

Analyzing and strengthening the clinical support of undergraduate midwifery students and developing a mentorship training program at a higher education institution in KwaZulu-Natal, South Africa: A mixed method and action research design

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A thesis submitted to the Discipline of Nursing, School of Nursing and Public Health, College of Health Sciences, University of KwaZulu-Natal, for the fulfilment of a Doctor of Philosophy degree in Nursing

DECLARATION

I, Hafaza Bibi Amod, Student number 214582170, declare that:

- I. The research reported in this thesis, except where otherwise indicated, is my original research.
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- VII. The researcher has indicated and acknowledged all sources quoted in this study text by employing a completed reference list.
- VIII. The University of KwaZulu Natal Human and Social Science Research Ethics Committee and the Department of Health approved the study.
- IX. The ethical standards of the University of KwaZulu Natal have been considered and adhered to during the conducting of the study.

Declaration of Manuscripts

1. Protocol: Amod, H.B., Mkhize, S.W., Muraraneza, C. (2021). Analyzing Evidence on Interventions to strengthen the clinical support of midwifery students in Placements: Protocol for a Systematic scoping review. *Journal of Medical Internet Research*, 10(9): e29707 [doi:10.2196/29707](https://doi.org/10.2196/29707)
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DEDICATION

I dedicate this thesis to my loving parents.

To my mom, Mrs Ayesha Bibi Ebrahim. You are the greatest gift in my life. Words cannot express the immense love, respect and gratitude I have for you. You are definitely the World's Greatest Mom.

To my late Dad (Mr Shaik Ebrahim Rahiman) Papa, I will love you forever. Thank you for sharing and teaching us about love, respect, dedication, strength, and generosity. May your beautiful and blessed soul rest in eternal peace.

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LIST OF ABBREVIATIONS

COVID-19- Coronavirus Disease 2019

DOH-SA- Department of Health- South Africa

ICM- International Confederation of Midwives

NMC- Nursing and Midwifery Council

PEF- Practice education Facilitator

PRAR- Problem Resolving Action Research

RCM- Royal College of Midwives

SANC- South African Nursing Council

SCARCE- Supportive, Challenging, and Reflective Competency Education

SDG- Sustainable Development Goals

SOM- Sign-Off Mentors

SPSS- Statistical Package for Social Science

SSR- Systematic Scoping review

WHA- World Health Assembly

WHO- World Health Organization

ABSTRACT

The competence of midwifery students is highly dependent on the quality of clinical support they receive during clinical placement. Offering support and training to midwifery practitioners, who supervise students during placement, is necessary in South Africa. This study aimed to analyze and strengthen the clinical support of undergraduate midwifery students, and develop a mentorship-training program. This study adopted a mixed-method and action research approach incorporating a descriptive and exploratory design. A convenient and purposive sampling technique, multiple research tools (systematic scoping review protocol, questionnaires, interviews and focus groups), and three different study populations (60 midwifery students, 28 practitioners and 10 educators) complimented the aim of conducting a mixed-methods study. Data collection commenced for Cycle 1 in May 2019 and concluded with Cycle 4 in April 2022. Quantitative data was inserted into SPSS version 27 for descriptive and comparative analysis whilst qualitative data used a thematic content analysis approach. Cycle 1 results highlighted that 93% of students had support from midwifery practitioners and found that the clinical placement benefitted their learning outcomes. Although students received three types of clinical support, namely clinical supervision, mentorship and preceptorship, 80% of clinical support was clinical supervision. Post-clinical placement, students were incompetent in 11.4% of their clinical requirements. In Cycle 2, a two-round Delphi method evaluated the quality of a mentorship-training program using midwifery experts in round 1 and midwifery practitioners in round 2. There was an overall quality score achieved of 81% round 1 and 96% in round 2. In Cycle 3, three themes emanated from the focus group discussions. Mentorship training was a new phenomenon, empowered mentorship abilities, and an investment toward midwifery leadership. Interview results showed that the mentorship training program was a new, well-structured and valuable program; a refresher course for midwifery clinical practitioners and educators, adequate to support midwifery practitioners in their mentorship roles and responsibilities, and produced recommendations for midwifery practice and education. Mentorship during clinical placement is likely to strengthen the clinical support of midwifery students. A mentorship training program for midwifery practitioners developed in this study is valuable to midwifery educators and practitioners in South Africa.

