RESEARCH DONE AND

NOTE THAT RESUBMISSION OF THE PROTOCOL BY RESEARCHER(S) IS REQUIRED IF THERE IS DEPARTURE FROM THE PROTOCOL PROCEDURES AS APPROVED BY THE COMMITTEE.

DECISION OF THE COMMITTEE: **APPROVED**

.....
Dr. Manei Letebele-Hartell
Chairperson: Tshwane Research Committee

Date: 07/03/2023

.....
Mr. Mothomone Pitsi
Chief Director: Tshwane District Health

Date: 2023-03-09

ANNEXURE C – PERMISSION TO CONDUCT RESEARCH

GAUTENG PROVINCE
HEALTH
REPUBLIC OF SOUTH AFRICA

Pretoria West District Hospital

RESEARCH REVIEWS OUTCOMES PRETORIA WEST DISTRICT HOSPITAL(PWDH) 2023

Name of Researcher	Comments	Outcome
1. Morobe RV	**Development of a Model to Support Midwives** **Experiencing Adverse Events in Obstetric Units of** **Tshwane District, Gauteng Province** **The following issues need to be addressed:** 1. There are no issues that need to be addressed. All the necessary research protocol aspects are covered.	Permission to conduct the research is granted.

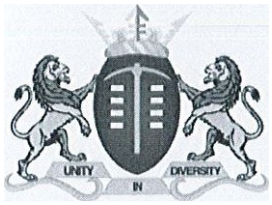
Reviewer: Dr Sizeka Maweya

BDT(Medunsa),MBChB (Pret), MMed (Fam.Med)(UL), MSc (Clin.Epi)(Pret), AHMP (FPD,Yale)

Family Physician/Clinical Epidemiologist/Lecturer (Pretoria West District Hospital/UP)
Signature:

Date: 27 March 2023

ANNEXURE C1 – PERMISSION TO CONDUCT RESEARCH JUBILEE



GAUTENG PROVINCE
HEALTH
REPUBLIC OF SOUTH AFRICA

Enquiries: Dr. Manei Letebele-Hartell
Tel: +27 12 451 9036
E-mail: Troy.Mashabela@gauteng.gov.za

TSHWANE RESEARCH COMMITTEE: CLEARANCE CERTIFICATE

DATE ISSUED: 21/04/2023
PROJECT NUMBER: 12/2023
NHRD REFERENCE NUMBER:GP_202301_040

TOPIC: Development of A Model to Support Midwives Experiencing Adverse Events in Public Hospitals in Tshwane District

Name of the Lead Researcher:	Mrs Rebotile Violet Morobe
Name of the Supervisor:	Prof. T. 1 Ramavhoya Prof. M.A Bopape
Facilities:	Jubilee District Hospital
Name of the Department:	University of Limpopo

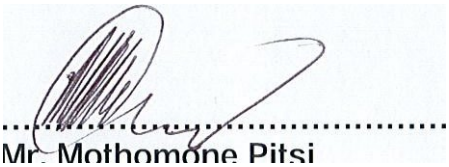
NB: THIS OFFICE REQUEST A FULL REPORT ON THE OUTCOME OF THE RESEARCH DONE AND

NOTE THA T RESUBMISSION OF THE PROTOCOL BY RESEARCHER(S) IS REQUIRED IF THERE IS DEPARTURE FROM THE PROTOCOL PROCEDURES AS APPROVED BY THE COMMITTEE.

DECISION OF THE COMMITTEE:APPROVED

..... Dr. Manei Letebele-HartellDate. 25/04/2023 . . . . .

Chairperson: Tshwane Research Committee



Mr. Mothomone Pitsi

Date: . . . .

