EVALUATION OF MIDWIFERY PRACTICES AMONG REGISTERED MIDWIVES AT WITPOORT AND LEPHALALE HOSPITALS IN LIMPOPO PROVINCE, SOUTH AFRICA

by

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DISSERTATION

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DECLARATION

I Kgatsere Sarah Maleta declare that "*Evaluation of midwifery practices among registered midwives at Witpoort and Lephalale hospitals in Limpopo province, South Africa*" is my unaided work in design, and has not been submitted by me or anyone for any degree or examination to this or any other institution and all the sources that I have used or quoted have been indicated and acknowledged employing complete references.

Maleta K.S. (Miss) 30/08/2023 **Date**

DEDICATION

In Memory of my Late Mother, Esther Mapodu Maleta, for words of encouragement, inspiration and support in every decision that I made in life. May her soul rest in peace. My Pillar of Strength.

This dissertation is also dedicated to all midwives at Witpoort and Lephalale hospital who selflessly gave their time and experience to assist me in the writing of this study.

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DEFINITION OF CONCEPTS

Evaluation

According to Cambridge Advanced Dictionary (2013) evaluation is defined as a process that critically examines a program, which involves collecting and analysing information about program activities, characteristics and outcomes to make judgments about the program to improve its effectiveness, to inform programming decisions. For this study, evaluation refers to the collection and analysis of information from respondents to identify and examine relevant indicators to improve midwifery care.

Midwifery

The International Confederation of Midwives (2011) describes midwifery as “a practice that includes the autonomous care of the girl-child, the adolescent and the adult woman prior to, during and following pregnancy”. In this study, midwifery refers to the care of pregnant women from pregnancy, labour and puerperium in their clinical settings.

Practices

Practices are value-driven, interactive and integrative cyclic processes that lead to safe, sustainable, comprehensive and individualised care by competent midwives (Bogan & English, 2013). For the purpose of this study, practices refer to procedures used by midwives to care for pregnant women from pregnancy, labour and puerperium to improve midwifery care.

Registered Midwives

According to the South African Nursing Council (2005), registered midwives are health care providers who have met the prescribed education requirements for registration as a midwife, have acquired and maintain the competence to practice as a midwife and are registered as a midwife in terms of section 31(1) (b) of the Act. In this study, registered midwives refer to professional healthcare providers who care for pregnant women during labour.

LIST OF ABBREVIATIONS

BBI	Better Births Initiative
CTG	Cardiotocography
ICM	International Confederation of Midwives
HOD	Head of Department
PPH	Postpartum Haemorrhage
SANC	South African Nursing Council
SAQA	South African Qualification Authority
SGDs	Sustainable Development Goals
SPSS	Statistical Package for Social Sciences
TREC	Turfloop Research Ethics Committee
UL	University of Limpopo
WASH	Water Sanitation And Hygiene
WHO	World Health Organization

ABSTRACT

Background: Midwifery practices have grown in complexity characterized by overload of operational pressure and the need for cost-effective and continuous accessible healthcare services where midwives are expected to adapt swiftly to keep up with the current changes in the settings to provide midwifery care. Midwifery practices are used to maintain quality as an alternative to mandatory legislated standards and can be used for self-assessment or benchmarking. Midwifery care is dynamic and evolving, and as such, failure by midwives to keep up with new developments may be deleterious. Therefore, upskilling clinical programmes such as essential steps to manage obstetric emergencies should be made available to midwives as it may improve clinical expertise.

Purpose: The purpose of this study was to evaluate the midwifery practices among registered midwives.

Research method: Quantitative, descriptive and cross-sectional research was conducted to assess and describe midwifery practices among registered midwives at Witpoort and Lephalale hospitals in Limpopo province, South Africa. The population was all the registered midwives at Witpoort and Lephalale hospital. The population size was 100 midwives. Sample size of 80 registered midwives determined by Slovin formular. Simple random sampling was used to select the sample. A self-developed questionnaire was piloted before the main study was conducted. Data were analysed using the Statistical Package for Social Sciences (SPSS) version 27 with the assistance of the statistician. Measures to ensure reliability and validity adhered to ensure quality of the study findings.

Results: The study revealed that midwifery practices were adversely affected due to lack of the human and material resources; inadequate and malfunctioning equipment and also lack of training. A significant portion (47%) of the registered midwives were aged 50 or older. The majority of the respondents (78%) were female, and 82% did not have a specialty. A large proportion (41%) of the registered midwives had less than 6 years of experience in the maternity unit, while 6% had more than 15 years of experience. The majority (93.3%) of respondents consistently provide emotional support to pregnant women during antenatal care, and 81.6% indicated that they consistently and effectively

address the questions and concerns of pregnant women. Most (93.8%) of the respondents monitor the well-being of both the fetus and the mother during high-risk antenatal visits, while 85.7% consistently offer emotional support during labour and childbirth. However, a substantial majority (97.9%) never advised pregnant women to bring doulas for support. The majority (85.7%) of the respondents provide pain relief to pregnant women during labour. About 81.6% of the respondents deliver appropriate care to women during labour and childbirth, but only 34.7% stay with the woman during the second stage of labour. About (81.6%) of the respondents provide health education to mothers during the postpartum period. Approximately 42.8% of the respondents consistently support mothers in initiating and establishing breastfeeding, and 63.3% consistently address complications during the postpartum period.

Conclusion: The study concluded that the midwifery practices were sub-standard due to the negative impact posed by lack of resources and equipment, and shortage of midwives, and lack of training. Sub-standard midwifery practices have serious implications for the health and well-being of mothers and newborns. These practices were influenced by various factors such as inadequate material and human resources; lack and malfunctioning of the available equipment. The consequences of inadequate midwifery practices can include increased maternal and neonatal morbidity and mortality rates, complications during childbirth, and long-term health issues for both mothers and infants. Addressing shortage of human and material resources in maternity units is important for ensuring the safety and well-being of pregnant women and their newborns.

Keywords: Evaluation, Midwifery, Practices and Registered Midwives

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CHAPTER 1

OVERVIEW OF THE STUDY

1.1 INTRODUCTION AND BACKGROUND

Midwifery plays an essential role as a backbone to women and child healthcare. Midwifery provides a holistic approach to women and child healthcare, focusing on the physical, emotional, and social well-being of women and their babies (Healy, Nyman, Spence, Otten & Verhoeven, 2020). Midwives are healthcare professionals who specialize in providing care to women during antepartum, intrapartum, and the postpartum period, they also contribute notably to improving maternal and child health outcomes. Furthermore, their expertise and dedication are valuable in achieving positive birth experiences, reducing maternal and infant mortality rates, and promoting overall health and well-being. Midwives in Australia are educated and professionally accountable to work with childbearing women and their families to provide support, care and advice throughout pregnancy, labour and birth and the postnatal/ neonatal period on the midwife's own responsibility (Watkins, Nagle, Yates, McAuliffe, Brown, Byrne & Waters, 2023).

Midwifery practice refers to the professional services and care provided by midwives to women and babies during antenatal, intrapartum and postpartum periods. Midwifery practices have grown in complexity characterized by overload of operational pressure and the need for cost-effective and continuous accessible healthcare services where midwives are expected to adapt swiftly to keep up with the current changes in the settings to provide midwifery care (Timmermans, Van Linge, Van Petegem, Van Rompaey & Denekens, 2012). According to Bogan & English (2013) midwifery practices are used to maintain quality as an alternative to mandatory legislated standards and can be used for self-assessment or benchmarking. Midwifery care is dynamic and evolving, and as such, failure by midwives to keep up with new developments may be deleterious. Therefore, upskilling clinical programmes such as essential steps to manage obstetric emergencies should be made available to midwives as it may improve clinical expertise (Mosadeghrad, 2014).

According to Goemaes, Shawe, Beeckman, Decoene, Verhaeghe & Van Heck (2016), there are policies and guidelines used to evaluate the practices of midwives and midwifery as a

profession. The World Health Organization (2016) defines antepartum care as the care provided by skilled healthcare professionals to pregnant women and adolescent girls to ensure the best health conditions for the mother and foetus during pregnancy. The midwifery practices encompass components of antepartum care aimed at risk identification, prevention and management of pregnancy-related conditions and health education as well as health promotion (WHO, 2016). Midwifery practices include monitoring of the foetal wellbeing during antepartum utilising Non-Stress Test (NST) machine and antepartum classes can be adopted for the improvement of midwifery care and outcomes.

Antepartum care refers to the healthcare services and support provided to women during pregnancy, from conception to the onset of labour (Watkins et al., 2023). Furthermore, it focuses on monitoring the health and well-being of both the mother and the developing foetus with the aims of promoting a healthy pregnancy and to reduce the risk of complications. According to Guidelines for Maternity Care (2016), ANC attempts to ensure, by antenatal preparation, the best possible pregnancy outcome for women and their babies. This may be achieved by screening for pregnancy problems, assessment of pregnancy risk, treatment of problems that may arise during the antenatal period, giving medications that may improve pregnancy outcome, provision of information to pregnant women and physical and psychological preparation for childbirth and parenthood.

Intrapartum care refers to the period from the commencement of true labour throughout the first, second, third and fourth stages of labour which last until one to hours after delivery of the placenta (Lowdermilk, Perry, Cashion & Alden. (2016). Intrapartum midwifery practices include monitoring the progress of labour, communication and informed consent, assessing the well-being of the mother and baby, and making appropriate clinical interventions when necessary. They may administer medications, pain management, perform episiotomies, assist with instrumental deliveries or collaborate with obstetricians for more complex cases. According to Guidelines for Maternity Care (2016), intrapartum midwifery services such as respect and privacy, companionship during labour, diet and fluids, mobility and posture, artificial rupture of membranes. Midwifery practices such as monitoring of the foetal wellbeing during intrapartum utilising Cardiotocograph (CTG) machine the use of Partogram and career educational schemes can be adopted (WHO, 2014).

Postpartum care is when care is provided to the mother and her new-born infant for the period from immediately after birth until six weeks. It focuses on the physical recovery of the mother, the emotional well-being of the mother and baby, and the establishment of breastfeeding and parenting routines (WHO, 2014). Fogel (2017) states that the important period after birth is often neglected when the mother needs the most care in experiencing physical and emotional changes. In the United States, surveillance systems to monitor maternal behaviours and experiences are in existence, however, not all states participate in this system. These surveillance systems focus on postpartum depression but not on other factors or complications and tend to put emphasis on maintaining health during pregnancy (Watkins et al., 2023).

According to WHO (2016), lack of education, poverty, and limited access to health-care facilities are associated with low use of postpartum care. Notably, years of experience and the level of education contributes to expertise at the proficient and expert levels. In addition, prolonged placement in a labour unit enables the midwives to gain the necessary experience related to intrapartum care that is essential for the development of clinical expertise (Mosadeghrad, 2014). According to Fogel (2017) a midwife is expected to be competent in terms of knowledge, skills and attitude, have a huge background of experience, an intuition to sense if something is going to happen and be able to act intelligently in different situations to convey best practices in the working environment.

According to Say, Chou, Gemmil, Tuncalp, Moller, and Daniels, (2014) evidence-based practice is a common term used in the everyday healthcare environment with an enormous amount of primary and secondary research studies, health literature, policy and practice guidance devoted to it. The primary definition of evidence is knowledge derived from research and informed by planned actions models and theories where its outcomes fall into two broad categories known as knowledge use and impact (Lowdermilk et al., 2016). In some areas of practice, high-quality evidence of interventions is associated with beneficial outcomes of childbirth. Conversely, when evidence of harm has been identified, like the performance of an episiotomy during the second stage of labour as an intervention to reduce severe perineal trauma it is assumed to benefit the woman. While, resulting in harm to maternal health, discomfort, and sexual and psychological health, leading to the mothers not bonding with their infants (Honikman Dawcus, & Meintjes, (2016).

Stark, Remynse and Zwelling (2016) indicate that the birth environment affects childbirth outcomes. There should be programmes and initiatives to reduce maternal mortality of 1000 death per 100,000 live births. Honikman et al. (2016) indicate that physical and verbal abuse, neglect and abandonment of care emanating from the birthing environment stem from a lack of professional support of health care workers, hierarchical work relationships, excessive workload and inadequate equipment due to a shortage of staff. For most women, pregnancy and childbirth are safe and are associated with a happy outcome. Sadly, this is not the reality for all families, and at times this has been due to service failings. In consideration of this challenge, a study conducted in Ireland by the Quality Authority (2014), the Health Service Executive and the Irish Department of Health highlighted that women faced challenges during childbirth and significant service deficits have been identified. These failings have undermined confidence in Irish maternity services and have significantly impacted staff morale (Health Information and Quality Authority, 2014).

Despite the global effort toward improving childbirth and maternity care, there are still complications such as haemorrhage, infections and high blood pressure that may arise unexpectedly. To end preventable mortality, women need skilled care at birth. Sepsis remains one of the leading causes of preventable maternal death since the body is vulnerable after pregnancy (Say et al., 2014). In Sub-Saharan Africa, maternal mortality ranges from 300-900 per 100,000 births and neonatal mortality is 32 per 1000 births. This is in stark contrast to the maternal 2-12 per 100,000 in Western Europe, 11 per 100,000 in the United States and neonatal mortality of 2-9 per 1,000 births in industrialised nations (UNICEF, 2015). In 2013, 800 maternal deaths occurred daily, 690 of which took place in sub-Saharan Africa and Southeast Asia with only 6 per day in wealthy nations (WHO, 2014).

According to the WHO (2015), the Safe Childbirth Checklist was developed to ensure the delivery of essential maternal and perinatal care practices around the time of childbirth. Research collaboration with the World Health Organisation (2015) was subsequently established to explore factors that influence the use of the checklist in a range of settings around the world. Devlierger, Benhalima, Damm, Van Assche, Mathieu, et al. (2016) said that in South Africa, the quality of midwifery care during childbirth could be improved by ensuring

that pregnant women are not left alone during childbirth. Sometimes women are shouted at, slapped and struck due to the shortage of midwives.

The midwives are expected to work in the emergency unit and postnatal ward which is overwhelming since there is a limited number of midwives per shift. Add to this the lack of resources which demoralises the workforce leading to the pregnant women not using services they judge to be poor quality. This leads to a high rate of home delivery increases which compromises the maternal and foetal outcomes due to the shortage of registered midwives (Briscoe, Lavender, & McGowan, 2016). Given these challenges, the current study evaluated and described the midwifery practices among registered midwives in implementing change and improving the effectiveness of the maternity ward to render good quality care.

1.2 Research problem

Several international and national best practice initiatives exist such as safe intrapartum care practices (Briscoe et al.,2016). Despite this, unsafe practices such as fundal pressure during the second stage of labour continue to occur despite the availability of best practices initiatives. The researcher observed that some midwives were still using routine intrapartum care interventions such as the use of fundal pressure to shorten the second stage of labour and the Valsalva manoeuvre. These interventions are not supported by evidence-based practices since they cause harm to women during labour. As highlighted in the study by Hastings-Tolsma, Temane, Tagutanazvo, Lukhele, and Nolte (2021) in the context of South Africa, a dearth of resources, encompassing equipment, supplies, access to technology, and, notably, a shortage of midwives, alongside a significant influx of patients, including immigrants, has had a profound impact on the practice of midwifery.

Despite the critical role played by registered midwives in providing maternal and neonatal healthcare, the researcher observed that various challenges persist in midwifery practices that hinder the delivery of optimal care. These challenges not only affect the well-being of mothers and newborns but also impact the overall quality of healthcare systems. The several barriers that hinder provision of effective and efficient midwifery care include insufficient resources and medical supplies, labour support, inadequate training and education. The increase in number of admissions and deliveries in the maternity units also affect the provision

of quality maternal care by midwives. These affect the practices of midwives and pose detrimental effects on health outcomes of women and babies. Therefore, it is essential to evaluate and describe the midwifery practices to enhance quality care and promote better health outcomes for women and babies.

1.3 Theoretical framework

Pender, Murdaugh, and Parsons (2006) have indicated that the health promotion model (HPM) is grounded in social cognitive theory, expectancy-value theory, and the nursing perspective of comprehensive human well-being. This model places a strong emphasis on enhancing health and well-being by encouraging the adoption of positive health behaviours. Its applicability to midwifery practice is notable for its potential to improve the overall health outcomes of women and their babies. Hence, the study was guided by the HPM, providing midwives with a robust framework for promoting holistic health and well-being during antepartum, intrapartum and postpartum. The HPM promotion model revolves around three key aspects: individual attributes and experiences, behavior-specific thoughts and emotions, and the resultant behavioural outcomes (Pender, Murdaugh & Parsons, 2006).

1.4 Aim of the study

The purpose of the study was to evaluate midwifery practices among registered midwives at Witpoort and Lephalale hospitals in Limpopo Province, South Africa.

1.5 Objectives of the study

The objectives of the study were to:

- Evaluate midwifery practices among registered midwives at Witpoort and Lephalale hospitals in Limpopo Province, South Africa.
- Describe the barriers affecting midwifery practices among registered midwives at Witpoort and Lephalale hospitals in Limpopo province, South Africa.

1.6 Research questions

The research questions that guided the study were as follows**:**

- What midwifery practices can be evaluated among registered midwives at Witpoort and Lephalale hospitals in Limpopo province, South Africa?

- What are the barriers affecting midwifery practices among registered midwives at Witpoort and Lephalale hospital in Limpopo province, South Africa?