Keywords: midwifery; mentorship training; clinical support; mentorship framework; COVID-19 pandemic

CHAPTER 1: INTRODUCTION

1.1. BACKGROUND

The provision of healthcare services is highly dependent on the quality of nursing and midwifery education. The Global Strategic Direction for Nursing and Midwifery 2021-2025 prioritizes the need for proper training of nursing and midwifery students to demonstrate clinical expertise through competency-based education programs (Global Strategic Direction for Nursing and Midwifery 2021-2025). In the 74th World Health Assembly (WHA), members reaffirmed the need to strengthen nursing and midwifery education by investing in education, employment, leadership, and service delivery. This investment included the role of the midwifery practitioner in health, social, and education systems (WHA Resolution 74, 2021). Despite strong emphasis and attempts to improve the quality of training, education, and practice of midwifery practitioners, groundwork expectations remain a challenge, and the urgent call to invest and empower midwifery practitioners is heard (State of the World's Midwifery Report, 2021).

The future of maternal and neonatal health outcomes is dependent on the current midwifery education and clinical training provided to midwifery students in the healthcare system. Clinical placement should allow midwifery students to achieve competence by applying their theoretical knowledge into practice and through the quality of clinical support, they receive during placement (Power and Jewell, 2018; Wilsom Mukan, Kulai, and Haji Che, 2021). According to Fasan, Zavarise, Palese, and Marchesoni (2012), Thunes and Sekse (2015), Phuma-Ngaiyaye, Bvumbwe and Chipeta (2017) and Power and Jewell (2018), clinical support provides midwifery students with opportunities to practice their clinical skills required for the job and thus become orientated to the real world of the profession. Hence, midwifery practitioners have a huge responsibility to guide and support students, especially in fast-paced environments, such as maternity units, where there is a high demand for patient care and a dire shortage of skilled and experienced practitioners.

The challenges for midwifery students placed at clinical facilities, such as the adaptation to the maternity department, supporting women through the variable intensity of the labor process, witnessing a traumatic perinatal event, the birthing process, or an obstetric emergency, can be stressful (Houghton, 2014; Sheen, Spiby and Slade, 2015; Alghamdi and Jarret, 2016; Coldridge and Davies, 2017). More recently, challenges brought about by the Coronavirus pandemic left

students feeling sidelined, confused and devalued (Kuliukas, Hauck, Sweet, Vasilevski, Homer, Wynter, Wilson, Szabo, and Bradfield, 2021).

In Europe, attempts to improve the quality of midwifery education and training standards through mentorship approaches were evident in studies by Moran and Banks (2016), Clark and Casey (2016), and Power and Jewell (2018), who investigated the role of Sign-off Mentors (SOM) to support students in midwifery practice. However, findings showed that mentors lacked confidence in teaching, were short-staffed, experienced high workloads, and had inadequate management support (Moran and Banks, 2016). Consequently, Practice Education Facilitators (PEF), or lead mentors, offered support and guidance to SOMs in their roles (McKellar and Graham, 2017; Tweedie, Yerrel, and Crozier, 2019). Interventions, such as training workshops to improve mentoring skills and abilities, protected time to prepare and review students' records, and weekly meetings, were to support midwifery practitioners in mentoring challenges. These interventions supported mentors in preparing a more conducive learning environment, enhancing the mentor-student relationship, and improving their assessment and feedback skills.

In African countries, the education and training programs for midwifery vary widely in approach, models, and levels of training. In the Democratic Republic of Congo, midwifery training is a 12-month certificate course or a 3-year diploma program only; there are no midwifery degree programs (Bogren, Ndela, Toko and Berg, 2020). Countries such as Uganda, Kenya, Tanzania (Edward, Hellen and Brownie (2018), Rwanda (Mukamana, Uwiyeze and Sliney, 2015), Malawi (Bvumbwe, Malema, and Chipeta, 2015), Ethiopia, Nigeria and South Africa (Bethabile and Simeon, 2013) offer entry-level nursing programs at the certificate, diploma, and degree levels at nursing education institutions. Despite improvements in midwifery education in Africa over the last decade, midwifery students in Ethiopia scored unsatisfactorily against core competencies for safe practice, revealing that the quality of pre-service midwifery education was poor (Yigsaw, Ayalew, Kim, Gelagay, Dejene, Gibson, Teshome, Broerse and Stekelenburg, 2015). In studies by Msiska, Smith and Fawcett (2014) and Bvumbwe, Malema and Chipeta (2015), findings showed that Malawi still has challenges of insufficiently trained midwifery practitioners and poor clinical support. In another study conducted in Ghana, findings revealed that midwifery students were dissatisfied with the clinical support they received during a clinical placement (Asirifi, Mill, Myrick and Richardson, 2013; Atakro, Armah, Menlah, Garti, Addo, Adatara and Boni (2019).