Mr . Mothomne Pitsi
Chief Director: Tshwane District Health

ANNEXURE D – CEO PERMISSION

GAUTENG PROVINCE
HEALTH
REPUBLIC OF SOUTH AFRICA

om DISTRICT
HOSPITAL Private Bag
X 509, Mabopane,
0190.
Enquiries:
Ms AN Zitha Tel: 012 725 2493, Fax: 012 725 2447, E-mail: zitha315@zmai1.com [Secretary]
Dr. KSA Ntshoe Tel: 012 725 2436, Fax: 012-725 2447, E-mail: kntshoe9@zmail.com [Chairperson]
Dr. MMM Ramochele Tel: 0127252436, E-mail: natu@live.co.za [Deputy Chairperson]

OUTCOME OF THE REQUEST TO CONDUCT RESEARCH STUDY IN om DISTRICT HOSPITAL

RESEARCH PROJECT NUMBER	ODI-2023/02
RESEARCH TITLE	Development of a model to support midwives experiencing adverse events in obstetric units of Tshwane District, Gauteng Province.
RESEARCHER	RV Morobe
INSTITUTION	University of Limpopo
UNIVERSITY APPROVAL PERIOD	01 June 2022-01 June 2023
DATE SUBMITTED	10 March 2023
OUTCOME	Approved

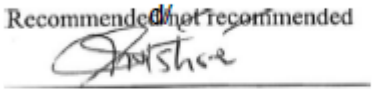
Odi District Hospital Research Committee is pleased to inform you that your request to conduct the above-mentioned research study has been approved.

The approval conditions are as follows:

1. Arrange with the Chairperson the days when you would like to collect data,
2. Arrange an introductory meeting with the relevant managers (chairperson to facilitate),
3. Data collection is to be completed within 3 months from the date of approval,
4. The approval period is in force till 01 June 2023. Should you need an extension, please submit your request in writing.
5. After completing the research study, submit a report and present your findings at Odi District
6. Hospital Annual Research Day.Dr. KSA Ntshoe

Chairperson: Research Ethics Committee

Recommended/~~not recommended~~



24/03/2022

Date

GAUTENG PROVINCE
HEALTH
REPUBLIC OF SOUTH AFRICA

Annexure 1

Declaration of intent from the hospital CEO

I give preliminary permission to Rebotile Violet Morobe to do her research on "Development Of a model to support midwives experiencing adverse events in obstetric units of Tshwane District, Gauteng Province "in Odi District Hospital.

I know that the final approval will be from the Tshwane/Metsweding Regional Research Ethics Committee and that this is only to indicate that the hospital is willing to assist.

Other comments or conditions prescribed by the hospital CEO:

1. The name of our hospital, as the study site must be clearly stated in the study methodology.
2. The name of our hospital should also appear in the Tshwane District clearance certificate.
3. The researcher must submit all relevant documentation to the hospital research ethics committee (ODIHREC) before data collection can commence.
4. The researcher must submit the study findings report and present it at the annual research day on the date set by ODIHREC.

Signature
Odi Hospital CEO

27/02/2023
Date

ANNEXURE E – INFORMED CONSENT

INFORMATION LEAFLET AND INFORMED CONSENT

Title of the study: Development of a model to support midwives experiencing adverse events in obstetric units of Tshwane district, Gauteng province

Dear Participant,

INTRODUCTION

We invite you to participate in a research study. This information leaflet will assist you to decide if you are willing to participate. Before you participate in the study please read the statement and should you have questions do not hesitate to ask the researcher, Morobe R.V.

PURPOSE OF THE STUDY

The purpose of the study is to develop a model to support midwives experiencing adverse events in obstetric units (OU) of Tshwane district, Gauteng province, which will be used as a framework of reference to support midwives and thus advance quality service delivery and reduce litigations.

PROCEDURES TO BE FOLLOWED

Nominal group interviews will be conducted using an interview guide. The interviews will be conducted in selected hospitals. Interviews will last for 45-60 minutes and questionnaires will be answered. The interviews will be audio -taped and field notes written guided by the interview guides. The participants will be notified of the results of the study once it is completed.

RISK AND BENEFITS INVOLVED

There are no benefits in participating in the study nor remuneration. No risks are involved some questions will be probed in order to understand some statements. Although you will not benefit from the study, services provided by the selected hospitals contribution from the conducted study will ultimately benefit other users in the public hospitals.

RIGHTS OF PARTICIPANTS

Your participation in the study is voluntary. As a participant you have the right to stop your participation or withdraw if you feel uncomfortable.