1.7 Overview of the research methodology

A quantitative, descriptive and cross-sectional research design was used to collect numerical data to evaluate and describe the midwifery practices among registered midwives at Witpoort and Lephalale hospitals in Limpopo Province, South Africa. The population of this study was one hundred (100) registered midwives from Witpoort and Lephalale hospitals. The sample was 80 registered midwives selected through simple random sampling techniques. Data were collected using a self-developed questionnaire and analysed using the Statistical Package for Social Sciences (SPSS) version 27 with the assistance of the statistician. Measures to ensure content validity, face validity and reliability were adhered to ensure quality of the study findings. The research methodology is discussed in detail in chapter three (3).

1.8 Validity and Reliability

- Validity

Validity is the degree to which the outcomes of an experiment can be attributed to the manipulated, independent variables rather than to uncontrolled extraneous factors.

- *Content validity*

Content validity is an assessment of how well an instrument represents all components of the variable to be measured and always precedes data collection (Brink et al., 2018). In this study, self-developed questionnaires were distributed to supervisors and registered midwives who were active in maternity units in order to gauge the appropriateness and relevance of the questionnaire's content concerning midwifery practices. Prior to the main research, the questionnaires were presented to midwives in maternity units to ensure their suitability and comprehensiveness.

- *Face validity*

Face validity is the least effective kind of instrument validity, the instrument appears to measure what it is supposed to and it is essentially based on an intuitive judgment made by experts Polit & Beck (2017). Pilot study was to identify any potential issues, confusing questions with the questionnaire's layout. In the process of enhancing the questionnaire, it was shared with expects, that is the registered midwives, supervisor and a qualified

biostatistician for their insights and validation. This step was taken to ensure that the questionnaire had an intuitive and apparent alignment with its intended purpose.

- *Reliability*

Reliability is the degree to which an instrument can be depended on to produce consistent results if it is used repeatedly over time on the same respondents, or if used by two researchers (Brink et al., 2018). Cronbach's alpha was used to assess the internal consistency of the questionnaire. Pilot study was conducted to identify any unclear or confusing questions which allowed the researcher to make revisions accordingly.

1.9 Bias

Bias is any influence that produces a distortion in the results of a study or that strongly favours the outcome of a particular finding of research (Polit & Beck (2017). According to Brink et al. (2018), bias can occur at any stage of the research process and includes research subjectivity, sampling bias and respondent bias. In this study, leading questions were avoided in order minimise bias. Simple random sampling was used which granted all the participants equal chance of inclusion in the study.

- *Researcher subjectivity*

According to Brink et al. (2018), the researcher's experiences and expectations may distort the information in a specific direction. In this study, research subjectivity was ensured by use of use structured questionnaires to ensure uniformity in data collection. In addition, a pilot study was conducted to identify and address issues with the questionnaire, procedures and interpretations of the results before the main study.

- *Sampling bias*

Sampling bias refers to the over-or-under-representation of a segment of the population which impacts the purpose of the study and its validity. (Brink et al., 2018). To ensure there is no sampling bias, the researcher adhered to the rules of cluster sampling to select the sample and avoid using the researcher's preferences in the selection of the sample.

1.10 Ethical considerations

The research proposal was submitted to the Turfloop Research Ethics Committee (TREC) for ethical clearance and it was obtained TREC/61/2021: PG. Permission to conduct the study was obtained from the Limpopo Department of Health and the CEOs of Witpoort and

Lephalale hospitals. A verbal and written informed consent form (Appendix 1) was provided to each registered midwife. Individuals are autonomous, they have the right to self-determination, and they can decide whether to participate in the study without the risk of penalty or prejudicial treatment (Brink et al., 2018). The researcher needs to ensure the respondents' well-being. The researcher ensured that collected data was not disclosed to anyone to ruin the reputation of any institution. The principle of justice refers to respondents right to fair selection and treatment (Polit & Beck (2017). A research respondent has the right to expect that information collected from or about them will remain anonymous and confidential. The respondents were not identified by name during the study to protect their identity. Numbers were allocated to each respondent to ensure that their names are not exposed in the studies.

1.11 Significance of the study

The results of the study may serve as a guide and reference for the student midwives undertaking similar studies. At Witpoort and Lephalale hospitals the study results might bring improvement and effectiveness in the maternity units with better skill, strategy and knowledge and assist them with organising the enrolment procedures in their working environment. Midwifery as a profession might have better skilled and more competent midwives to optimise the normal biological, psychological, social and cultural processes of childbirth and the early life of the new-born. It might promote partnership at work among women, respect and collaborate with other health care professionals to improve the standard of Midwifery. This study might be a useful reference for future researchers who may plan to make a related study. They might be able to gather information, and this could serve as a building block to a larger study.

1.12 Outline of Subsequent Chapters

Chapter 2: Literature Review

Chapter 3: Research Methodology

Chapter 4: Presentation and Discussion of the Results

Chapter 5: Summary, Limitations, Recommendations and Conclusion

1.13 Conclusion

Chapter one discussed the overview of the study, which included the introduction and background of the study, the problem statement, the theoretical framework, and the aim of

the study. In addition, the research questions, the objectives of the study, the overview of the research methodology and the significance of the study were also discussed in Chapter 1. Chapter 2 discuss the literature review of this study.

CHAPTER 2

LITERATURE REVIEW

2.1 INTRODUCTION

Polit & Beck (2017) refer to the literature review as a critical summary of existing knowledge on a topic, often prepared to contextualise the research problem. The literature review was obtained from published articles, journals, science direct, eBooks, Google scholar, and books from the library. The purpose of the literature review is to conduct a critical and analytical appraisal of recent scholarly work on the topic in determining what is already known about the topic.

The researcher obtained a comprehensive picture of the current knowledge base which assisted with the direction of the study's planning and execution. It identifies the research problem and refines the research questions; in this way the researcher was able to identify gaps in the study and find solutions. In addition, the literature review was used to obtain clues about the methodology and the instruments to use. The researcher was able to know which approach to take and which instruments to use. Led by these factors this study made use of a self-administered questionnaire to collect the necessary data (Brink, van der Walt & van Rensberg, 2018).

2.2 The supportive care during intrapartum stage

Midwives can facilitate the process of physiological labour and birth by enabling the interplay of the reproductive hormonal and neuro-hormonal mechanism, through their kind and respectful caring practices which promote oxytocin release for effective uterine contractions during labour and the relaxation of the birth canal (Nieuwenhuijze, Thompson, Gudmundsdottir & Gottfreðsdóttir, 2020). The best intrapartum care requires in-depth knowledge of current research, and critical analysis of own practices to come up with the best practice initiatives tailored to meet the individual needs of women and their families (Uvnas-Moberg, 2014). According to Nieuwenhuijze et al. (2020), alleges that midwives should be capacitated to understand research in their clinical areas.

The scope of midwifery practices views a midwife as a recognised individual who is responsible and accountable in the profession. Who works in partnership with women to give

the necessary support, care and advice during pregnancy, labour and the puerperium period. In addition to conducting births, the midwife's role responsibility is providing care for the newborn and infant (International Confederation of Midwives, 2011). It states that the midwife may practice in any setting including the community, clinics and health units, hospitals and the home, if the midwife has the qualities of midwifery care which includes employing preventative measures, promoting normal birth and detecting maternal and infant complications (ICM, 2011). Assessing appropriate assistance and medical care, providing emergency care, offering health counselling to the women, family and community and offering antenatal education and preparation for becoming a parent as well as offering sexual and reproductive health education about the care of the child (ICM, 2011).

2.3 Overview of the Global strategic directions for strengthening nursing and Midwifery 2016–2020

The Global strategic directions for strengthening nursing and midwifery 2016–2020 provide a framework for the WHO and various key stakeholders to develop, implement and evaluate nursing and midwifery accomplishments to ensure available, accessible, acceptable, quality and safe nursing and midwifery interventions at global, regional and country levels which enable all involved stakeholders to demonstrate commitment, be accountable and report progress on essential elements. Furthermore, to optimise leadership, strengthening accountability and governance which bring mobilizing political will for the nursing and midwifery workforce. For their effective contribution to the Sustainable Development Goals (SGDs) and universal health coverage, the global strategic directions embrace strategic partnerships with key stakeholders at all levels as essential for their implementation (World Health Organisation, 2015).

2.4 Midwives' roles and responsibilities

Roles and responsibilities of a midwife encompass a wide range of tasks and duties related to providing comprehensive care to women and their families throughout the antepartum, intrapartum, and postpartum periods (Campbell, 2017). According to Mattison, Lavis, Wilson, Hutton and Dion (2020), there are various roles and responsibilities that a midwife is expected to provide at all times to women during antepartum period which includes: conducting initial assessments and health screenings, providing comprehensive antepartum care, including regular check-ups, monitoring fetal development, and identifying and

managing any potential complications, offering education and counselling on nutrition, and antepartum exercises, etc; and providing emotional support and addressing the physical and emotional changes experienced during pregnancy. Furthermore, midwives are expected to be leaders who plan, provide and review women's care with their input and agreement from initial antepartum assessment through postpartum (Mona, 2016).

Midwives are communicators so they should understand the effectiveness of communication as it helps to develop a trusting relationship with pregnant women and family members (Mona, 2016). A midwife could be regarded as a manager and one of their most important tasks is that they should manage all the circumstances surrounding pregnancy and labour. According to Mattison et al. (2020) some of the intrapartum roles and responsibility of a registered midwives includes: monitoring and assessing the progress of labour, providing continuous support and comfort measures to women, such as pain management techniques, positioning assistance, and emotional support, facilitating effective communication and collaboration between the woman, her family, and the healthcare team.

In addition, identifying and managing any complications that may arise during labour and birth and assisting with vaginal deliveries, ensuring the safety and well-being of the mother and newborn, and administering medications, if within the midwife's scope of practice and in accordance with local regulations (Campbell, 2017). Where appropriate, they should identify problems and refer to obstetricians and other specialists timeously. Midwives are also educators, and they should provide high-quality, culturally sensitive health education to promote healthy, helpful family life and positive parenting (Mattison et al., 2020).

Midwives are also counsellors whose duty it is to provide information and counsel pregnant women on self-care including nutrition, hygiene, breastfeeding, and health promotion (Campbell, 2017). They counsel people as family planners, by providing information about the different types of family planning methods available and assist couples in making decisions about what would best suit their needs (Mona, 2016). Midwives are also record-keepers as it is an integral part of midwifery practices. It helps to make continuity care easier and to enable identifying problems in an early stage. According to Mattison et al. (2020) indicated the following as some of the roles and responsibilities of a midwives during postpartum period: conducting postpartum assessments for both the mother and new-born,

providing guidance and support for breastfeeding initiation and management, monitoring the physical and emotional recovery of the mother, assessing and managing postpartum complications and addressing any concerns or questions. In addition, providing emotional support and also promoting health of the women and babies.

2.5 Midwifery practice

Globally, midwifery practice is governed by policies, protocols, and guidelines that direct towards safety (Yang & Kozhimannil, 2015). These guidelines and policies are meant to mitigate risks for both the mother and the foetus. Midwifery practice is concerned with the promotion of women's health, it is centred upon an understanding of women as healthy individual progressing through life cycle, based on a respect for pregnancy as a state of health and childbirth as a normal physiological process and profound event in a woman's life. Midwifery care holds a fundamental respect for the personal autonomy and dignity of the woman and her reproductive rights also requires a high level of knowledge in several fields including health care, psychology, sociology, counselling and humanities (Campbell, 2017). In contrast, the study conducted by Oyetunde (2014) shows that autonomy appears to be a challenging factor of practice in midwifery. The study revealed that Patients' rights are rarely observed by registered midwives in maternity units due to their perceptions that they are in control.

The specific scope of midwifery practice varies by country and jurisdiction. In Canada, midwives specialise in normal pregnancy, intrapartum and postpartum care from conception to six weeks postpartum whereas in South Africa midwives focus on normal and abnormal pregnancy, intrapartum and postpartum from conception to six weeks postpartum. The midwifery scope of practice reflects the internationally recognised scope of midwifery care as defined by the International Confederation Midwifery (2011) which states that the midwife recognised as a responsible and accountable professional who work in partnership with women to give necessary midwifery care, to conduct deliveries on the midwife own responsibility and to provide care for the new-born and infant.

This care includes preventative measures, the promotion of normal birth, the detection of complication in mother and child, the accessing of medical care and other appropriate assistance and the carrying out of emergency measures (Yang & Kozhimannil, 2015). In Australia, according to Watkins et al. (2023), the midwife standards for practice were informed

by a structured scoping review of the published literature between 2006 and 2016. Midwifery scope of practice was recognised to include: ‘woman-centred and primary health care, safe, supportive and collaborative practice; clinical knowledge and skills with interpersonal and cultural competence’.

In South Africa registered midwives provide most of maternal and child health care services, and for them to provide safe care, they are expected to comply with guidelines, policies and legislation governing their profession, as guided by the International Confederation of Midwives (Mathibe-Jele, 2022). The South African Nursing Council (SANC)"s Regulation 2598, “The Scope of Practice”, outlines the acts and procedures which are to be performed by the registered midwife to safeguard pregnant, in labour and post-delivery women including their babies by setting standards of performance for all midwives and nurses. Regulation 387, “Acts and Omissions”, records that SANC may establish disciplinary measures against nurse’s adverse conduct, including assault, abuse, harassment of health care users and colleagues or any conduct bringing the profession into disrepute, and disclosure of confidential information (SANC, 2015). Furthermore, National DoH has developed strategies to minimize the burden of care and for improved quality service delivery, which includes the development of Patient Centred Maternity Care (PCMC) codes of practice to complement the SANC regulations (DoH, 2013).

The study conducted by Healy et al. (2020) found that midwives practices were influenced by their years of experience, the designation of the maternity unit where they work, and that midwives’ practices were not always consistent with the scientific literature or with a physiological approach to birth. Therefore, the regulations set out parameters that guide midwives in providing quality care to pregnant and birthing women in South Africa.

2.6 BARRIERS AFFECTING MIDWIFERY PRACTICE

Registered midwives experienced difficulties related to midwifery practice because of the shortage of relevant staff and material resources, as well as managerial issues that affected performance (Wibbelink., James & Thomson, 2022).

2.6.1 Shortage of maternity health care providers

The shortage of staff according to (Lumadi & Matlala, 2019) in maternity units has a huge impact on the care of pregnant women and neonates. Registered midwives often need to work long hours under very stressful conditions which can result in fatigue, injury and job dissatisfaction. According to Adegoke, Atiyaye, Abubakar, Auta & Aboda (2015). Midwives suffering in these environments are more prone to make medical errors and unfortunately, the outcome is that patient quality care can suffer resulting in a variety of preventable complications including medication errors, emergency room overcrowding and more alarmingly, an increased mortality rate. In 2011 a study by the American College of Obstetrics and Gynaecology (ACOG) examined several factors impacting the midwives, obstetricians and gynaecologists' workforce and concluded that the United States is facing a very serious shortage of Maternity Care providers. The meaning of this shortage has been driven by several significant trends (Congress of Obstetrics and Gynaecology, 2011).

The study by Moyimane, Matlala and Kekana (2017) revealed a shortage of midwifery practitioners and increased workloads in South Africa. The deficit amounted to 2.4 million doctors and midwives/nursing personnel per 10 000 population compared with 19 doctors and 49 midwives/nurses per 10 000 for the Americans: 32 doctors and 78 midwives/nurses per 10 000 for Europe. The similar finding Matlala and Lumadi (2019) indicated that impact of shortage of registered midwives was reported to be directly related to poor provision of quality midwifery care because of increased workload, leading to low morale and burnout.

Shortage of staff and long hours routinely seem to exacerbate the challenging working condition of midwife practitioners, thus making job dissatisfaction and overwork prevalent and turnover more attractive. The results of the study conducted by Lumadi and Matlala (2019) showed that senior managers did not support midwives with an adequate supply of human resources despite the increased number of deliveries midwives conducted. Some respondents indicated that increased workloads are due to several factors such as an inadequate number of midwifery practitioners on duty. Feeder clinics not adhering to the referral criteria set, thus referring pregnant women without a genuine reason, resulting in too many pregnant women under the midwife's care (Mdoa, Ersdal & Mduma, 2018).

2.6.2 Shortage of equipment and material resources in the maternity unit

Equipment and material resources are necessary tools used by midwives in hospitals to provide quality midwifery care, prevention, diagnosis and treatment of disease in patients. Access to functional medical equipment is a challenge in low-and-middle-income countries. The World Health Organisation (2015) estimated that 50 to 80 per cent of medical equipment in developing countries is not working, creating a barrier to the ability of the health system to deliver health services to patients. Moyimane et al. (2017) agree that serious shortage of medical equipment at the maternity units occurred in the form of unavailability of equipment, low quality and poor maintenance of the available equipment which had a negative impact on midwifery practice.

2.7 Midwifery perspective on labour support

Labour support was viewed as affordable intervention that responds to the basic emotional and physical needs of a woman during a painful and vulnerable moment of her reproductive career, namely childbirth. Pain during labour is a physiological phenomenon. Lumadi and Matlala (2019) pointed out that the source of pain during the first stage of labour was associated with a reduced blood supply to the uterine muscle during contractions; in the second stage of labour, the source of pain was associated with the stretching of the vaginal wall and perineum and compression of pelvic structures during the passage of the descending head. The pain that women experience during labour was affected by physiological and psychological factors and its intensity varied greatly.