In the South African healthcare system, challenges such as the shortage of staff, lack of clinical role models, limited academic support, and poor liaison from higher education institutions to clinical facilities, all pose a massive problem for midwifery students (National Strategic Plan for Nurse Education and Training, 2012- 2017). The quality of support for midwifery students placed in various clinical facilities has become a growing concern (Lawal, Weaver, Bryan and Lindo, 2015; Joolae, Jafarian Amiri, Farahani and Varaei, 2016), hence, midwifery practitioners have an essential supportive role in shaping midwifery students to achieve clinical competence and become confident and qualified practitioners.

Nursing and midwifery education regulatory bodies, such as the South African Nursing Council (SANC), exist to ensure the establishing and maintaining of minimum standards for education, training, and practice (SANC, Nursing Education and Training Standards, 2013). Similarly, the Nursing and Midwifery Council (NMC, Standards Framework for Nursing and Midwifery Education, 2019), in the United Kingdom, guides and supports the education and clinical learning of midwifery students (NMC, 2018). Such standards provide criteria for evaluating and benchmarking the quality of nursing and midwifery education and its effectiveness in nursing practice.

In South Africa, challenges such as shortage of staff and resources, high patient turnovers, poor communication between nursing education institutions and clinical staff, and the negative attitudes of midwifery practitioners toward clinical teaching, hinder midwifery clinical support (Mamphunge, Seekoe, and Peters, 2015; Setati and Nkosi, 2017 and Maputle and Netshisaulu, 2018). The last attempts to improve the clinical education of midwives in South Africa were in 2011, using a Model for Clinical Education and Training. The model, as a national strategy, intended to improve the clinical education of undergraduate nursing and midwifery students (National Strategic Plan 2012-2017; Hugo and Botma, 2019). However, the model was not nationally adopted and sustained.

Mentor-student relationships in midwifery practice are critical to the outcome of a safe and competent practitioner (Thunes and Sekse, 2015; Taylor and Blease, 2015; Maxwell, Black and Baillie, 2015), thus strengthening the relationship through mentorship training and support for midwifery practitioners is quite compulsory.

1.3. STATEMENT OF THE PROBLEM

In South Africa, clinical support for midwifery students is a significant concern for midwifery educators. The concern stems from the many challenges experienced in clinical placements (National Strategic Plan for Nurse Education, Training and Practice (2012- 2017). In recent years, the increased student enrolment rates at higher education institutions have subsequently increased the clinical support responsibilities for midwifery educators and practitioners (Phuma-Ngaiyaye, Bvumbwe, and Chipeta, 2017). According to Hugo and Botma (2019), recommendations to improve clinical support through preceptorship did not resolve clinical education and training challenges as many universities did not adopt the proposed model and hence, denied sustainability of the approach within South Africa. In an early evaluation of the model, Mulder and Uys (2012) and Botma, Jeggels, and Uys (2012) identified that not all universities embraced the model. As a country, the ratio of preceptors versus students was in a state of disequilibrium, hence, the challenges of clinical placements remained.

Anecdotal reports revealed that midwifery practitioners in maternity units in South Africa share the professional responsibility of teaching and supporting midwifery students, which they undertake voluntarily and informally. Clinical support is mostly unplanned and within extremely busy maternity wards. The recent high maternal and neonatal morbidity and mortality rates questions the quality of midwives being produced at nursing education institutions. Hence attempts to support midwifery practitioners towards preparing students towards competence and independence, is important to maternity care outcomes. Currently, there are no formal preceptor or mentor training and support programs for midwifery practitioners in South Africa. This study therefore aims to develop a mentorship training program for midwifery practitioners who support undergraduate midwifery students from a higher education institution during clinical placement.

1.4. PURPOSE OF THE STUDY

This study focused on analyzing and strengthening the clinical support of undergraduate midwifery students and, developing a mentorship training program at a selected higher education institution in KwaZulu-Natal, South Africa.