ETHICAL CLEARANCE OF THE STUDY

The study has received written approval from the Research Ethics Committee of the Faculty of Health Sciences at the University of Limpopo, District office and the selected hospitals. The copies of the approval letters are available if needed.

CONTACT PERSON

If as a participant you have queries you are welcome to contact my supervisor Prof Ramavhoya 015 268 3966 or co-supervisor Prof Bopape 015 268 2387

CONFIDENTIALITY

All information obtained during interviews will be kept confidential even though when shared in a group it can affect confidentiality.

CONSENT FORM (ENGLISH)

DEPARTMENT OF NURSING SCIENCE CONSENT FORM

I have read the information and heard the aims and objectives of the proposed study and was provided the opportunity to ask questions and given adequate time to rethink the issue. The aim and objectives of the study are sufficiently clear to me. I have not been pressurized to participate in any way.

I know that sound recordings will be taken of me. I am aware that this material may be used in scientific publications which will be electronically available throughout the world. I consent to this provided that my name will not be revealed.

I understand that participation in this study / project is completely voluntary and that I may withdraw from it at any time and without supplying reasons.

I know that this study / project has been approved by the Turfloop Research Ethics Committee (TREC). I am fully aware that the results of this study / project will be used for scientific purposes and may be published. I agree to this, provided my privacy is guaranteed.

The study/project envisaged may hold some risk for me that cannot be foreseen at this stage. Access to the records that pertain to my participation in the study will be restricted to persons directly involved in the research. Any questions that I may have regarding the research, or related matters, will be answered by the researcher/s.

I indemnify the University of Limpopo and all persons involved with the above project from any liability that may arise from my participation in the above project or that may be related to it, for whatever reasons, including negligence on the part of the mentioned persons.

I hereby give consent to participate in this study / project.

Signature of researched person.....
Signature of researcher……
Signed at…….. this……day of……..2023

ANNEXURE F – INTERVIEW GUIDE FOR MIDWIVES

INTERVIEW GUIDE FOR MIDWIVES
DEMOGRAPHICAL DATA

Participant code					
How old are you?					
Race group	African	White	Coloured	Indian	Other
	1	2	3	4	5
What is your nationality?	South African		1		
	Other, please specify		2		
How many years of service do you have as a professional nurse?	1-3		4-9		10 and above
What is your highest level of education	Diploma		Degree		Other, Specify
	1		2		3

SEMI-STRUCTURED INTERVIEW

- What are the challenges you have experienced related to AEs when rendering maternal health care services in the obstetric units of Tshwane district?
- What are the contributory factors that lead to adverse events in public hospitals in Gauteng province?
- What do you think is the root cause of all the challenges identified?
- What do you think should be done after an adverse event?
- How would you describe the present working conditions in your hospital?
- How would you describe the relationship between management and midwives after an adverse event?
- As employees to what extent are you involved in health care decision-making processes?
- In your opinion which approach could be used to support stressed midwives?
- Provide suggestions/recommendations to improve care in the OU.

ANNEXURE F1 – QUESTIONNAIRE FOR MIDWIVES

QUESTIONNAIRE FOR MIDWIVES

RESEARCH TOPIC: *Development of a model to support midwives experiencing adverse events in obstetric units in the Tshwane district of the Gauteng province*

Instructions:

Please answer all questions as honestly as you can. The information collected will be analysed to give a clear picture of the responses to assist in improving quality care in maternity obstetric units by supporting midwives as healthcare providers. It is envisaged that the developed model will greatly impact the quality of care and retention of midwives in public hospitals.

You do not need to identify yourself; the researcher will maintain anonymity. No participant will be linked to any research findings. You are requested to indicate your answer with an (X) in the appropriate box and write answers legibly where required. If a need arises for extra information, please take a blank sheet of paper, write the question number, and write your answer.