According to Moyimane et al. (2017 “Labour support is the work of personal caring and support behaviours provided to the labouring woman and encompasses the dimensions of therapeutic presence”. During labour, midwives are expected to show a caring attitude and provide words of encouragement to deliver a healthy baby. The support and treatment the women receive during labour can affect them positively or negatively for their entire life. Midwives need to have the necessary skills and knowledge to ensure effective care for his/her patients. In addition, giving birth can be a traumatic experience if the woman is not prepared for the delivery process. They need to be provided with information and strategies to avoid unnecessary interventions. A positive relationship with the midwife can be critical to women (Mdoa et al., 2018).

Thopola and Lekhuleni (2019) stated that when a relationship is ‘done well’ it undoubtedly benefits all parties and enhances feelings of self-worth, well-being and satisfaction. Poor relationships on the other hand can be damaging to women in terms of self-esteem, feelings of control and the quality of experience and for the midwives in terms of job satisfaction and emotional labour. Psychological childbearing is a complex experience. Midwives need to both understand this complexity and be able to build effective relationships with women while they are in pain, distracted, anxious and fearful or disadvantaged in some way and offer the support that the women need.

Social support is a flexible concept which is consequently difficult to define. Mdoa, et al. (2018) define it as ‘an exchange of resources between at least two individuals perceived by the provider or recipient to be intended to enhance the well-being of the recipient.’ The three key components of social support are Emotional support, which may be a warm and caring relationship, a presence or companionship, or a willingness to listen, followed by Informational support, which is the giving of good advice or information and Practical or tangible support which may be financial or could be physical comforting support during labour. Most social support is provided by friends, family and the community, but social support by health professionals is very important. In addition, it has been shown to have a positive impact on the general health and well-being of the person being supported. Moyimane et al. (2017) say It works as a buffer against stress to assist with the development of coping strategies, it can influence behaviours that impact health also It can facilitate recovery from illness.

Midwives have a key role in supporting women through pregnancy and childbirth (Campbell, 2017). Key areas of midwifery support identified by women are good communication, good listening skills, practical support also knowing their careers and being known by them. Continuity of care and social support should be integral to maternity service. The effects of social support in pregnancy reduce anxiety resulting in greater confidence, lack of nervousness that reduces fear and generates positive feelings towards birth. It also reduces psychological and physical morbidity. In addition, it can increase satisfaction with care and communications and gives an increased sense of control. With labour, it can reduce the duration of labour, the amount of pain relief required and operative vaginal delivery. The 5-min Apgar score of <7, also reduces the likelihood of caesarean section where companions were not normally admitted (Thopola & Lekhuleni (2019).

2.8 Health promotion model

Pender, Murdaugh and Parsons (2006) identifies the theoretical basis of the health promotion model (HPM) as drawing upon social cognitive theory, expectancy-value theory and the nursing perspective of holistic human functioning. It emphasizes the promotion of health and well-being through the adoption of positive health behaviours. It can be effectively applied to midwifery practice to enhance the overall health outcomes of women and their families. Therefore, the HPM guided this study by providing a comprehensive framework for midwives to promote holistic health and well-being during pregnancy and childbirth. HPM promotion model focuses on three areas: individual characteristics and experiences, behaviour–specific cognitions and affects, and behavioural outcomes (Pender, Murdaugh & Parsons, 2006). Health Promotion Model is discussed following the schematic presentation (figure 2.1) shown in below.

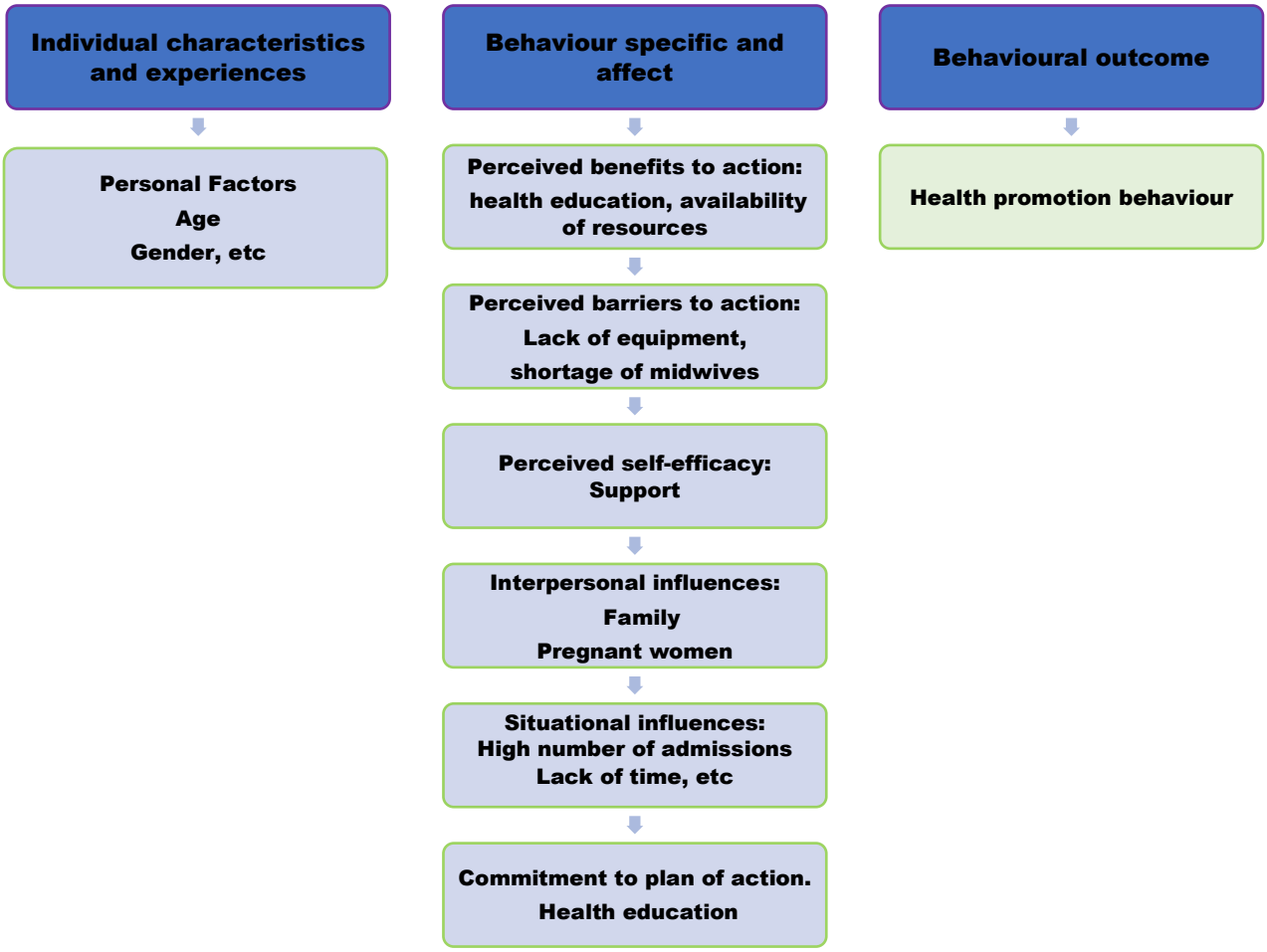

Figure 2.1: Health Promotion Model (Adapted from, Pender, Murdaugh & Parson, 2006).

2.8.1 Individual characteristics and experiences

The Health Promotion Model recognizes that individuals have unique characteristics, including personal factors, experiences, and beliefs that influence their health behaviours. Individual characteristics and experiences are unique to each person. The importance of any characteristics or experiences varies with the behaviour under consideration of personal factors. (Pender et al., 2006). In this study, unique individual characteristics of the registered midwives were age, gender, qualifications and clinical experience in maternity ward.

2.8.2 Behaviour-specific cognitions and affect.

Behaviour-specific cognitions and affect refer to the thoughts, beliefs, and emotions that are specific to a particular behaviour or action. These cognitions and affective responses play a crucial role in shaping and influencing behaviours and can vary depending on the context and situation (Pender et al., 2006). Behaviour-specific cognitions and affect is broken down into the following concepts: perceived benefits to action, perceived barriers to action, perceived self-efficacy, interpersonal influences, situational influences and commitment to plan of action which are discussed below.

- *Perceived benefits of actions*

Perceived benefits of actions involve personal experiences with positive outcomes, increase the motivational importance of the target behaviour and relate to the expectations outcomes such as health education and treatment (Pender et al., 2006). In this study, the researcher wants to evaluate midwifery practice based on personal experiences of the registered midwives. Furthermore, their behaviour towards availability of resources and the health care outcomes. Interpersonal influences are a person's belief or thought about behaviours such as family or pregnant women.

- *Perceived barriers to action*

Perceived barriers to action are subjective and can vary among individuals based on their unique circumstances, beliefs, and personal experiences (Pender et al., 2006). Identifying and addressing these barriers can help individuals overcome obstacles and facilitate behaviour change. Providing social support, resources, education, and creating a supportive environment can help individuals overcome perceived barriers and take positive action. In

this case, it includes the registered midwives, as the health care providers, as the primary sources which include norms and provides social support to the women.

- *Perceived self-efficacy*

Perceived self-efficacy refers to an individual's belief in their ability to successfully engage in a particular behaviour (Pender et al., 2006). Registered midwives can promote self-efficacy by providing accurate and positive information, offering support, and encouraging women to set achievable health goals during pregnancy and childbirth. This can empower women to actively participate in their care and make informed decisions.

- *Interpersonal influences*

Interpersonal influences are cognitions concerning behaviours, beliefs or attitude of others. Interpersonal influences include norms, social and emotional support, and its primary sources are peers, families and health care providers (Pender et al., 2006). In this study, interpersonal influences primary sources were the registered midwives and families who played a significant role and contributed to shaping women's health behaviours during intrapartum, intrapartum and postpartum period.

- *Situational influences and Commitment to a plan of action*

Situational influences are an option which is perceived as being available, demand characteristics and environmental features such as high number of admissions, infrastructure, shortage of midwives, etc. Committed to a plan of action that initiates the behaviour (Pender et al., 2006). The underlying cognitive process is the commitment to carry out a specific action at a given time and place with a specific person or alone irrespective of anything else competing for preference such as health education. Social and emotional support and encouragement to the women can improve their health behaviour during antepartum, intrapartum and postpartum period.

2.8.3 Behavioural outcomes

According to Pender et al., (2006), a behavioural event is initiated by a commitment to plan of action unless there is a competing demand and cannot be avoided or a competing preference that cannot be restricted. The desired behavioural outcome is health-promoting behaviour, the purpose is for the registered midwives to realise positive outcomes, such as improved functioning or improved quality of midwifery practices. The intention is by carrying

out a plan of action; health promoting behaviours identified in the plan of action will lead to better health for pregnant, in labour and post-delivery women. Furthermore, the HPM acknowledges that pregnant women faces health challenges throughout pregnancy, however, support from the registered midwives could assist them to effectively manage and cope with the challenges faced.

2.9 Conclusion

Chapter two illustrated the essential role of midwifery in providing supportive intrapartum care and highlighted the importance of global strategic directions in shaping midwifery practices. Midwives' roles and responsibilities have been shown to be fundamental in achieving comprehensive maternal and newborn care. Despite the barriers such as the shortage of midwives and essential resources, there is a growing need for investment in these areas to ensure the well-being of women and babies. The Health Promotion Model has guided this study, offering a strong foundation for improving maternal care. In the face of these challenges and opportunities, it is evident that midwifery is a critical pillar in the broader healthcare system and plays a vital role in promoting holistic health and well-being for women and babies. Efforts to overcome barriers and uphold best practices in midwifery should remain a priority for the advancement of global healthcare. The forthcoming chapter three will present a comprehensive discussion of the research methodology, addressing biases, validity and reliability and, also ethical considerations.

CHAPTER 3

RESEARCH METHODOLOGY

3.1 INTRODUCTION

This chapter discusses the research methodology which comprises the discussion research approach and designs, the study settings, population and sampling, data collection, data analysis, data management, validity and reliability. Furthermore, ethical considerations including the ethical clearance and permission, and informed consent, the principle of respect to persons, the principle of beneficence and the principle of justice as well as anonymity, confidentiality and bias are discussed in this chapter.

3.2 Research approach

The quantitative research method was used in this study to collect data that was measured and summarized numerically (Brink, van der Walt & van Rensberg, 2018). In this study, a quantitative research method was used to collect data to evaluate the midwifery practices among registered midwives at Witpoort and Lephalale hospitals in Limpopo Province, South Africa.

3.3 Research designs

Botma, Greeff and Mulaudzi (2016) refer to a research design as a blueprint for conducting research. A descriptive cross-sectional research design was used to ’evaluate and describe the Midwifery practices among Registered Midwives at Witpoort and Lephalale hospitals in Limpopo Province South Africa.

3.3.1 Descriptive design

Descriptive design studies where more information is required in a particular field about characteristics through the provision of a picture of the phenomenon in certain situations as it occurs naturally (Creswell, 2014). Numerical data were collected from a sample, statistical analysis to summarize and interpret the data. A descriptive design was appropriate in this study because the researcher intended to describe midwifery practices among registered midwives.

3.3.2 Cross-sectional design

Cross-sectional design according to Brink et al. (2018), are studies used to determine data at one point in time, data were collected on only one occasion. Cross-sectional design was used to collect data from registered midwives in Witpoort and Lephalale hospital maternity units from September to November 2021.

3.4 Study settings

The study was conducted at Witpoort and Lephalale hospitals which are in Limpopo province. Witpoort and Lephalale Hospitals are public hospitals governed by the Limpopo Department of Health. In both hospitals services are free for pregnant and breastfeeding women as well as children under the age of six years old. They have maternity units in which midwifery care is provided for women during intrapartum, antepartum and postpartum. On Wednesdays and Tuesdays every week the hospitals conduct high risk clinics for pregnant women respectively, who are attended to by registered midwives and doctors who allocated in antenatal clinic.

Figure 3.1: Map of Waterberg Municipality (Adopted from Limpopo).

(www.localgovernment.co.za/provinces/views5/limpopo)

3.5 Population and Sampling

Population is the entire group of persons or objects that meets the criteria that the researcher is interested in studying (Brink et al., 2018). The population relevant to this study was registered midwives in terms of the South African Nursing Council Regulation No.R.425 of 22 February 1985 as amended. The total number of the population of registered midwives was 100 with Witpoort hospital having 45 registered midwives and Lephalale hospital, 55.

Sampling refers to the process in which researchers select a portion of people from a population to obtain information regarding a phenomenon in a way that represents the whole population (Brink et al., 2018). Simple random sampling method was used to select the sample size of 80 respondents. Sample size according to Polit & Beck (2019) is the number of people who participate in a study, an important factor in the power of the analysis and statistical conclusion validity. The fishbowl technique was used to select the sample size. The sample size was calculated using Slovin's formula to determine the sample size. Slovin's formula was used to calculate the sample size (n) given the population size (N) which was 100 and a margin of error (e) which is 0,05. The random sampling technique formula below was used to estimate sample size (Slovin E.1960) is indicated below a.

$$n = \frac{N}{1+Ne^2}$$

$$n = \frac{100}{1+100\ (0.05)^2}$$

$$n = \frac{100}{1+100(0.0025)}$$

$$n = \frac{100}{1.25}$$

$$n = 80$$

- *Inclusion criteria*

In this study, all registered midwives who were registered with the South African Nursing Council act R425 of 22 February 1985 and who completed a midwifery course were included. The registered midwives with more than two years' experience working in a maternity unit were included because they are more experienced with pregnancy, labour and puerperium and are relevant to the study.

- *Exclusion criteria*

In this study, registered midwives who are registered with South African Nursing Council act R425 of 22 February 1985 as amended not working in the maternity unit with less than two years' experience were excluded since they were believed not to have more experience relevant to the study.

3.6 Data collection

- Recruitment of the respondents

The researcher telephonically called the personal assistants of the Chief Executive Officers (CEO) of the selected hospitals and requested an appointment with the CEOs. The appointment was scheduled, and the researcher met with the CEOs of the selected hospitals before data collection, presented the permission from the Department of Health (DoH), research proposal, ethical clearance certificate and questionnaire and requested permission to conduct the study. The aim and objectives and respondents of the study were highlighted. After the permission to conduct a study was granted by the CEOs, the researcher approached the Nurse managers for further permission. The Nurse managers called the maternity units' managers and indicated that the researcher was coming to the unit. The study was then discussed with the maternity units' managers of the selected hospitals, wherein they called registered midwives who were on duty and indicated the reasons of the researcher's visit, thereafter a date for data collection was set with the researchers. The researcher met with the registered midwives at maternity units on the given dates and conducted a pre-test.

- *Pre-test*

According to Botma et al. (2016) a pilot study is a mini-scale version of the study, whereas a pre-test only tests some aspects of the study such as useability of the data collection tool. The pre-test was done to test the useability of the study. The pre-test included registered midwives regarded as experts in the field of study who were knowledgeable information required. Five (5) registered midwives who did not form part of the main study were given the questionnaires to complete and then returned to the researcher. The pre-test helped the researcher to assess and test validity and reliability of the questionnaire prior utilization for the main study (Creswell, 2014). All respondents were female registered midwives with more

than two years ‘experience. The results indicated no flaws on the questionnaire and there was no need to change or refine any question.

- *Components of data collection instrument*

The self-developed questionnaire was developed with the assistance of midwifery practice related literature and the health-promotion model. The questionnaire consisted of 36 questions closed-ended questions, divided into 4 sections (Appendix 2) namely:

Section A: Demographic data, which comprise of 5 questions.