1.5. RESEARCH OBJECTIVES

1. To identify mechanisms that will strengthen clinical support for midwifery students.

2. To analyze the existing clinical support of undergraduate midwifery students from a selected higher education institution in South Africa.
3. To develop and conduct a mentorship training program for midwifery practitioners who support undergraduate midwifery students during clinical placement.
4. To evaluate the developed mentorship training program at the selected higher education institution.

1.6. RESEARCH QUESTIONS

1. What are the mechanisms used to strengthen clinical support for midwifery students globally?
2. How are midwifery students from the higher education institution supported during the clinical placement?
3. What are the essential components to consider when developing a mentorship training program to support midwifery students in clinical practice?
4. How effective is the developed mentorship training program in strengthening clinical support of midwifery students from a higher education institution?

1.7. SIGNIFICANCE OF THE STUDY

1.7.1. To midwifery education:

This study aimed to strengthen the clinical support of midwifery students by developing a mentorship training program for midwifery practitioners who support undergraduate midwifery students during clinical placement. The mentorship-training program will likely benefit midwifery educators, who are searching for innovative methods to strengthen the clinical support of students at various national and international universities.

1.7.2. To midwifery clinical practice:

The intervention developed in this study aimed to empower midwifery practitioners in mentorship roles and responsibilities through skills and capacity development. Midwifery practitioners, who are well-prepared to support midwifery students during clinical placement, will ensure that students practice safely and independently. Hence, the intervention contributes to improvements in clinical support of midwifery students, improvements in the quality of midwifery clinical education, and retrospectively improvements in maternal and neonatal health outcomes.

1.7.3. To midwifery research:

This study brought new information to an existing body of knowledge related to mentorship training, midwifery clinical education, and midwifery practice from a South African perspective. The study contributed to innovative mentorship training methods developed during the COVID-19 pandemic using online platforms such as ZOOM. The study recommendations are suitable for pursuing future research in similar research settings where mentorship improvements are required.

1.8. OPERATIONAL DEFINITIONS

1.8.1. Clinical placement refers to the period spent by a student in clinical and other experiential learning sites to ensure that the program's purpose is achieved (SANC Regulation 174 of 8 March 2013). In this study, there were clinical placement areas in maternity care departments where undergraduate midwifery students achieved their practical requirements.

1.8.2. Clinical support provides clinical assistance, education, and advanced clinical skills to nurses and patients within the organization, thus ensuring a comprehensive quality nursing service. Joolae, Ashghali, Jafarian, and Varaei (2016) defined *clinical support* as receiving help to grow as a competent nurse. In this study, clinical support refers to midwifery practitioners assisting, teaching, and supervising midwifery students in clinical practice areas to render quality care to patients. The process includes three types of clinical support: mentorship, preceptorship, and clinical supervision.

1.8.3. Mentor is an experienced person who facilitates teaching, learning, and assessment in practice placements (Royal College of Midwives, 2013). According to Wynn, Holden, Romero, and Julian (2021), mentors are nurse supporters, counsellors, confidantes, advocates, preceptors, and advisors that promote the application of survivorship and retention of nurses in healthcare professions. In this study, a mentor refers to a midwifery practitioner who has completed a diploma or degree course in midwifery and is involved in the clinical mentoring of students allocated to the clinical placement areas.

1.8.4. Mentorship - According to Bradford, Hines, Labko, Peasley, Valentin-Welch and Breedlove (2022), mentorship is a nurturing relationship whereby a more experienced or knowledgeable

practitioner (mentor/midwifery practitioner) guides and supervises a less experienced or less knowledgeable practitioner (mentee/midwifery student). In this study, mentorship refers to a supportive relationship between a midwifery practitioner and a midwifery student during clinical placement.

1.8.5. Midwifery Practitioner - A midwifery practitioner, also known as a registered midwife, is a qualified, competent, and independent practitioner capable of assuming responsibility and accountability for such practice (Nursing Act 33 of 2005). In this study, a midwifery practitioner is a licensed practitioner who works in the maternity department and supervises students in training.

1.8.6. Midwifery student - A person following a program of study in a nursing education and training institution may use the title learner midwife. A learner means a person registered with the Nursing Council as a learner midwife in section 32 of the Nursing Act 33 of 2005. In this study, a midwifery student refers to a learner from the midwifery module of an undergraduate nursing program.

1.8.7. Nursing education institution - means an institution conducting a nursing education and training program to prepare persons for practice and accredited by the Nursing Council in terms of the Nursing Act 33 of 2005 (Nursing Act 33 of 2005). In this study, a nursing education institution means a private or public college or university that offers nursing education and training.