SECTION A: BIOBLIOGRAPHICAL DATA

Participant code					
How old are you?					
Race group	African	White	Coloured	Indian	Other
	1	2	3	4	5
What is your nationality?	South African		1		
	Other, please specify		2		
How many years of service do you have as a professional nurse?	1-3		4-9		10 and above
What is your highest level of education	Diploma		Degree		Other, Specify
	1		2		3

SECTION B

SUPPORT OF MIDWIVES BY MANAGEMENT

Indicate whether the following are applicable at your unit by making an X in the applicable box

	Yes	No	Not sure
1) Does the hospital have a way of dealing with adverse events experienced by midwives?			
If the answer is yes, please elaborate			
2) Would you like to be consulted by management after an adverse event?			
3) Are there sessions/workshops to enlighten staff members about adverse events?			
If yes, which sessions/ workshops offered			
3) Are these sessions easily accessible?			
4) Did management consult you after you experienced an adverse events?			
5) Did management give you any support after the event?			
If yes, what type of a support we you offered?			
6) Are there formal stipulated procedures followed for the adverse event?			
If yes, which procedures			
7) Were you blamed for the event?			
8) Were you assisted or evaluated if can you manage to continue with your work after the adverse event?			
How were you assisted?			
9) Are there clear communication lines to raise your concerns?			
10) Was there a follow-up session helpful?			
11) Would you recommend counselling services to other colleagues after an adverse event?			

SECTION C: Factors influencing proper delivery of care by midwives

Indicate whether the following aspects are present at your obstetric unit

	Strongly agree (1)	Agree (2)	Neutral (3)	Disagree (4)	Strongly disagree (5)
a) Midwives experience fear when exposed to AEs					
b) Maternity care is jeopardised during AEs					
c)Midwives are faced with poor leadership to lack of professional development					
d) Midwives feel traumatised post AEs					
e) Midwives' concerns are not escalated to management					
f) Midwives are psychologically affected, demoralised, and stressed after AEs					

ANNEXURE F2 – MODEL VALIDATION INSTRUMENT

Model validation instrument

NOTE TO PARICIPANTS

Please answer all questions based on your understanding of the statement.

Please make a cross(X) next to a statement that best reflect your choice and comment where possible.

Validation of the model Chinn and Kramer's (2018)

NO	Model evaluation checklist			Comments
	1. Simplicity	Yes	No	
1.1	Is the model simple to understand?			
1.2	Is the model using simple terms?			
1.3	Does the model enhance positive results?			
1.4	Are the model's concepts and outcomes clear?			

	Model evaluation checklist			Comments
	2. Accessibility	Yes	No	
2.1	Is the model testable?			
2.2	Is the model operationally defined?			
2.3	Will the model be measurable?			
2.4	Is the model accessible to all staff members?			

In your own words kindly describe the accessibility and the simplicity of the model

Comments.....
.....
.....
.....

ANNEXURE F3 – QUESTIONNAIRE FOR EXPERTS

QUESTIONNAIRE FOR EXPERTS

Open-ended questionnaire on the Support of Midwives Module

INSTRUCTIONS:

Please provide your expert opinion on the "Support Model for midwives who experience adverse events in public hospitals by answering the following questions:

SECTION ONE:

Biographical Information

1. **Qualification, please tick the appropriate**

Qualification	Yes
Diploma in Midwifery	
Advanced Midwifery	
Masters in Midwifery	
Masters in any other discipline(indicate which	
PhD (indicate in which discipline)	

2. **Work experience in the Midwifery discipline(Please indicate more than one if applicable)**

Work Setting	Number of years
Work in hospital setting (indicate in which areas)	
Work in the clinic (indicate in which areas)	
Work in the midwifery section	
Work in the midwifery section	
Work in an educational institute	
Work in an educational institute	
Other	
Other	

Thank you for your willingness to participate in the study. To refresh your memory I include a part of the information given to you went consent was obtained to participate in the study.

Title of the study: Model development to support midwives who experience adverse events in public hospitals of Tshwane district.