Section B: Factors affecting midwifery practice, comprised of 10 questions.

Section C: Availability and functionality of equipment, comprised of 9 questions; and

Section D: Evaluation of midwifery practices 12 questions.

- *Data collection process*

After the permission to conduct a study was obtained from maternity unit managers, the respondents were briefed by the researcher about the aim and purpose of the study before the distribution of questionnaires (Creswell, 2014). The questionnaires consisted of closed-ended questions that were also completed autonomously in the study (see Appendix 2). Verbal consent was voluntarily obtained from every respondent before participating in the study. Written informed consent was obtained by asking the respondents to sign the consent form. The respondents were informed that their participation in the study was voluntarily (Brink et al., 2018). The questionnaire was delivered to the respondents by the researcher at both Witpoort and Lephalale hospitals. The questionnaires were distributed to the registered midwives on duty to complete in their private room, however, the researcher was available in case any clarity was needed. The duration for completion of the questionnaires was approximately 30 to 40 minutes. In addition, additional 10 minutes were granted to those who couldn’t finish within 40 minutes. Data were collected for a period of 3 months, that was from September to November 2021.

3.7 Data analysis

Data analysis is the systematic organisation and synthesis of research data (Pilot & Beck, 2017). The collected data were coded, this enabled the researcher to refer in case of missed data. Data were captured on Microsoft Office Excel and later submitted to the statistician to assist in importing to the Statistical Package for Social Sciences (SPSS) software. Data were

analysed using SPSS version 27 with the assistance of a statistician. Descriptive statistics were used to analyse the data. Descriptive statistics is a form of statistical analysis that organise and summarise the collected data in a form of frequencies, percentages and averages (Holcomb, 2017). Data were presented in a form of bar graphs and tables. Midwifery practices were the independent variables that could be manipulated to affect the outcome of the experiment whereas the registered midwives were the dependent variables that represent the outcome of the experiment. In this study, a midwifery practices were assessed to established how they affects the registered midwives in the hospitals.

3.8 Validity and Reliability

Validity and reliability are measures used to ensure data quality in a quantitative research design.

3.8.1 Validity

Validity refers to the extent to which the results of an experiment can be attributed to the intentionally manipulated independent variables rather than unintended external influences. As stated by Brink et al. in 2018, when evaluating the data collection instrument's validity, the goal is to determine if it accurately measures the intended characteristics, taking into account the specific context in which it is used. Achieving validity also necessitates that the instrument is consistent and dependable. The study incorporated two forms of validity assessment, namely content validity and face validity.

- *Content validity*

Content validity is an assessment of how well an instrument represents all components of the variable to be measured and always precedes data collection (Brink et al., 2018). In this study, self-developed questionnaires were distributed to supervisors and registered midwives who were active in maternity units in order to gauge the appropriateness and relevance of the questionnaire's content concerning midwifery practices. Prior to the main research, the questionnaires were presented to midwives in maternity units to ensure their suitability and comprehensiveness.

- *Face validity*

Face validity is the least effective kind of instrument validity, the instrument appears to measure what it is supposed to and it is essentially based on an intuitive judgment made by

experts Polit & Beck (2017). Pilot study was done to identify any potential issues, confusing questions with the questionnaire's layout. In the process of enhancing the questionnaire, it was shared with expects, that is the registered midwives, supervisor and a qualified biostatistician for their insights and validation. This step was taken to ensure that the questionnaire had an intuitive and apparent alignment with its intended purpose.

3.8.2 Reliability

Reliability is the degree to which an instrument can be depended on to produce consistent results if it is used repeatedly over time on the same respondents, or if used by two researchers (Brink et al., 2018). Cronbach's alpha was used to assess the internal consistency of the questionnaire. Pilot study was conducted to identify any unclear or confusing questions which allowed the researcher to make revisions accordingly.

3.9 BIAS

Bias is any influence that produces a distortion in the results of a study or that strongly favours the outcome of a particular finding of research (Polit & Beck (2017). According to Brink et al. (2018), bias can occur at any stage of the research process and includes research subjectivity, sampling bias and respondent bias. In this study, leading questions were avoided in order minimise bias. Simple random sampling was used which granted all the participants equal chance of inclusion in the study.

3.9.1 Researcher subjectivity

According to Creswell (2014), the researcher's experiences and expectations may distort the information in a specific direction. In this study, the researcher did not tell the respondents the experiences and expectations because telling them could make the respondents answer questions according to the experiences and expectations of the researcher. Furthermore, research subjectivity was ensured by use of structured questionnaires to ensure uniformity in data collection. In addition, a pilot study was conducted to identify and address issues with the questionnaire, procedures and interpretations of the results before the main study.

3.9.2 Sampling bias

Sampling bias refers to the over- or under-representation of a segment of the population which impacts the purpose of the study and its validity. It is caused by the researcher and

occurs when samples are not selected carefully (Brink et al., 2018). To ensure there is no sampling bias, the researcher adhered to the rules of simple random sampling to select the sample and avoid using the researcher's preferences in the selection of the sample. In this study, sampling bias was minimised by utilizing simple random sampling in the form of fishbowl, everyone had an equal chance of being included in the study.

3.10 ETHICAL CONSIDERATIONS

Polit and Beck (2017) refers to ethical considerations as a system of moral values that is concerned with the degree to which research procedures comply to professional, legal and social obligation to the study respondents. The researcher adhered to the following principles: ethical clearance, permission to conduct a study, informed consent, principle of respect for persons, principle of beneficence, principle of justice, anonymity and confidentiality.

3.10.1 Ethical Clearance

The ethical clearance (TREC/61/2021:PG) was granted by Turfloop Research Ethics Committee (TREC) after the following steps were followed: presentation of the research proposal at the Department of Nursing Science, review at the School of Health Care Sciences Research Committee and ratification by Faculty Higher Degrees committee and finally submitted to TREC for ethical clearance.

3.10.1 Permission

Permission to conduct study was obtained from the Limpopo Department of Health after submitting ethical clearance, research proposal and questionnaire to National Health Research Database. Permission to access Witpoort and Lephalale hospitals were granted by the Chief Executive Officers after submitting the Limpopo Department of Health approval letter, ethical clearance certificate and research proposal. Data collection commenced after permission was granted. Further permission was sort with the operational managers of the maternity units to gain access and collect data from the registered midwives.

3.10.2 Informed consent

The researcher ensured informed consent by explaining the purpose, the aim and objectives of the study to the respondents, the possible benefits and risks which respondents may be exposed to (Creswell, 2014). The respondents were informed that participation in the study was voluntary and that withdrawal from the study was permitted at any time whenever they

felt uncomfortable, without prejudice and punishment (Babbie & Mouton, 2014). After explaining the purpose of the study, the respondent gave a verbal consent. Furthermore, a written informed consent (Appendix 1) was issued, and the respondent signed the form to grant permission to participate in the study. The researcher explained the data collection method used, namely, questionnaires.

3.10.3 Principle of respect for persons

Individuals are autonomous, they have the right to self-determination to decide to participate in the study without the risk of penalty or prejudicial treatment, in addition, they have the right to withdraw at any time or refuse to give information and ask for clarification about the purpose of the study, so the researcher avoided any form of coercion. In this study, respect for persons was ensured by allowing the respondents to make informed decisions, maintaining privacy during completion of questionnaires and by keeping their information confidential (Brink et al., 2018).

3.10.4 Principle of beneficence

The researcher needs to ensure the respondent's well-being. The respondents have a right to be protected from discomfort and harm whether physical, psychological, emotional, economic or legal. In this study, the researcher did not identify the names of the institutions in the report, or any publication based on the report to such an extent that its image or reputation could be damaged or brought into disrepute (Creswell, 2014). The principle of beneficence was ensured by protecting the respondents from physical and emotional harm and discomfort. The respondents were prone to emotional and psychological harm due to the past difficult or traumatic situations they went through. The psychological counsellor was readily available for in case one suffered harm, however, no respondents experienced any kind of harm.

3.10.5 Principle of justice

The principle of justice refers to respondents' right to fair selection and treatment (Polit and Beck (2017). The respondent has the right to expect that information collected from or about them remains anonymous and confidential. The respondents’ identities were kept secret. The principle of justice was ensured by distributing the same questionnaire to all the respondents and by granting all equal chances to participate in the study through simple random sampling.

3.10.6 Anonymity and confidentiality

The respondents were not identified by names during the study to protect their identity. Numbers were allocated to each participant for identification to ensure that their names were not exposed in the study. Brink et al. (2018) describe that the respondents had the right to confidentiality whereby the researcher assured them that data collected from them, would not be disclosed to anyone nor given to any person who is not involved in the study. In this study, confidentiality was ensured by limiting the persons who had access to or were allowed to read the information document and the self-developed questionnaires. Data collected from the respondents were stored under lock and access was limited to the researcher and the supervisors. Data will be kept until it meets the standard for publication and at least three (3) years before it could be destroyed in case verification could be needed.

3.11. Conclusion

Chapter 3 discussed the research methodology which includes research designs, study settings, population and sampling, data collection, data analysis, validity and reliability, bias and ethical considerations. The presentation of the study results and discussion will be discussed in Chapter 4.

CHAPTER 4

PRESENTATION AND DISCUSSION OF THE RESULTS

4.1 INTRODUCTION

This chapter presents and discusses the results of the study. The results were analysed utilising SPSS version 27 with the assistance of the statistician. The results of the study are presented and discussed according to the sections of the questionnaire. Descriptive statistics such as frequencies and percentages were used for closed-ended questions.

4.2. Presentation of the results

Eighty (80) questionnaires were distributed to the respondents, only seventy (53) were completed and returned, however four (4) were spoiled because they were incomplete and twenty-seven (27) were not returned. Therefore, a total of forty-nine (49) questionnaires were analysed and data were presented in the form of tables and figures, frequencies and percentages.

4.3 SECTION A: Demographic data of the respondents

The demographic data includes age, gender, qualification and years of experience, and are presented as follows:

4.3.1 Age of the respondents

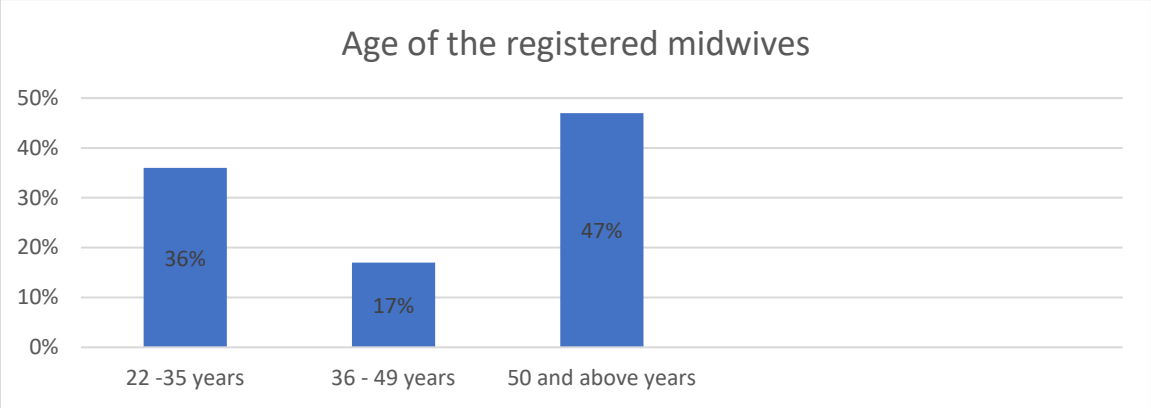

Figure 4.1 Age of registered midwives n=49

Figure 4.1 indicates the age of the registered midwives who participated in the study. The age was represented as follows: between 20-35 years (36%), 36-49 years (17%) and 50

and above years (47%). The results indicate that majority of the registered midwives were between 50 and above years, followed by 22 – 35 years and minority were between 36-49 years.

4.3.2 Gender of registered midwives

Figure 4.2 indicates the gender of the registered midwives who participated in the study.

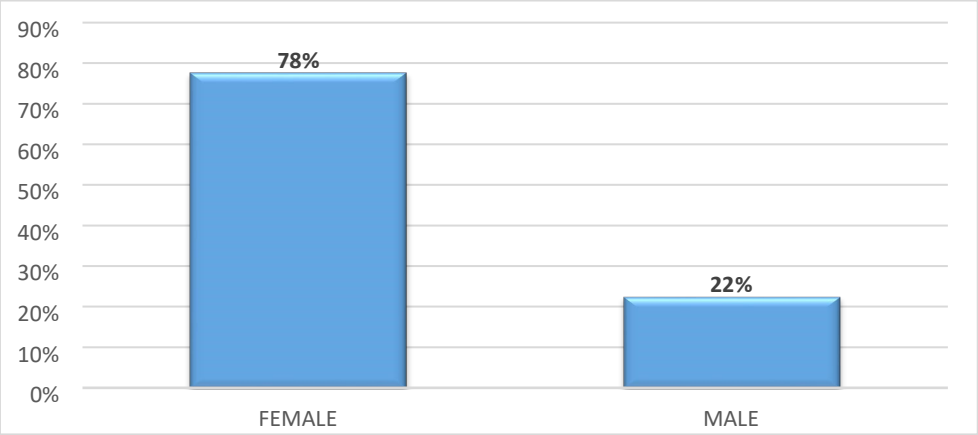

Figure 4.2 Gender of registered midwives n=49

Seventy-eight per cent (78%) of the respondents were females and (22%) were males. The findings in figure 4.1 indicate that the registered midwives in the hospitals where data were collected, majority were females and a minority of males. This implies that nursing and midwifery are female dominant professions. Women may have gender-preference when it comes to their midwives. Availability of both genders can respect and accommodate these preferences, promoting patient choice and satisfaction.

4.3.3 Qualifications of Registered Midwives

Figure 4.3 present the qualifications of the registered midwives who were allocated in maternity units.

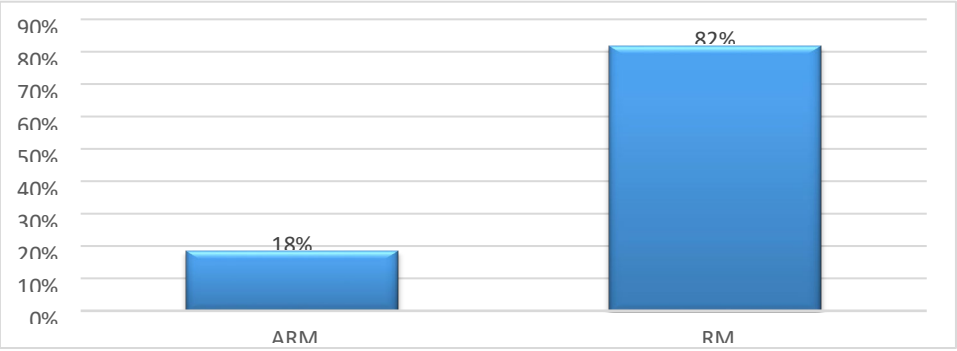

Figure 4.3 Qualifications of registered midwives, n=49

Eighteen per cent (18%) of the respondents were Advanced Registered Midwives (ARM) and 82% were registered midwives (RM), without speciality. Figure 4.3 shows that minority of the respondents obtained advanced midwifery speciality and the majority obtained basic midwifery qualification. A shortage of specialized midwives could potentially impact the quality of midwifery care, resulting in the provision of subpar services. Specialized training and additional skills are essential for managing complex or high-risk cases effectively.

4.3.4 Years of clinical experience in maternity units

Figure 4.4 indicates the years of experience of the respondents in maternity units.

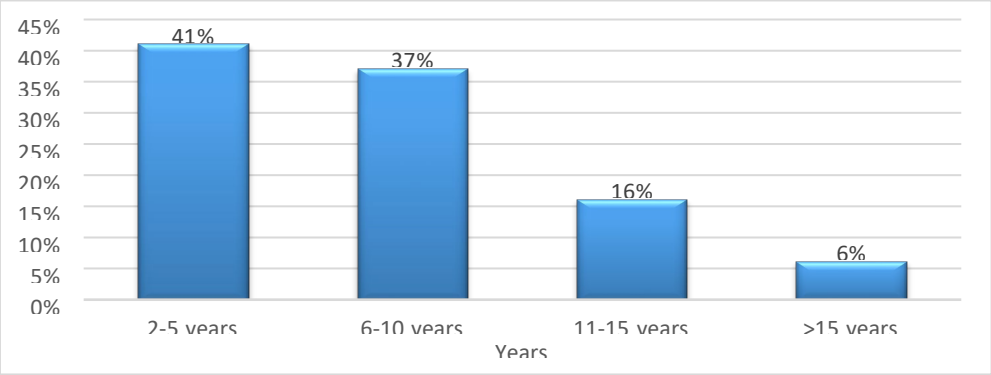

Figure 4.4 Years of clinical experience in maternity units

Figure 4.4 indicate that 41% of the respondents had 2-5 years, 37% had 6-10 years, 16% had 11-15 years and 6% had more than 15 years of experience working in the maternity unit. The results revealed that most of the respondents had less than 6 years of experience in the maternity unit and minority had more than 5 years clinical experience. The more experience a midwife has beyond five years, the better the quality of health care services rendered to the pregnant, in labour, post-delivered women and neonates

4.4 SECTION B: BARRIERS AFFECTING MIDWIFERY PRACTICE

4.4.1 The availability of resources verses midwifery practices in maternity units

Table 4.1 is a summary of the responses on the availability resources versus midwifery practice in maternity units. Strongly agree and agree were regarded as positive responses, while disagree and strongly disagree were regarded as negative responses.

Table 4.1: The availability of resources verses midwifery practices in maternity units

Resources	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1. Were linen savers used by the midwives to protect the sheets and mattress??	10(20.4%)	8 (16.3%)	8 (16.3%)	6 (12.2%)	17 (34.7%)
2. Did midwives replace the lines as part of preventing the inflections?	2 (4.1%)	4 (8.2%)	30(61.2%)	7 (14.3%)	6 (12.2%)
3. Did midwives use sterile gloves when treating pregnant women during childbirth?	25(51.0%)	14(28.6%)	2 (4.1%)	2 (4.1%)	6 (12.2%)
4. Did midwives supply women with pads for regular changes?	26(53.1%)	9 (18.4%)	8 (16.3%)	2 (4.1%)	3 (6.1%)
5. Did midwives use antiseptic solution and bleach (chlorine base compound) after rendering nursing care?	18(36.7%)	6 (12.2%)	25(51.0%)	0 (0%)	0 (0%)
6. Did midwives employ urinary catheters as needed during antepartum, intrapartum, and postpartum care?	22(44.9%)	16(32.7%)	8 (16.3%)	1 (2.0%)	2 (4.1%)
7. Did midwives utilize delivery beds that facilitate a semi-sitting or lateral position for women?	3 (6.1%)	4 (8.2%)	11(22.4%)	19(38.8%)	12 (24.5%)
8. Did midwives use toilet paper for their personal use and for pregnant women in the unit?	17(34.7%)	15(30.6%)	16(32.7%)	1 (2.1%)	0 (0%)

9. Are clean water supplies available and working properly in the delivery room for midwives use?	27(55.1%)	19(38.8%)	3 (6.1%)	0 (0%)	0 (0%)
10. Did the midwives use the logbook?	20(40.8%)	17(34.7%)	5(10.2%)	2(4.1%)	4 (8.2%)

- **Were linen savers used by the midwives to protect the sheets and mattress?**

The data in Table 4.1 demonstrates that 18 (36.7%) registered midwives expressed strong agreement regarding the presence of linen savers in the maternity unit while providing care to pregnant women. Conversely, 8 (16.3%) midwives held a neutral stance on the availability of linen savers, and 23 (46.9%) disagreed with their availability. The absence of essential resources leads to improvisation, thereby having adverse effects on the quality of midwifery services provided to women.

- **Did midwives replace the linens as a measure to prevent infections?**

The findings presented in Table 4.1 indicate that approximately 6 (12.3%) of the respondents expressed a strong belief that using clean linens alone is sufficient to deliver high-quality care. In contrast, over half of the respondents, 30 (61.2%), held a neutral standpoint concerning the availability of clean linens, while 13 (26.5%) strongly disagreed with the notion that clean linens were readily available.

- **Did midwives use sterile gloves when treating pregnant women during childbirth?**

The data presented in Table 4.1 show that 39 (79.6%) registered midwives strongly affirmed the availability of sterile gloves, with approximately 2 (4.1%) holding a neutral stance, and 8 (16.3%) strongly disagreeing with the availability of sterile gloves. Gloves play a vital role in safeguarding the hands of the midwives against direct contact with blood, bodily fluids, secretions, or excretions. When there is any potential risk, it is imperative to wear gloves and dispose of them after each use, procedure, or patient encounter.

- **Did midwives supply women with pads for regular changes?**

According to the data in Table 4.1, over half of the respondents, specifically 35 (71.5%), strongly acknowledged the availability of sanitary pads in the maternity units for regular use. In contrast, 8 (16.3%) respondents maintained a neutral position, while 5 (10.2%) strongly disagreed with the availability of sanitary pads. Sanitary pads are of paramount importance in maternity units as they play a critical role in preventing infections and keeping women's clothing clean.

- **Did midwives use antiseptic solution after rendering nursing care?**

As indicated in Table 4.1, approximately 24 (48.9%) of the respondents strongly affirmed the presence of antiseptic solutions in the maternity unit, while 25 (51.0%) maintained a neutral stance, with no respondents expressing disagreement. The results suggested that antiseptic solutions were not consistently available on a daily basis in the maternity unit, which could potentially jeopardize the well-being of both registered midwives and patients, exposing them to the risk of infections.

- **Did midwives employ urinary catheters as needed during antepartum, intrapartum, and postpartum care?**

The data presented in Table 4.1 reveal that 38 (77.6%) of the respondents strongly supported the use of urinary catheters, while 8 (16.3%) held a neutral viewpoint, and 3 (6.1%) expressed disagreement regarding the use of urinary catheters in midwifery care. These findings suggest that most registered midwives utilize urinary catheters during antepartum, intrapartum, and postpartum care whenever it was necessary.

- **Did midwives utilize delivery beds that facilitate a semi-sitting or lateral position for women?**

As outlined in Table 4.1, about 7 (14.3%) respondents strongly concurred, 11 (22.4%) maintained a neutral stance, and 31 (63.3%) strongly objected to the availability of clean beds in the unit. These results strongly suggest that the delivery beds in the unit were not maintained in a clean condition. This situation implies that women may be positioned on delivery beds that do not meet cleanliness standards, potentially posing a risk of infection to their well-being.

- **Did midwives use toilet paper for their personal use and for pregnant women in the unit?**

The data presented in Table 4.1 shows that 32 (65.3%) of the respondents strongly affirmed the presence of toilet paper, with 16 (32.7%) maintaining a neutral position, and only 1 (2.1%) expressed disagreement regarding the availability of toilet paper for both midwives and patients.

- **Are clean water supplies available and working properly in the delivery room for midwives use?**

The results in Table 4.1 reflect that 46(93.9%) of the respondents strongly agreed that clean water supplies are accessible to delivery rooms and working properly whereas only 3(6.1%) were neutral about water supplies, and none of the respondents complained about water supplies.

- **Did the midwives use the logbook?**

The data presented in Table 4.1 shows that 37 (75.5%) of the respondents strongly agreed that the logbook was easy to use, while 5 (10.2%) held a neutral stance, and 6 (12.3%) strongly disagreed with the use of the logbook. It's noteworthy that more than half of the respondents did not have any complaints about the usability of the logbook.

4.5 SECTION C: AVAILABILITY AND FUNCTIONALITY OF EQUIPMENT VERSUS MIDWIFERY PRACTICE

4.5.1 The results of the registered midwives' responses to functionality of equipment versus midwifery practice

Table 4.2 is a summary of the responses on the availability and functionality of equipment units versus midwifery practice. Always and frequently were regarded as positive responses, while never, seldom and occasionally were regarded as negative responses.

Table 4.2 Medical equipment versus midwifery practice

Medical equipment	Always	Frequently	Occasionally	Seldom	Never
1. Do midwives utilise cardiotocography machine during intrapartum care?	33(67.3%)	13(26.5%)	3 (6.1%)	0(0%)	0 (0%)
2. Do midwives use the haemoglobin machine/testing in the unit?	23(46.9%)	14(28.6%)	9(18.4%)	3(6.1%)	0 (0%)
3. Do midwives utilize episiotomy scissors during the second stage of labour?	3 (6.1%)	8(16.3%)	23 (46.9%)	9(18.4%)	6(12.2%)
4. Is the cardiotocography (CTG) machine used by midwives during labour to evaluate fetal well-being?	35(71.4%)	4 (8.2%)	8(16.3%)	2 (4.1%)	0 (0%)
5. Do midwives use oxygen cylinders when necessary?	22(44.9%)	15 (30.6%)	2 (4.1%)	10 (20.4%)	0 (0%)
6. Do midwives use suction apparatus during childbirth when necessary?	24(49.0%)	9(18.4%)	7(14.3%)	6(12.2%)	3 (6.1%)
7. Do midwives use Pinard stethoscope during antepartum care?	10(20.4%)	4 (8.2%)	7(14.3%)	11 (22.4%)	17(34.7%)
8. Is the vacuum extraction available for use during the second stage of labour when the delivery is complicated?	2 (4.1%)	0(0%)	4 (8.2%)	8(16.3%)	35(71.4%)
9. Do midwives use double-shelved trolley to keeps delivery equipment accessible near delivery beds?	37(75.5%)	5(10.2%)	2 (4.1%)	2 (4.1%)	2 (4.1%)

- **Do midwives utilise cardiotocography machines for fetal well-being monitoring during intrapartum care?**

Based on the information presented in Table 4.2, 46 (93.8%) of registered midwives reported regular utilization of cardiotocography machines for fetal well-being monitoring, while 3 (6.1%) of them employed these machines intermittently during the intrapartum period. These results suggest that cardiotocography machines were accessible and operational, as the majority of registered midwives consistently used them for monitoring fetal well-being during intrapartum care.

- **Do midwives use the haemoglobin machine/testing in the unit?**

The data in Table 4.2 shows that 37 (75.5%) of the registered midwives consistently used the haemoglobin machine in the unit, while 9 (18.4%) reported occasional usage, and approximately 3 (6.1%) mentioned its infrequent availability. This suggests that the haemoglobin machines were consistently accessible for midwives to use when caring for pregnant women.

- **Do midwives utilize episiotomy scissors during the second stage of labour?**

The data presented in Table 4.2 indicates that 11 (22.4%) of registered midwives expressed disagreement with the use of episiotomy scissors. Meanwhile, 23 (46.9%) stated that episiotomy scissors were occasionally employed, approximately 9 (18.4%) mentioned their infrequent use, and 6 (12.2%) reported that they were never used. These findings suggest that the episiotomy scissors might not be in regular use, possibly due to issues such as bluntness or malfunction, affecting their functionality.

- **Is the cardiotocography (CTG) machine used by midwives during labour to evaluate fetal well-being?**

The findings in Table 4.2 demonstrate that 39 (79.6%) of registered midwives consistently utilized the CTG machine during labour to assess fetal well-being. Additionally, around 8 (16.3%) indicated occasional usage of the cardiotocography machine, while 2 (4.1%) mentioned infrequent use. These results suggest that a majority of the respondents incorporated the use of the CTG machine during labour for assessing fetal well-being.

- **Is oxygen cylinders used by midwives when it is required?**

According to the information in Table 4.2, 37 (75.5%) of registered midwives consistently used oxygen cylinders when they were required. Moreover, approximately 2 (4.1%) mentioned occasional usage, while 10 (20.4%) reported infrequent utilization. This suggests that oxygen cylinders were consistently available for use by midwives when required.

- **Do midwives employ suction apparatus when it's needed during childbirth?**

The findings in Table 4.2 indicate that 33 (67.4%) of registered midwives consistently used suction apparatuses during childbirth when required. Furthermore, 7 (14.3%) mentioned occasional availability of the apparatus, while 6 (12.2%) reported infrequent use, and approximately 3 (6.1%) expressed the belief that the suction apparatus was never available for use during childbirth.

- **Do midwives use Pinard stethoscope during antepartum care?**

The results in Table 4.2 reflect that 14 (28.6%) of registered midwives always used the Pinard stethoscope during antepartum care, 7 (14.3%) indicated occasional use and 11 (22.4%) agreed to seldom use and about 17 (34.7%) believed that Pinard stethoscope was never used during antepartum care.

- **Is vacuum extraction available for utilization during the second stage of labour in complicated deliveries?**

According to the data in Table 4.2, only 2 (4.1%) of registered midwives reported that vacuum extraction was consistently used during the second stage of labour in complicated deliveries. In contrast, 4 (8.2%) indicated occasional use, 8 (16.3%) mentioned infrequent usage, and the majority, 35 (71.4%) of the respondents stated that vacuum extraction was never employed during the second stage of labour in complicated deliveries. These results suggest that most respondents do not frequently use vacuum extraction in such situations.

- **Is a double-shelved trolley used by midwives to maintain the accessibility of delivery equipment near delivery beds?**

According to the findings in Table 4.2, 42 (85.7%) of registered midwives reported that the double-shelved trolley, which ensures the availability of delivery packs, was consistently

accessible for their use. In contrast, an equal number, 2 (4.1%) of the respondents indicated occasional, infrequent, and never availability, respectively.

4.6 Section D: EVALUATION OF MIDWIFERY PRACTICES

4.6.1 The responses of registered midwives to the evaluation of midwifery practices

Table 4.3 shows the summary of the responses on the evaluation of midwifery practices. Always and frequently were regarded as positive responses, while never, seldom and occasionally were regarded as negative responses.

TABLE 4.3: EVALUATION OF MIDWIFERY PRACTICES

Midwifery practice	Always	Frequently	Occasionally	Seldom	Never
Antepartum care					
1. Are pregnant women provided with emotional support during antepartum care?	38(77.6%)	8 (16.3%)	2 (4.1%)	1 (2.1%)	0 (0%)
2. Do you address questions and concerns of the pregnant women adequately during antepartum care?	29(59.2%)	11 (22.4%)	7 (14.3%)	2 (4.1%)	0 (0%)
3. Do you monitor the foetal and maternal well-being during high-risk antenatal visits?	33(67.3%)	13(26.5%)	3 (6.1%)	0(0%)	0 (0%)
Intrapartum care					
4. Are women provided with emotional support during labour and childbirth?	25(51.0%)	17 (34.7%)	7 (14.3%)	0 (0%)	0 (0%)
5. Are pregnant women advised to bring doulas during labour and childbirth for support?	0 (0%)	0 (0%)	0(0%)	1 (2.1%)	48(97,9%)
6. Are pregnant women given pharmacological pain relief during labour?	31(63.3%)	11 (22.4%)	5 (10.2%)	2 (4.1%)	0 (0%)
7. Is the care given to women during labour and childbirth is appropriate?	29(59.2%)	11 (22.4%)	7 (14.3%)	2 (4.1%)	0 (0%)
8.Do you stay with the woman when second stage of labour is imminent?	15(30.6%)	2 (4.1%)	15(30.6%)	8(16.3%)	9 (18.4%)
9. Is the documentation in the books such as Partogram and admission books done?	10(20.4%)	21(42.9%)	4 (8.2%)	5 (10.2%)	9 (18.9%)
Postpartum care					
10.Do you provide health education to the mothers during postpartum period?	29(59.2%)	11 (22.4%)	7 (14.3%)	2 (4.1%)	0 (0%)

11. Do you support mothers in early initiation of breastfeeding	10(20.4%)	11 (22.4%)	10(20.4%)	12(24.5%)	6(12.2%)
12. Do you promptly address complications during the postpartum period, e.g., signs of postpartum haemorrhage?	19(38.8%)	12(24.5%)	10(20.4%)	4 (8.2%)	4 (8.2%)

- **Are women provided with emotional support during antepartum care?**

According to the data in Table 4.3, 46 (93.3%) of respondents stated that emotional support was consistently and frequently provided to women during antenatal care, while approximately 3 (6.2%) disagreed with the provision of emotional support to pregnant women. The results demonstrate that the majority of registered midwives agreed that emotional support was extended to pregnant women.

- **Do you address questions and concerns of the pregnant women adequately during antepartum care?**

The data in Table 4.3 shows that 81.6% of the respondents consistently and frequently address the questions and concerns of pregnant women adequately, while 14.3% indicated occasional attention to these matters. Only 2 (4.1%) respondents mentioned infrequent addressing of questions and concerns, and no respondents reported never addressing them. These results suggest that the majority of registered midwives effectively addressed the questions and concerns of pregnant women.

- **Do you monitor the foetal and maternal well-being during high-risk antenatal visits?**

As per the information in Table 4.3, 46 (93.8%) of the respondents confirmed their practice of monitoring both fetal and maternal well-being during high-risk antenatal visits, while roughly 3 (6.1%) acknowledged occasional monitoring. None of the respondents reported infrequent or non-existent monitoring. This indicates that the majority of midwives consistently adhere to the practice of monitoring fetal and maternal well-being during high-risk antenatal visits.

- **Are women provided with emotional support during labour and childbirth?**

According to the data in Table 4.3, 42 (85.7%) of respondents reported that women consistently and frequently receive emotional support during labour and childbirth, while approximately 7 (14.3%) mentioned occasional support. The results demonstrate that the majority of registered midwives agreed that emotional support was extended to women during labour and childbirth.

- **Pregnant women are advised to bring doulas during labour and childbirth for support?**

Table 4.3 shows that 0 (0%) of the respondents indicated that pregnant women were always and frequently and occasionally not advised to bring doulas during labour and childbirth for support, only 1 (2.1%) indicated they were seldom advised, whereas almost all 48(97.9%) indicated that they never advised pregnant women to bring doulas. The results revealed that majority of the registered midwives didn't advice the pregnant women to bring doulas during labour and childbirth.

- **Do pregnant women receive pain relief during labour?**

The data presented in Table 4.3 reveals that 42 (85.7%) of respondents concluded that pregnant women were provided with pain relief during labour, while 5 (10.2%) indicated occasional provision. Only 2 (4.1%) mentioned infrequent provision, and none (0%) disagreed with the notion that pain relief was never provided. These results indicate that the majority of registered midwives acknowledged the provision of pain relief during labour.

- **Is the care given to women during labour and childbirth considered appropriate?**

According to the data in Table 4.3, 40 (81.6%) of the respondents expressed agreement that the care given to women during labour and childbirth was appropriate. Additionally, 7 (14.3%) believed that appropriate care was occasionally provided, while only 2 (4.1%) mentioned infrequent appropriateness. None (0%) of the respondents disagreed with the notion that the care provided was inappropriate. These results indicate that the majority of registered midwives believed that the care given to women during labour and childbirth was indeed appropriate.