1. **Purpose of the study.**

The purpose of this stage is to explore expert opinion for the design of a module as a part of supporting midwives who experienced adverse events in public hospitals in the Tshwane district of Gauteng province. I hope that the overall findings will assist in contributing toward the ds development of the model and improve support of midwives as carers in the midwifery discipline and improve service delivery and patient care in the future. Support of midwives will be incorporated as an end product

2. **Participation in the study**

The study utilizes a Nominal Group Technique. This involves the completion of the questionnaire giving your expert opinion on the designed module. The first round consists open ended questions related to your opinion in relation to the practice in the maternity sections. Responses to the questionnaire will be incorporated into the module. The module will then be facilitated by the district hospitals. The study makes use of mixed method design. The purpose of using this design is to develop expert consensus and explore areas of disagreement related to support of midwives and delivery of quality patient care. To ensure time efficiency discussion will be kept brief. The following information can be used as a reference should you anticipate an aspect of the module that is unclear.

3.Background

Midwives at public hospitals are experiencing high levels of stress, job dissatisfaction, burnout, low morale, and demotivation because of a lack of support from their supervisors after AEs. Lack of attention to the wellbeing of the healthcare professionals has been identified as a missing response in the management of AEs (Austin, Smythe & Jull 2018). The nature of practice is such that even when midwives are providing safe, competent care, there can still be AEs.

RESEARCH QUESTIONS

The research questions that will guide this study are as follows:

- How can a model that supports midwives experiencing AEs in midwifery? obstetric units of Tshwane district, Gauteng province be developed?
- What support system do OPMs, and line managers offer to midwives experiencing AEs in obstetric units of Tshwane district, Gauteng province?
- What are the factors influencing proper delivery of care by midwives to prevent AEs in obstetric units of Tshwane district, Gauteng province?

SIGNIFICANCE OF THE STUDY

The study is significant as a unique contribution to exploring the support of midwives, closing the gap in dealing with AEs in obstetric units of Tshwane district, Gauteng province.

Researcher: Ms. R.V. Morobe(19112383)

Supervisors: Prof I.T.Ramavhoya

Prof M Bopape

ANNEXURE G – LETTER OF STATISTICAL SUPPORT

UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA
Denkleiers • Leading Minds • Dikgopolo tša Dihlalefi

DEPARTMENT OF STATISTICS

LETTER OF STATISTICAL SUPPORT

Date: 21st August 2023

This letter is to confirm that I have provided statistical support to **Ms. Rebotile Violet Morobe** studying at the University of Pretoria, with the project title "**Development of a model to support midwives experiencing adverse events in the public hospitals of Tshwane district**

Mr. Andries Masenge

Senior Research Consultant

Department of Statistics

Internal Consultation Service

Tel 012 420 3645

ANNEXURE G1 – VIOLET MOROBE CODING CERTIFICATE

Dr Annatjie van der Wath (M Cur, PhD) annavdw@mweb.co.za

CODING CERTIFICATE

Qualitative Data Analysis

This serves to confirm that Annatjie van der Wath has co-coded the following qualitative data: Three focus groups and two interviews for the study:

MODEL DEVELOPMENT TO SUPPORT MIDWIVES EXPERIENCING ADVERSE EVENTS IN PUBLIC HOSPITALS TSHWANE DISTRICT, GAUTENG PROVINCE

I declare that the candidate, R Morobe, and I have reached consensus on the major themes and categories as reflected in the findings during a consensus discussion.

Annatjie van der Wath (M Cur, Ph D) annavdw@mweb.co.za

ANNEXURE H – EDITOR'S LETTER

6th February 2024

I, Nicolette Sutherland, hereby confirm that I have edited the proposal to engage in the presentation of the dissertation noted below. The utmost care will be taken to ensure that the Final Document is free of spelling and grammatical errors, however, the accuracy of the final work remains the responsibility of the author.

Author: Rebotile Violet Morobe

Title: DEVELOPMENT OF A MODEL TO SUPPORT MIDWIVES EXPERIENCING ADVERSE EVENTS IN OBSTETRIC UNITS OF THE TSHWANE DISTRICT, GAUTENG PROVINCE

The edit includes the following:

- Spelling
- Vocabulary
- Punctuation
- Grammar
- Consistency in terminology, numbering, font style.
- Sentence construction
- Suggestions for text with unclear meaning
- Logic: Relevance, clarity, and consistency
- Checking the list of references against in-text citations.