- **Do you stay with the woman when second stage of labour is imminent?**

  According to the data in Table 4.3, 17 (34.7%) of the respondents mentioned that they consistently stayed with the woman when the second stage of labour was imminent. About 15 (30.6%) indicated occasional presence, while 8 (16.3%) stated infrequent presence, and 9 (18.4%) reported never staying with the woman in such circumstances. The results suggest that more than half of the registered midwives did not typically stay with the woman when the second stage of labour was about to begin.

- **Is the documentation in the books such as Partogram and admission books done?**

The data in Table 4.1 reveals that 31 (63.3%) strongly agreed that record completion was performed in multiple books, while 4 (8.2%) remained neutral on the matter, and 14 (29.1%) strongly disagreed with the completion of records in multiple books. This suggests that a majority of registered midwives were dissatisfied with the practice of completing records in multiple books, which could be due to the time-consuming nature of this task in busy units.

- **Do you provide health education to the mothers during postpartum period?**

According to the data in Table 4.3, 40 (81.6%) of the respondents confirmed that they provided health education to mothers during the postpartum period. Occasional and infrequent provision of health education was reported by 7 (14.3%) and 2 (4.1%) respondents, respectively. None (0%) of the respondents disagreed with the notion that they never provided health education to mothers. These results suggest that the majority of registered midwives did, in fact, provide health education to mothers during the postpartum period.

- **Do you support mothers in early initiation of breastfeeding?**

As shown in Table 4.3, 21 (42.8%) of the respondents expressed that they consistently supported mothers in the initiation and establishment of breastfeeding, while 10 (20.4%) indicated occasional support, 12 (24.5%) reported infrequent support, and approximately 6 (12.2%) stated that they never supported mothers in this regard. The results indicate that more than half of the registered midwives did not provide support for mothers in the early initiation and establishment of breastfeeding.

- **Do you promptly address complications during the postpartum period?**

According to the data in Table 4.3, 31 (63.3%) of respondents reported that they consistently promptly addressed complications during the postpartum period. Approximately 10 (20.4%) respondents indicated occasional attention to complications, while 4 (8.2%) reported infrequent attention and the same number, 4 (8.2%), said they never addressed complications promptly. The results suggest that more than half of the respondents were proactive in addressing postpartum complications.

4.7 DISCUSSION OF THE FINDINGS

The study aimed to evaluate midwifery practices among registered midwives at Witpoort and Lephalale hospitals in Limpopo province, South Africa.

- **Demographic information of the registered midwives**

The results indicate that a majority of the midwives included in the study fell within the older age group. This suggests a potential challenge in maintaining adequate staffing levels in maternity units and raises concerns about the future loss of experienced midwives as they retire from the profession. Such departures could result in a knowledge and skills gap within healthcare institutions. In accordance with these findings, Voit and Carson (2014) also noted that older midwives possess valuable experience but may face difficulties with late-night shifts, extended work hours, and the physical demands of childbirth and infant care.

The study's results are consistent with a study conducted by Sisinyana and Davhana-Maselesele (2016), which similarly revealed a predominance of females and a shortage of males in the field. This gender imbalance can be attributed to the historical perception of nursing as a predominantly female profession, which may have discouraged more males from pursuing careers in this field. Nursing has traditionally been dominated by women since its establishment as a recognized profession (American Nurses Association, 2012).

In a separate study carried out by Feringa, De Swardt & Havenga (2018), male midwives described their experience in midwifery as anxiety-inducing, challenging, and damaging to their self-confidence. In contrast, female midwives were reported to be less prone to experiencing anxiety, possibly because midwifery is traditionally seen as a female-dominated profession. According to research by Pender et al. (2006), personal factors such as gender can influence health behaviour, and this applies to midwifery as well. Since midwifery is closely associated with women's health and childbirth, female midwives tend to exhibit a greater interest in delivering high-quality midwifery care compared to their male counterparts.

The findings indicated that only a minority of the respondents possessed advanced midwifery specialization, while others held basic midwifery qualifications. The absence of specialization acted as a hindrance for registered midwives in delivering efficient and high-quality care, primarily due to their limited knowledge. Pender et al.'s Health Promotion Model (2006)

indicates that perceived barriers to taking action can directly hinder the action itself or indirectly diminish one's commitment to act. These results were in line with other studies that underscored a significant shortage of adequately trained personnel capable of providing top-notch patient care (Shemdoe, Mbaruku, Dillip, Bradley, William, Woson & Hildon, 2016).

Providing services without the requisite knowledge and skills can have adverse effects on midwifery practice. As demonstrated in a study by Feringa et al. (2018), a lack of proficiency and expertise in the field can lead to frustration and reduced motivation, subsequently impacting the quality of midwifery care and increasing health risks for pregnant women and newborns. According to Pender et al.'s Health Promotion Model (2006), when registered midwives perceive a deficiency in the necessary knowledge or skills for a specific behaviour, it can serve as a barrier to taking action. They may feel uncertain about how to initiate or carry out the desired action, resulting in hesitation or avoidance, ultimately leading to the provision of sub-standard midwifery care services.

The findings indicated that the majority of registered midwives had less than five years of experience working in the maternity unit, with a minority having over five years of clinical experience. It's worth noting that beyond five years of experience, midwives tend to provide higher-quality midwifery care to pregnant women, those in labour, and post-delivery care (McHugh & Lake, 2010). Research by Shemdoe et al. (2016) revealed that older and more experienced midwives were more inclined to offer labour support, including the administration of analgesics, provision of social support, and later care of outcomes, even while caring for multiple women simultaneously.

According to Pender et al. (2006), the number of years of clinical experience among registered midwives holds significant importance, as it aligns with the personal factors described in the Health Promotion Model. It provides insights into the level of expertise and seniority within the profession. The results also highlighted a deficiency in specialized training among registered midwives. Consequently, nursing managers should consider offering opportunities for advanced midwifery specialization to enhance midwifery practices.

- **The availability of resources verses midwifery practices in maternity units**

The study's findings indicated that registered midwives faced a shortage of essential supplies such as linen savers, clean linen, sterile gloves, sanitary pads, hand washing soap, urinary catheters, and toilet paper. This means that registered midwives are providing patient care with insufficient material resources, even though the delivery of quality midwifery care is expected for women and their babies. These results align with the observations made by Palmer (2020), who noted that midwives around the world often practice in underprivileged and resource-limited environments. According to the Health Promotion Model et al. (2006), these perceived barriers to action in health behaviours come from the lack of necessary material resources, which can pose significant obstacles to the provision of midwifery care. Therefore, the findings suggest that registered midwives may encounter challenges in delivering quality midwifery care due to material resource deficiencies, ultimately having a detrimental impact on midwifery practices.

In support of the study's findings, Thopola and Lekhuleni (2015) reported that there was a lack of clean linen, which led midwives to resort to improvisation, even though this was not always considered safe and could potentially endanger the health of patients. Furthermore, Mathebula's study in 2016 demonstrated that the unavailability of essential resources, such as linens, has a direct impact on midwifery practices. The insufficient availability of sterile gloves presents a significant challenge for midwives, as these gloves play a crucial role in preventing infections caused by bodily fluids. The use of non-sterile gloves during internal vaginal examinations and deliveries can expose patients to the risk of cross-infection.

Proper bladder care is an essential aspect of midwifery care during labour and the immediate postpartum period, as emphasized by the National Institute for Health and Care Excellence (NICE, 2014a). To ensure the effectiveness of bladder care, midwives often perform catheterization, which may be necessary in various situations, as outlined by the National Institute for Health and Care Excellence (NICE, 2014). The absence of urinary catheters posed a significant obstacle to action, particularly in cases where patients were required to remain strictly on bedrest, as perceived through the Health Promotion Model (HPM). Therefore, it is imperative for nursing management to prioritize the availability of urinary catheters in the context of midwifery care.

The absence of essential materials in maternity units holds significant importance for the effective delivery of midwifery care, potentially impeding registered midwives in carrying out their responsibilities satisfactorily. Pender et al. (2006) view the perceived lack of material resources as hindrances to taking action. This perceived deficiency of material resources can obstruct registered midwives from engaging in midwifery practice. It is imperative for managers to guarantee the consistent availability of material resources for registered midwives, thereby enabling them to provide efficient midwifery care to women and their babies.

The results indicated a shortage in the adequate provision of sanitary pads, although all women in the unit, especially during the intrapartum and postpartum periods, used sanitary pads. Hence, ensuring the availability of a sufficient quantity of sanitary pads is critically important in the context of midwifery care. These findings align with a study conducted by Palmer (2020), which recommended that sanitary pads should be freely provided in public hospitals to patients who require them. Additionally, the findings revealed that a majority of the respondents expressed satisfaction with the availability of clean water, a crucial aspect of midwifery care and infection prevention. The attention to the state of water, sanitation, and hygiene (WASH) and infection prevention and control (IPC) in healthcare facilities is gradually increasing.

In contrast to the findings of the study, the inaugural global assessment of Water, Sanitation, and Hygiene (WASH) in healthcare facilities, conducted by the World Health Organization (WHO) and UNICEF, unveiled that 38% of the surveyed facilities across 54 low- and middle-income countries (LMICs) lacked access to WASH services, which encompassed essentials like soap and water for hand hygiene. This insufficiency contributed to the suboptimal healthcare services provided to their patients. Pender et al. (2006) underscores the significance of perceived benefits as motivators for health-promoting behaviours. Registered midwives have the potential to help women recognize the advantages of healthy practices during pregnancy, such as handwashing and infection prevention, as well as adhering to antenatal appointments. By highlighting these benefits to women, registered midwives can inspire them to engage in behaviours that enhance their overall well-being.

Operating without access to toilet paper could present a significant health challenge for both women and registered midwives. The study's results indicated that registered midwives were

delivering care to women even in the absence of toilet paper. These findings are in accordance with a study conducted by the Paper Manufacturers Association of South Africa (PAMSA, 2020), underscoring the importance of having toilet paper available in hospitals for infection prevention. The absence of toilet paper, as viewed by Pender et al. (2006), can be seen as a perceived barrier to action, potentially jeopardizing the well-being of women. In such cases, women might resort to using substitutes like newspapers or any available paper after using the bathroom, which could expose them to infections.

Moreover, the use of alternative papers may lead to toilet blockages, introducing additional health hazards for both women and registered midwives. Hence, factors that have an adverse impact on midwifery practice, such as the absence of essential material resources, hinder the effective execution of midwifery procedures. It is the responsibility of managers to ensure the availability of toilet paper in maternity units. Recognizing and addressing these barriers can empower registered midwives to surmount obstacles and promote behavioural change. Supplying the necessary material resources, offering support, and providing education can aid in overcoming perceived obstacles and promoting positive actions.

- *Availability and functionality of Equipment versus Midwifery Practice in Maternity Units*

The study findings unveiled a scarcity of essential equipment, including Pinard stethoscopes and haemoglobin machines, along with reports of equipment malfunction, such as episiotomy scissors. This indicates that registered midwives were delivering midwifery care with insufficient equipment, despite the expectation of providing quality care. These results find support in a study conducted by Kamala, Ersdal, Dalen, Abeid, Ngarina, Perman, and Kidanto (2018), which showed infrequent use of the Pinard stethoscope for intermittent fetal heart rate monitoring during antepartum care in low-income countries. Instead, electronic fetal monitors were commonly used, likely due to their time-saving benefits in busy maternity units. The limited use of the Pinard stethoscope, as per Pender et al. (2006), can be seen as a situational influence, reflecting compatibility with the life context or environment when engaging in specific health behaviours. In this study, registered midwives opted for the available and time-efficient electronic monitor for providing midwifery care.

A study carried out by Thopola and Lekhuleni (2015) underscored the necessity for an adequate number of functioning haemoglobin kits to monitor pregnant women's haemoglobin

levels. The absence of these kits hinders the midwifery staff's ability to effectively and proficiently manage patients. Furthermore, another study by Mathebula (2016) highlighted the shortage of equipment and supplies, including haemoglobin kits. Despite registered midwives managing patients with insufficient equipment, they were expected to deliver effective and efficient healthcare services. Consequently, haemoglobin machines play a crucial role in promptly monitoring haemoglobin levels. It falls upon managers to ensure the constant availability and proper functioning of haemoglobin machines.

In alignment with the study's findings, Thopola and Lekhuleni (2019) disclosed that the presence of episiotomy scissors was limited, and those available were dull. Furthermore, it was observed that the participants resorted to improvisation by using a scalpel blade to perform an episiotomy, indicating substandard care that carried potential medico-legal risks (Thopola and Lekhuleni, 2019). In accordance with the perspective of Pender et al. (2006), the absence and dysfunction of equipment were viewed as perceived barriers since effective midwifery services could not be delivered in the absence of adequate and properly functioning equipment.

The findings demonstrated that the Cardiotocograph machine, oxygen cylinders, suction apparatus, delivery trolleys, and vacuum extractors were consistently employed as needed. Monitoring the health issues of pregnant women and fetal health data has always held great significance during the perinatal period. However, the shortage of equipment has hindered pregnant women from receiving the level of care they anticipated. According to Garabedian Jonckheere, Butruille, Deruelle, Storme, Houfflin, Debarge et al. (2017), the Cardiotocograph (CTG) is a commonly used technique for monitoring fetal well-being when a woman is in labour. It is one of the most prevalent obstetric procedures. Furthermore, continuous monitoring of fetal well-being during labour can aid in the early detection of fetal compromise.

The results indicated the ever ready availability of both oxygen and suction apparatus for use when needed. According to the World Health Organization (WHO, 2021), oxygen is a crucial medical resource used to provide care to patients at all levels of healthcare systems, including maternal and child health. The results also suggest that registered midwives were able to utilize suction apparatus during deliveries to assist neonates facing breathing difficulties, a point supported by a study conducted by Med One Group (2022).

The suction apparatus serves various functions during delivery, primarily cantered around a baby's respiration. It is particularly important when a baby struggles to clear their oral or nasal passages and is at risk, especially if meconium is passed during delivery. While not required for every birth, as stipulated by the "Better Births Initiative" and "Helping Babies Breathe," it is crucial to have one readily available in the delivery room for potential complications (Med One Group, 2022). In accordance with Pender et al. (2006), the availability of oxygen and suction apparatus can be perceived as beneficial action factors. They are accessible for use by registered midwives when providing midwifery care, which can positively impact midwifery practices.

The results revealed that registered midwives expressed disagreement regarding the frequent use of vacuum extraction during the second stage of labour in complicated deliveries. In contrast to the findings of this current study, UNICEF (2012) pointed out that vacuum extractors were not accessible in the unit. However, South African national obstetric guidelines concerning the prevention of mother-to-child transmission (PMTCT) indicated that instrumental deliveries might elevate the risk of vertical transmission of HIV, and therefore, vacuum deliveries were recommended in such a context (UNICEF, 2012). According to Pender et al. (2006), the availability of vacuum extractors can be perceived as a beneficial factor for action, as they are ready for use when necessary, particularly during the second stage of labour in complicated deliveries.

The findings illustrate the availability and use of delivery trolleys in the maternity unit to organize the necessary materials and equipment for midwifery care during deliveries. These delivery trolleys come equipped with storage compartments and trays, providing registered midwives with convenient access to essential equipment, supplies, and medications essential during labour and childbirth. Therefore, it is of utmost importance for delivery trolleys to be present and in optimal working condition. Additionally, the preparation of the delivery trolley helps streamline the delivery process, reducing the time spent searching for required items and ensuring that everything necessary is readily accessible for immediate use.

In contrast, the World Health Organization (2015) estimated that 50 to 80 percent of medical equipment, including delivery trolleys, in developing countries were not functional, creating a

hindrance to delivering quality healthcare services. According to Pender et al. (2006), the availability and non-availability of user-friendly delivery trolleys were seen as perceived facilitators and barriers to action, respectively. Therefore, it is the responsibility of management to ensure that delivery trolleys are consistently available and in good working order.

- **Evaluation of midwifery practices**

The study's findings indicate that a majority of registered midwives consistently offer emotional support to pregnant women during the antepartum period. These results are consistent with a study conducted by Savory, Sanders, & Hannigan (2022), which found that many registered midwives have provided care to women with mental health issues, with anxiety and depression being the most common concerns. Additionally, registered midwives informally assess women's mental health by observing their mood, anxiety levels, level of support, and mental health history. According to the Health Promotion Model (HPM), registered midwives can enhance perceived self-efficacy by providing accurate and positive information and encouraging women to set achievable health goals during pregnancy and childbirth. This, in turn, empowers women to actively participate in their care and make informed decisions. Therefore, it is crucial for registered midwives to receive training in perinatal mental health to effectively provide emotional support to pregnant women.

The results also reveal that nearly all respondents consistently monitor fetal and maternal well-being during antenatal visits. According to Pettker and Campbell (2018), the primary objective of midwifery care is to assess and prevent adverse outcomes for the fetus, neonate, and mother. Monitoring the well-being of both the mother and fetus during the antepartum period plays a crucial role in ensuring their health and safety. Furthermore, it allows for early detection of complications, assessment of fetal growth and development, identification of abnormalities, management of maternal health conditions, provision of health education, and tracking the progress of the pregnancy.

Regular monitoring allows registered midwives to take essential actions to optimize outcomes and promote a healthy pregnancy. These results align with a study by Mdoa et al. (2018), which concluded that monitoring is essential for assessing fetal and maternal well-being and for the early detection of fetal responses to hypoxemia. According to the Health Promotion

Model (HPM), health promotion behaviours are actions individuals take to enhance their well-being, prevent illness, and maintain a healthy lifestyle. Pregnant women engage in actions such as attending antenatal visits to improve maternal and fetal well-being through monitoring, ultimately benefiting from the information provided by registered midwives. Monitoring fetal and maternal well-being is crucial for reducing neonatal and maternal morbidity and mortality, aligning with Sustainable Development Goal number three (SDG 3). Despite the high adherence to monitoring of fetal and maternal well-being among registered midwives, ongoing in-service training remains vital to enhance their practices.

The intrapartum period can be distressing for women in labour (Mathibe-Jele, 2022). Providing emotional support during this challenging phase can help them cope with the fear of childbirth and labour pain, while also enhancing their perception of midwifery care and their expectations for a positive delivery experience (Çankaya & Can, 2021). The current study's results indicate that most registered midwives consistently offer pregnant women emotional support during labour and childbirth. However, these findings differ from those of Maputle (2018), who observed limited emotional support provided by midwives during labour and childbirth, evident in the lack of inquiries about women's fears and personal preferences during childbirth. According to the Health Promotion Model (HPM), registered midwives promote perceived self-efficacy through informational support and by encouraging women to express their personal preferences. Therefore, it is essential for registered midwives to receive training in intrapartum counselling skills to effectively provide emotional support and promote the health of women and their babies.

The standards established by the Better Births Initiative (BBI) emphasize the use of doulas or labour companions as an evidence-based intervention to enhance the quality and experience of care for pregnant women. However, the current study's findings indicate that most registered midwives rarely advised women to bring their own doulas during labour and childbirth. Similarly, a study conducted by Maputle (2018) observed that none of the midwives actively promoted the presence of a doula or the integration of cultural and personal preferences during childbirth. Another similar study by Hastings-Tolsma, Temane, Tagutanazvo, Lukhele, and Nolte (2021) also found that registered midwives in public settings often encountered obstacles preventing labouring women from having a companion due to space constraints, privacy concerns, and security issues as primary reasons.

In contrast to the study results, research conducted by Beake, Chang, Cheyne, Spicy, Sandall, and Bick (2018) highlighted the essential role played by women's labour companions. However, women's experiences varied based on their labour companion's attitude. The process of labour and childbirth can be physically and emotionally intense for women, and having a trusted companion by their side offers emotional support and reassurance. The presence of a doula or labour companion can help alleviate anxiety, fear, and feelings of isolation during labour, promoting a sense of security and comfort. Therefore, it is advisable for labour unit managers to permit the presence of doulas in the units to provide support to women. In the context of the Health Promotion Model (HPM), the presence and support of a birth companion or doula is viewed as a significant situational influence during the intrapartum and childbirth phases.

In the other hand interpersonal influences can significantly shape women’s beliefs, attitudes, and behaviours related to health or the labour and childbirth process. Furthermore, social support from the doulas plays a crucial role in promoting health and well-being, and it involves the emotional, instrumental, and informational assistance provided by family, friends, and peers. Therefore, maternity unit managers should allow and encourage companion from the doulas as it could positively influence health promotion behaviours by providing encouragement, practical assistance, and a sense of belonging.

Pain relief during labour is a critical part of labour management. Pain relief during labour could be in the form of non-pharmacological in the latent phase and pharmacological in the active phase of labour. The results revealed that majority of the registered midwives indicated that women were given pain relief during labour. Differently, the study conducted by Beake et al., (2018) concluded that pain surpasses and frequently exceeds the pregnant woman’s intrapartum expectations thus, the women should be encouraged to seek help regarding pain relief during labour. Another study by Malatji and Madiba (2020) concluded that women were not given pain relief during labour, and often, their requests for pain relief were ignored, even when they cried out in pain.

HPM regards the availability and accessibility of pain management options, such as pharmacological interventions or non-pharmacological techniques as situational influences

that can influence a woman's choices and experience during labour. Furthermore, the situational influence of pain management options can impact a woman's perceived control, comfort, and ability to actively participate in the birthing process (Madden, Turnbull, Cyna, Adelson, & Wilkinson, 2013). Therefore, pharmacological interventions and non-pharmacological techniques of pain relief during labour are of paramount importance for better labour and childbirth experience of the women.

The intrapartum period is when pregnant women require care the most. The study's results indicated that the majority of the respondents believed they provided appropriate care to women during labour and childbirth. In contrast, the study by Malatji and Madiba (2020) suggested that registered midwives often fall short of meeting professional care standards that should address the fundamental needs of women during labour and childbirth. Furthermore, women felt they did not receive care that was acceptable to them due to either the unavailability of services or being denied those services.

Another study by Mosadeghrad (2014) concluded that the appropriateness of midwifery services primarily hinges on midwives' knowledge, experience, and skills. In the context of the Health Promotion Model (HPM), committing to a plan of action is vital for promoting and supporting the health and well-being of women and their babies. Moreover, midwives play a crucial role in delivering holistic care, education, and guidance throughout the antepartum, intrapartum, and postpartum periods, which is considered appropriate care. The absence of appropriate midwifery care could lead to increased maternal and neonatal morbidity and mortality, and potentially result in legal challenges.

The second stage of labour is often the most challenging phase for both the woman and the fetus. It commences at full dilation of the cervix and extends until the baby's birth, encompassing the expulsive uterine contractions that lead to an involuntary urge to push (Marshall, Raynor & Nolte, 2016). Less than half of the respondents indicated that they remained with women when the second stage of labour was imminent, while more than half disagreed with staying with women during this stage. The large number of respondents who disagreed suggests that a substantial portion of registered midwives could not stay with women when the second stage of labour was approaching, likely because they were caring for multiple women at the same time. This means that if more than one woman was in the

second stage of labour, the registered midwife would have to move between two or more labour rooms to provide care to all.

The study conducted by Häggsgård, Nilsson, Teleman, Rubertsson, and Edqvist (2022) underscores the importance of providing continuous support during the second stage of labour and emphasizes that changing staff during this period should be avoided whenever possible. The practices of registered midwives during the second stage of labour can vary. A registered midwife's approach is influenced by their knowledge, skills, and experience, but it should ultimately be guided by evidence-based practice (Healy et al., 2020). According to the Health Promotion Model (HPM), the inability of registered midwives to remain with women when the second stage of labour is imminent is considered a situational influence. This means that registered midwives who have a high number of women to care for may not be able to stay with a woman when the second stage of labour is approaching, potentially contributing to elevated rates of maternal and neonatal mortality and morbidity, as well as an increased risk of legal cases.

The practice of midwives leaving women alone when the second stage of labour is imminent hinders the provision of quality care. Furthermore, this practice deviates from the Scope of Practice for Midwives, which explicitly states that "when the second stage of labour is imminent, a registered midwife shall remain with the patient until after the birth of the child and for as long as the condition of the patient and the child may require." Therefore, there is a clear need to hire more midwives in maternity units to ensure the provision of appropriate care and to prevent maternal and neonatal mortality and morbidity.

The Nursing and Midwifery Council has issued guidelines for proper record-keeping, encompassing maternity case records and various record-keeping methods, regardless of their format. The study's findings showed that documentation was performed across multiple sources, including Partograms and admission books. A study conducted by Mosehle, Matlala, Thanyane, and Lumadi (2019) revealed that the maternity register is frequently employed as a comprehensive perinatal care document, supplied by the national department of health, but it was also recognized as a source of redundancy. Midwives often found themselves frustrated with unnecessary documentation, which frequently duplicated information.

In contrast to the study's results, another study by Genctuc, Demirci, Acamur, Izdes, and Bulut (2017) found that midwives did not extensively record their actions, typically only documenting observations when irregularities were detected. This could be attributed to the time constraints they faced when providing care to multiple labouring women while simultaneously managing multiple records. The Health Promotion Model considers the lack of time as one of the perceived barriers to taking action. Furthermore, registered midwives were required to utilize multiple record-keeping books, which consumed a substantial amount of their time, ultimately compromising the quality of care provided to women because much of their time was spent on documentation rather than actual patient care. Therefore, it is imperative for the Department of Health (DoH) to consolidate information into a reduced number of record-keeping books, minimizing redundancy, streamlining the process, and saving valuable time.

The postpartum period represents a challenging phase in a woman's life, marked by sudden changes in her roles and responsibilities. A significant portion of the respondents in the study indicated that they provided health education to mothers during the postpartum period. In contrast to these findings, a study by Slomian, Emonts, Vigneron, Acconcia, Glowacz, Reginster, Oumourgh, and Bruyère (2017) noted a lack of comprehensive health education after delivery. Furthermore, the perceived need for health education seemed to decrease with subsequent deliveries. It is also possible that registered midwives are frequently overwhelmed by the sheer number of women they need to attend to, leaving them with limited time for providing health education (Namutebi, Kabahinda, Mbalinda, Nabunya, Nanfuka, Kabiri, Ngabirano & Muwanguzi, 2022).

This situation might be exacerbated by the reported low staff-to-patient ratios in other studies conducted in low-income settings. According to the Health Promotion Model (HPM), health education for postpartum mothers is crucial for promoting their well-being and facilitating a healthy transition into motherhood. Therefore, women should be surrounded by registered midwives who can provide emotional support and deliver relevant health education.

The World Health Organization (WHO) (2018) recommends that every newborn baby should be breastfed within one hour after birth. Early initiation of breastfeeding in the first hour of life is fundamental for optimal breastfeeding. The results of the study revealed that less than half

of the respondents expressed support for mothers in the early initiation of breastfeeding. WHO (2018) advocates for early initiation of breastfeeding due to its numerous health benefits, including enhanced immunity, reduced risk of diarrhea, and increased child survival rates.

In contrast, another study by Alebel, Dejenu, Mullu, Abebe, Gualu, and Eshetie (2017) indicated that early initiation of breastfeeding was not widely practiced by mothers giving birth, particularly in developing countries, due to the lack of support from registered midwives. According to the HPM, delayed initiation of breastfeeding may be attributed to a lack of knowledge and support from registered midwives, which can act as a barrier to early breastfeeding initiation. Therefore, it is crucial for maternity unit managers to consider recommending short courses or in-service training on breastfeeding to empower registered midwives to better support mothers in initiating breastfeeding early.

The postpartum period holds equal importance in a new mother's life as the antenatal and intrapartum periods. The World Health Organization (WHO) (2017) has characterized the postpartum period as one of the most dangerous yet neglected phases in a mother's life. A majority of the respondents in the study indicated that they promptly addressed complications during the postpartum period. However, it's notable that around 36.8% of the respondents admitted to not always addressing complications promptly, which is a considerable proportion. These findings contrast with a study conducted by Kaur and Ray (2020), which identified that due to a lack of proper knowledge and skills in recognizing postpartum complications like Postpartum haemorrhage (PPH) and puerperal infections, many cases go undiagnosed and mismanaged.

According to the Health Promotion Model (HPM), the lack of prompt management of postpartum complications might be influenced by insufficient knowledge and skills needed to take a specific action or manage complications, which can act as a barrier. Registered midwives might feel uncertain about how to initiate or carry out the necessary actions, leading to hesitation or avoidance. Postpartum complications can result in severe maternal morbidity and mortality. Therefore, it is imperative for maternity unit management to prioritize ongoing in-service training for the identification and management of postpartum complications. This

would align with the goals of Sustainable Development Goal 3 (SDG 3), which aims to improve health and well-being.

4.8 CONCLUSION

This chapter determined the presentation, interpretation, and discussion of the study findings. The statistical analyses were conducted with the assistance of a professional statistician, using SPSS version 27. Descriptive statistics, such as percentages and frequencies, were employed to analyse the data. The outcomes were visually represented through tables, graphs, and figures. It's noteworthy that midwifery practice suffered due to factors such as an inadequate number of midwives, a shortage of essential material resources, and non-functional equipment. Chapter 5 encapsulates a summary of the findings, outlines the limitations, provides recommendations, and concludes the study.

CHAPTER 5

SUMMARY, LIMITATIONS, RECOMMENDATIONS AND CONCLUSION

5.1 INTRODUCTION

In this chapter, the summary of findings, limitations and conclusion of the study, and recommendations are presented based on the study findings. The summary is discussed in line with the objective and its achievement based on the findings.

5.2 Summary of the study results

5.2.1 The aim of the study

The study aimed to evaluate midwifery practices among registered midwives at Witpoort and Lephalale hospitals in Limpopo province, South Africa.

5.2.2 The objectives of the study

The objectives of the study were to:

- Assess midwifery practices among registered midwives at Witpoort and Lephalale hospitals in Limpopo Province, South Africa.
- Describe the barriers affecting midwifery practices among registered midwives at Witpoort and Lephalale hospitals in Limpopo province, South Africa.

5.2.3 The research methodology

This study employed a quantitative, descriptive, and cross-sectional research approach to fulfil its defined objectives. Numerical data was gathered from registered midwives working at Witpoort and Lephalale hospitals in the Limpopo Province of South Africa. The total population under examination encompassed one hundred (100) registered midwives. To collect data, a simple random sampling method was employed, utilizing the fishbowl technique to select 80 respondents. The sample size was calculated using Slovin's formula. Data was collected through a self-designed questionnaire administered to the registered midwives, and data analysis was carried out using SPSS version 27, with the assistance of the University Biostatistician.

The study rigorously observed measures to ensure content validity, face validity, and reliability, thereby upholding the quality of the research findings. Prior to conducting the study, ethical clearance and permissions for data collection were obtained. The following ethical considerations were strictly adhered to throughout the research process: obtaining informed consent, respecting individuals' autonomy, maintaining anonymity and confidentiality, ensuring non-maleficence, and upholding principles of justice.

5.2.4 The results of the study

- *Demographic Information*

About (47%) of registered midwives fell within the age group of 50 years and above, followed by those aged 22 to 35 years (36%), while a smaller portion (17%) were aged between 36 and 49 years. A significant majority of the respondents (78%) were female. The majority (82%) of the respondents did not possess a specialized field. Approximately 41% of registered midwives had less than 6 years of experience in the maternity unit, with 6% having over 15 years of experience. Continuous efforts to improve speciality training and education in midwifery are critical for advancing the profession and promoting positive maternal and neonatal outcomes.

- *Availability of Material Resources versus Midwifery Practice*

Regarding the availability of material resources, approximately 36.7% of registered midwives strongly agreed that linen savers were present in the maternity unit, while 46.9% disagreed. Approximately 12.3% of respondents strongly agreed that there was an adequate supply of clean linen, whereas 61.2% had a neutral stance. A significant 79.6% of registered midwives strongly agreed that sterile gloves were accessible. More than half of the respondents (71.5%) strongly agreed that sanitary pads were readily available in the maternity units. Around 48.9% of the respondents strongly agreed that antiseptic solution was available in the maternity unit, whereas 51.0% held a neutral position.

A substantial majority (77.6%) of respondents strongly agreed with the use of urinary catheters during midwifery care, while 6.1% disagreed. In terms of the availability of clean beds in the unit, 63.3% strongly disagreed. The majority (65.3%) of the respondents strongly agreed with the accessibility of toilet paper, with only 2.1% in disagreement. A significant majority (93.9%) of the respondents strongly agreed that clean water supplies were readily accessible in the

delivery rooms and functioning properly, and 75.5% of the respondents strongly agreed that the logbook was user-friendly. These findings highlight both strengths and areas for improvement in midwifery practice. It's crucial for healthcare institutions to address the areas of concern, such as the availability of clean beds and the consistency of essential supplies like sanitary pads and clean linen. Addressing these issues can lead to safer and more effective care for pregnant women and new mothers. Continuous monitoring and improvement in resource availability and practices are essential for maintaining high-quality midwifery care.

- *Availability and functionality of Equipment versus Midwifery Practice*

The vast majority (93.8%) of registered midwives concurred that they consistently utilize a cardiotocography machine during intrapartum care to monitor foetal well-being and identify any irregularities. Around 75.5% of the registered midwives acknowledged that the haemoglobin machine was regularly operational and accessible within the unit. A smaller portion (46.9%) reported that episiotomy scissors were used occasionally and in good working condition. The majority (79.6%) of registered midwives confirmed that pregnant women were consistently monitored using the cardiotocography machine.

A significant majority (75.5%) of registered midwives indicated that oxygen cylinders consistently functioned correctly on a daily basis. A notable 67.4% of the respondents agreed that suction apparatuses were consistently available and used during childbirth. Only 28.6% of registered midwives disclosed that they frequently used the Pinard stethoscope during antepartum care, while 34.7% never used it for antepartum care.

Merely 4.1% of registered midwives reported that vacuum extraction was regularly used during the second stage of labour to assist in complicated deliveries, and a substantial majority (71.4%) indicated it was never employed for this purpose. The majority (85.7%) of registered midwives indicated that the trolley responsible for keeping delivery packs was consistently accessible, user-friendly, and available. These findings indicate a generally positive adherence to best practices in midwifery care, with a strong focus on monitoring fetal well-being and having essential equipment available and functional. Areas of improvement could include increasing the usage of the Pinard stethoscope during antepartum care and considering further education on the use of vacuum extraction when necessary. Overall, maintaining the availability and proper functioning of essential equipment is crucial for providing safe and effective midwifery care.