Nicolette Sutherland

082 453 1469

Nikkisuth40@gmail.com

ANNEXURE I – TRANSCRIPTS

Participant 8 from the interview

Years of experience:9

Qualification: Degree in Nursing and Advanced Midwifery

Key: **R** =Researcher
P=Participant

R: Good afternoon Sister

P: Afternoon

R: How are you doing?

P: I am fine thanks.

R: As I have introduced the topic already before we start with our interview, I wish to remind you that your name is not going to be reflected anywhere you can relax and relate your experiences without fear.

P: Yes, I understand thanks.

R: I just want to know if you were involved in an adverse event in the obstetric unit, and what was your experience.

P: Yes, I was involved in one serious adverse event that occurred some three years back which remains in my mind every day.

R: I hear you, do you mind telling me what happened in that event?

P: I still remember it like it was yesterday. One of the mothers died during our shift and we had to account as midwives. A woman delivered at 20 weeks gestation and had a retained placenta. A doctor tried to remove the placenta manually the woman bled profusely, her HB was 4g/dl she was rushed to the theater, and a hysterectomy was performed to save her life but she died the following day in the post-natal ward. There was only 1 unit of blood in the whole hospital, no FFP. We were running around to save a life we resuscitated but we were blamed. She died on the second day in the post-natal ward. We were blamed for the death

of this woman instead of appreciating what we did and supporting us as we were emotionally disturbed but nobody cared. What we got from our managers was "***What did you do*"?**

R: Mhhh! you said you were blamed, who blamed you please tell me more about this.

P: The managers blamed us, we were never asked how we felt, and nobody even appreciated our efforts. The doctor was never asked why he performed what he did. Our work environment is stressful. Remember there was no blood but the blame was on midwives. Another issue here is patients are seen on the second day after being admitted this is confusing and painful for us daily as we care for these mothers. We work in an unconducive environment we have no resources to take care of patients you can imagine losing a patient because there was no blood in the hospital I was very confused and hurt, it is painful to lose a patient then you have to answer for other people performances.

R: What confuses you now?

P: In this hospital midwives must run after doctors to come to see patients we struggle all the time. Every time midwives are the ones to look for doctors to come to the wards. I don't think it is our responsibility, once you encounter such occurrences like this one where a patient dies you become stressed, you have sleepless nights you are afraid you can even lose your job, you become isolated, colleagues gossip about your mishap or event you feel useless.

R: I hear you, but what do your managers say about all these challenges?

P: Our managers don't support or appreciate us at all, even when you have extra qualifications like Advanced midwifery you are hardly recognized.

R: What kind of support do you expect from the managers?

P: You know once you experience an adverse event, psychologically and emotionally you are affected. You need someone to care or someone who will walk with you in these painful steps as you are worried about what is going to happen to you.

R: I hear what you say but how does the hospital deal with staff that has been affected by adverse events, I want to understand if you are emotionally affected do you report or take leave or is there something for staff members?

P: There is counseling conducted by some allocated staff members and a psychologist though we are not so sure of their services.

R: Why do you say you are not sure of services can you please explain further?

P: The healing services are dependent on the individuals who attend them. Colleagues talk about people attending counseling as if they are mentally disturbed, so people choose to consult out of the hospital as they are embarrassed to be consulted here. Another issue is the offices are not always open, accessibility is a problem. You cannot go at any time you are feeling depressed one has to book an appointment. It takes time to be seen meanwhile you are facing the same environment daily rather than going to consult somewhere out and being booked off sick to heal, so frustrating and draining the little energy you have.

R: I understand your frustration but tell me once you attend healing sessions what happens next, is there a follow-up of how you are doing or feeling from managers?

P: Nope, nothing of that sort, as midwives we are not involved in any communication matters concerning us, matters are decided without our input. We work hard in this hospital and are not appreciated or recognized at all. No follow-up is done you are not even moved to another ward or given a day off because the ward is always busy and there is a shortage of staff. The healing process is your baby no support is offered you have to continue working the hospital is overpopulated.

R: I understand is there anything else you want to tell me?

P: I wish that this research could bring change to our working situation and I wish you well with your studies. Please let us know how it went**.**

R: Thanks, I will come back to the research committee to arrange a day to present the results, thank you for your time, goodbye.