- *Evaluation of Midwifery Practices*

The vast majority of respondents, at 93.3%, stated that women consistently and frequently receive emotional support during antenatal care, while 81.6% affirmed that the questions and concerns of pregnant women are consistently and adequately addressed. An overwhelming 93.8% of respondents concurred that both fetal and maternal well-being are closely monitored during high-risk antenatal visits, and 85.7% indicated that women consistently and frequently receive emotional support during labour and childbirth. Regarding the inclusion of doulas during labour, a significant 97.9% of respondents reported that they never recommended pregnant women to bring doulas. A substantial majority of 85.7% of respondents agreed that pregnant women are provided with pain relief during labour.

Approximately 81.6% of respondents confirmed that the care provided to women during labour and childbirth was appropriate, while only 34.7% indicated that they remained with the woman when the second stage of labour was imminent. In contrast, 18.4% reported that they had never stayed with the woman in such situations. A majority of 81.6% of respondents stated that they offer health education to mothers during the postpartum period. About 42.8% of respondents agreed that they consistently supported mothers in initiating and establishing breastfeeding, and 63.3% confirmed that they promptly addressed complications during the postpartum period.

These findings reflect a commitment to providing emotional support, addressing questions and concerns, monitoring well-being, and offering pain relief during pregnancy, labour, and postpartum care. However, areas of improvement may include considering the role of doulas in care, ensuring continuous support during the second stage of labour, and promoting breastfeeding. Finally, these findings can serve as a basis for enhancing the quality and patient-centeredness of midwifery practice.

5.3 Limitations of the study

The study took place within the maternity units of two district hospitals located in the Waterberg district of the Limpopo province. As a result, it's important to note that the conclusions drawn from this study cannot be applied to other public hospitals across South Africa. The data collection for this study specifically involved registered midwives working

during the day shift, so it's essential to avoid generalizing the findings to registered midwives who were on leave or working the night shift.

5.4 Recommendations

Training and educational systems

- Healthcare institutions should offer additional support, mentoring, and resources to help male midwives navigate the challenges associated with working in a traditionally female-dominated profession.
- Addressing the shortage of midwives with advanced specialization is essential. Nursing managers should consider providing opportunities and incentives for midwives to pursue advanced midwifery training.
- Nursing managers and healthcare institutions should take into account the principles of Pender et al.'s Health Promotion Model (2006) to address perceived barriers to action among registered midwives. This involves identifying and removing obstacles that may hinder midwives from providing the best possible care to patients.

Department of Health

- To address the gender imbalance in midwifery, healthcare institutions and educational programs should actively promote the profession to individuals of all genders. This can be done by challenging traditional perceptions of nursing as a female-dominated profession and fostering a more inclusive environment that welcomes male midwives.
- Healthcare institutions should prioritize the consistent availability of essential materials in maternity units, such as linen savers, clean linen, sterile gloves, sanitary pads, hand washing soap, urinary catheters, and toilet paper. Managers and administrators should establish a robust supply chain management system to prevent shortages and ensure a continuous and sufficient stock of these resources.
- Emotional support during labour is crucial for women's well-being. Midwives should be trained in intrapartum counselling skills to provide effective emotional support during the challenging intrapartum period.

- Address the issue of understaffing and high nurse-to-patient ratios, especially during the second stage of labour. Adequate staffing is essential to provide continuous care and support during this crucial phase of childbirth.
- Recognizing the importance of clinical experience in midwifery, healthcare institutions should make efforts to retain and support experienced midwives. This may include offering mentorship programs, continued education, and ensuring manageable workloads to encourage experienced midwives to stay in the field.
- Healthcare institutions should simplify and consolidate record-keeping processes to reduce redundancy and save time for midwives. Utilizing electronic health records can streamline documentation and improve efficiency.
- Advocate for adequate resources and support at both the institutional and governmental levels. Midwives, healthcare administrators, and policymakers should collaborate to ensure that midwifery practices are adequately resourced to provide quality care to women and their infants.
- Healthcare institutions should prioritize the consistent availability of essential equipment in maternity units, including Pinard stethoscopes, haemoglobin machines, and episiotomy scissors. A robust supply chain management system should be established to prevent shortages and ensure proper functioning of equipment.
- Regular maintenance and quality control of equipment, such as episiotomy scissors, should be conducted to ensure proper functioning. Managers should establish procedures for the timely repair or replacement of malfunctioning equipment to prevent disruptions in midwifery care.

Midwifery practice

- Midwives should provide comprehensive health education to mothers during the postpartum period. Healthcare institutions should allocate time for postpartum education, ensuring that new mothers receive information about infant care, breastfeeding, and postpartum self-care.
- Ensure that women have access to a range of pain relief options during labour, including both pharmacological and non-pharmacological methods.
- Encourage the presence of doulas or labour companions during labour and childbirth. Healthcare institutions should facilitate and support women who wish to have a doula or a labour companion, as it positively influences women's birth experiences.

5.5 CONCLUSION

In conclusion, the majority of registered midwives working in maternity units lack the advanced knowledge and skills required for specialized midwifery. Those with extensive experience are limited in number and will soon leave the system. As a result, it is advisable for the Department of Health to invest in training more registered midwives to ensure they possess the essential knowledge and skills needed to deliver high-quality care. Registered midwives offer emotional support to pregnant women during the antepartum period and maintain continuous monitoring of fetal and maternal well-being during antenatal visits. While they do provide pain relief during labour, they often do not recommend that women bring their own doulas for additional support during labour and childbirth. While registered midwives do provide appropriate care to women during labour and childbirth, they face challenges staying with women during the critical second stage of labour due to the high number of deliveries they must manage. To address this issue, it is recommended that the Department of Health hire more nursing staff to alleviate the workload, enabling registered midwives to provide the quality care needed for maternal and newborn well-being.

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APPENDICES

APPENDIX 1: CONSENT FORM

University of Limpopo: English consent form

Statement concerning participation in a Research Project

Name of Study: *Evaluation of Midwifery Practices among Registered Midwives at Witpoort and Lephalale hospitals in Limpopo province, South Africa.*

I have 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 scientific publications which will be electronically available throughout the world. I consent to this provided that my name is not revealed. I understand that participation in this Study is completely voluntary and that I may withdraw from it at any time and without supplying reasons.

I know that this Trial / Study / Project have been approved by the Turfloop Research and Ethics Committee (TREC), University of Limpopo (Turfloop Campus) and Limpopo Department of Health. I am fully aware that the results of this study will be used for scientific purposes and may be published. I agree to this, provided my privacy is guaranteed.

I hereby give consent to participate in this Study.

....

Name of the volunteer Signature of volunteer

…….. ……

Place Date ……

……..

Name of the researcher Signature of the researcher

…… ……..

Place Date

Statement by the Researcher

I provided verbal and/or written information regarding this study.

I agree to answer any future questions concerning the study to the best of my ability.

APPENDIX 2: QUESTIONNAIRE

SECTION A: DEMOGRAPHIC INFORMATION (INDIVIDUAL CHARACTERISTICS & EXPERIENCES)

Fill in the following column and do not write your name

1. Age	
2. Gender	
3. Qualification	
4. Years of clinical experience in maternity unit	

SECTION B: BARRIERS AFFECTING MIDWIFERY PRACTICE (BEHAVIOUR SPECIFIC & AFFECT)

Tick the appropriate option in the appropriate column

Strongly agree. (SA): 1	Agree(A) : 2	Neutral(N): 3	Disagree(D): 4	Strongly Disagree (SD):5

Availability of Material Resources Versus midwifery practice	SA	A	N	D	SD
1. Were linen savers used by the midwives to protect the sheets and mattress??	1	2	3	4	5
2. Did midwives changed the lines as part of preventing the inflections?	1	2	3	4	5
3. Did midwives use sterile gloves when treating pregnant women during childbirth?	1	2	3	4	5
4. Did midwives supply women with pads for regular changes?	1	2	3	4	5

5. Did midwives use antiseptic solution after rendering nursing care?	1	2	3	4	5
6. Did midwives employ urinary catheters as needed during antepartum, intrapartum, and postpartum care?	1	2	3	4	5
7. Did midwives utilize delivery beds that facilitate a semi-sitting or lateral position for women?	1	2	3	4	5
8. Did midwives use toilet paper for their personal use and for pregnant women in the unit?	1	2	3	4	5
9. Are clean water supplies available and working properly in the delivery room for midwives use?	1	2	3	4	5
10. Did the midwives use the logbook?	1	2	3	4	5

SECTION C: AVAILABILITY AND FUNCTIONALITY OF EQUIPMENT VERSUS MIDWIFERY PRACTICE (PERCEIVED BENEFITS TO ACTION AND PERCEIVED BARRIERS TO ACTION)

Tick the answer according to the availability of the equipment in the maternity ward

Always (A):1	Frequently (F):2	Occasionally (O):3	Seldom(S):4	Never(N):5

Availability and functionality of Equipment	**A**	**F**	**O**	**S**	**N**
1. Do midwives utilise cardiotocography machine during intrapartum care?	1	2	3	4	5
2. Do midwives use the haemoglobin machine/testing in the unit?	1	2	3	4	5
3. Do midwives utilize episiotomy scissors during the second stage of labour?	1	2	3	4	5
4. Is the cardiotocography (CTG) machine used by midwives during labour to evaluate fetal well-being?	1	2	3	4	5
5. Do midwives use oxygen cylinders when necessary?	1	2	3	4	5
6. Do midwives use suction apparatus during childbirth when necessary?	1	2	3	4	5
7. Do midwives use Pinard stethoscope during antepartum care?	1	2	3	4	5

8. Is the vacuum extraction available for use during the second stage of labour when the delivery is complicated?	1	2	3	4	5
9. Is the trolley that puts delivery packs accessible near delivery beds user-friendly?	1	2	3	4	5

SECTION D: EVALUATION OF MIDWIFERY PRACTICES (PERCEIVED BENEFITS TO ACTION, PERCEIVED BARRIERS TO ACTION AND SITUATIONAL INFLUENCES.

Please tick the correct answer below according to the keys

Always (A):1	Frequentl y (F):2	Occasion ally(O):3	Seldom(S):4	Never(N):5

Midwifery Practices	A	F	O	S	N
Antepartum Care					
1. Are pregnant women provided with emotional support during antepartum care?	1	2	3	4	5
2. Do you address questions and concerns of the pregnant women adequately during antepartum care?	1	2	3	4	5
3. Do you monitor the fetal and maternal well-being during high-risk antenatal visits?	1	2	3	4	5
Intrapartum Care					
4. Are women provided with emotional support during labour and child birth?	1	2	3	4	5
5. Are pregnant women advised to bring doulas during labour and childbirth for support?	1	2	3	4	5
6. Are pregnant women given pharmacological pain relief during labour?	1	2	3	4	5
7. Is the care given to women during labour and childbirth is appropriate?	1	2	3	4	5
8.Do you stay with the woman when second stage of labour is imminent?	1	2	3	4	5
9. Is the documentation in the books such as Partogram and admission books done?	1	2	3	4	5

Postpartum Care					
10.Do you provide health education to the mothers during postpartum period?	1	2	3	4	5
11. Do you support mothers in initiating and establishing the breastfeeding?	1	2	3	4	5
12. Do you promptly address complications or concerns during the postpartum period, e.g. signs of postpartum haemorrhage?	1	2	3	4	5

APPENDIX 3: ETHICAL CLEARANCE CERTIFICATE

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: 26 September 2022

PROJECT NUMBER: TREC/61/2021: PG-Amended

PROJECT:

Title:	Evaluation of Midwifery Practices among Registered Midwives at Witpoort and Lephalale Hospitals in Limpopo Province, South Africa.
Researcher:	KS Maleta
Supervisor:	Ms MG Mathebula
Co-Supervisor/s:	Prof MA Bopape
School:	Health Care Sciences
Degree:	Master of Nursing Sciences

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.**

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APPENDIX 4: PERMISSION LETTER FROM LIMPOPO DEPARTMENT OF HEALTH

LIMPOPO
PROVINCIAL GOVERNMENT
REPUBLIC OF SOUTH AFRICA

Department of Health

Ref : LP_2021-06-006
Enquires : Ms PF Mahlokwane
Tel : 015-293 6028
Email : Phoebe.Mahlokwane@dhsd.limpopo.gov.za

Kgatsere Sarah

PERMISSION TO CONDUCT RESEARCH IN DEPARTMENTAL FACILITIES

Your Study Topic as indicated below;

Evaluation of Midwifery Practices among Registered Midwives at Witpoort and Lephalale Hospitals in Limpopo Province, South Africa.

1. Permission to conduct research study as per your research proposal is hereby Granted.
2. Kindly note the following:
    a. Present this letter of permission to the institution supervisor/s a week before the study is conducted.
    b. In the course of your study, there should be no action that disrupts the routine services, or incur any cost on the Department.
    c. After completion of study, it is mandatory that the findings should be submitted to the Department to serve as a resource.
    d. The researcher should be prepared to assist in the interpretation and implementation of the study recommendation where possible.
    e. The approval is only valid for a 1-year period.
    f. If the proposal has been amended, a new approval should be sought from the Department of Health
    g. Kindly note that, the Department can withdraw the approval at any time.

    Your cooperation will be highly appreciated

PP **Head of Department** **Date** 15/07/2021

Private Bag X9302 Polokwane
Fidel Castro Ruz House, 18 College Street. Polokwane 0700. Tel: 015 293 6000/12. Fax: 015 293 6211.
Website: http/www.limpopo.gov.za

The heartland of Southern Africa – Development is about people!

APPENDIX 5: LEPHALALE HOSPITAL PERMISSION LETTER

LIMPOPO

PROVINCIAL GOVERNMENT

REPUBLIC OF SOUTH AFRICA

DEPARTMENT OF
HEALTH
ELLISRAS HOSPITAL

DEPARTMENT OF HEALTH
ELLISRAS DISTRICT HOSPITAL
OFFICE OF THE CEO
2021 -10- 18
PRIVATE BAG X 211
LEPHALALE 0555
TEL: 014 763 2227 FAX: 014 763 2406
LIMPOPO PROVINCE

Enquiries: Dr Leboho PK (Head of Institution)
Contact: 076 520 1092
Email address: Pheaha.Leboho@dhsd.limpopo.gov.za

From: Head of Institution: Ellisras Hospital
Dr Leboho PK

To: Ms Maleta KS

RE: APPROVAL TO CONDUCT RESEARCH IN MATERNITY: ELLISRAS HOSPITAL

The Head of Institution Ellisras Hospital is happy to inform you that your request to conduct research in maternity is hereby approved effective from the date of signing of this letter.

You will receive cooperation from officials at Ellisras and don't hesitate to contact the office should you not find joy.

Wishing you the best in your research project.

Yours in service delivery.

DR LEBOHO PK
HEAD OF INSTITUTION

18/10/2021
DATE

APPENDIX 6: WITPOORT HOSPITAL PERMISSION LETTER

LIMPOPO
PROVINCIAL GOVERNMENT
REPUBLIC OF SOUTH AFRICA

DEPARTMENT OF
HEALTH

DEPARTMENT OF HEALTH
WATERBERG DISTRICT
WITPOORT HOSPITAL
06 SEP 2021
CEO
LIMPOPO PROVINCE

Ref:
Enq: CEO`s Office
Tel: 014 7690025/30
Cell: 0767952144/0725531324
Email: George .Makuya@dhsd.limpopo.gov.za
Date: 6TH September 2021

To: Ms Maleta K.S

From: Chief Executive Officer: Mr Makuya N.G

RE: REQUEST FOR CONDUCTING A REASEARCH AT WITPOORT HOSPITAL

1. The above matter bears reference

2. The Hospital has approved your request for conducting a research in our institution and we believe that the research will be a benefit to all hospitals in our Limpopo Province.

3. Wishing you good luck in your research.

Thanks

Makuya N.G
Chief Executive Officer

06/09/2021
date

DEPARTMENT OF HEALTH
WATERBERG DISTRICT
WITPOORT HOSPITAL
06 SEP 2021
CEO
LIMPOPO PROVINCE

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APPENDIX 7: CERTIFICATE OF EDITOR

JVH Consulting
Teaching, Training, and Development
JONI van HEERDEN
(c) 083 286 7807
(e) joni.vanheerden@gmail.com

Certificate of Editing

This is to certify that the manuscript with the title:
Evaluation of midwifery practices among registered midwives at Witpoort and Lephalale hospitals in Limpopo Province, South Africa;

to be submitted by the author(s),
Kgatsere Sarah Maleta

has been edited for grammar, punctuation and spelling. Neither the research content nor the author's intentions were altered in any way during the editing process.

Editors can contact us for a copy of the edited document that was submitted to the author.

Editor:
Ms. Joni van Heerden
Joni.vanheerden@gmail.com

Date Issued:
26 October 2022

APPENDIX 8: STATISTICIAN LETTER

University of Limpopo
Research Administration and Development
Private Bag X1106, Sovenga, 0727, South Africa
Tel: (015) 268 3982, Fax: (015) 268 2306, Email: peter.mphekgwana@ul.ac.za

To: To whom it may concern

From: Mr MP Mphekgwana
Biostatistician
Date: 26 May 2023

Letter of Confirmation

Dear Sir/Madam

I hereby confirm that I have read and approved the study analysis of Kgatsere Sarah Maleta (201113079) titled "*Evaluation Of Midwifery Practices Among Registered Midwives At Witpoort And Lephalale Hospitals In Limpopo Province, South Africa*".

Hope you find everything in order.

Kind Regards,

Mphekgwana M.P

Mr Peter Mphekgwana, University Biostatistician