1.8.8. Higher education institution - is a public or private university providing undergraduate and postgraduate higher education programs, encourages research and community engagement. The minister prescribes the criteria for recognition under section 69 (d) of the Higher Education Amendment Act, 2016 (Higher Education Amendment Act No. 9 of 2016). In this study, higher education institution refers to a public university.

1.9.CONCEPTUAL FRAMEWORK OF THE STUDY

The conceptual framework chosen for this study is the Problem Resolving Action Research Model by Piggot- Irvine (2001).

1.9.1. Overview of the framework

Developed from the work of Kurt Lewin in 1946, action research is evolving but its elements remain on a spiral or cyclic process of planning, acting, observing, and reflecting to find solutions to issues/problems. According to Piggot-Irvine (2001), action research is a process of inquiry conducted by and for those taking 'the action.' It is action-oriented, participatory, and a valuable tool for educators responsible for designing, conducting, analyzing, and evaluating their practice (Robinson, Irvine, Youngs and Cady, 2018; Van Heerden, Janse van Rensburg and Maree, 2021). The processes involved in conducting action research are cyclical; however, not every cycle will complete due to its flexible nature, which requires constant evaluation and reflection. As a result, the cycles may shorten as new ways to proceed are identified, and multiple data collection methods or triangulation may result in multiple perspectives. Each cycle of this framework guided the progression of this study, as discussed extensively in Figure 1.1.

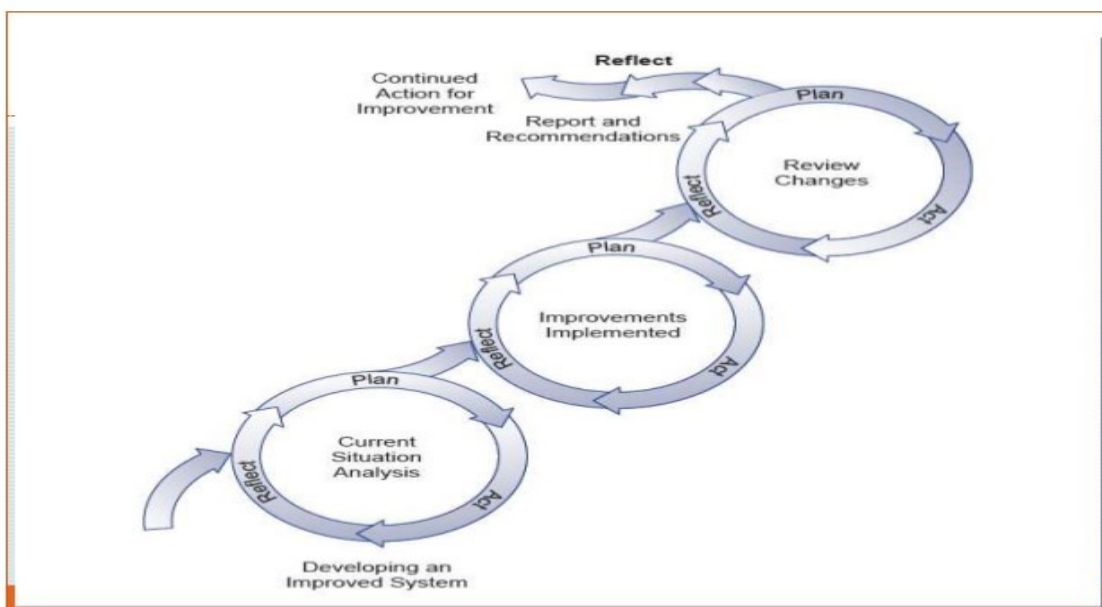


Figure 1.1: A framework for Problem Resolving Action Research (Piggot-Irvine, 2001)

1.9.2. Description of the PRAR framework

There is a brief explanation, in three (3) action cycles, of the PRAR framework applied in this action research study.

Cycle 1: Current situation analysis

Description: The Problem Resolving Action Research (PRAR) model involves experiential learning cycles. As described by Kolb (2014), in experiential learning knowledge is through observations, questioning, and reflections about concrete experiences or actions. Understanding, improving, and transforming a specific situation is the outcome of these experiential learning cycles. The PRAR model focuses on research carried out within the participants' organization. The PRAR model aims to narrow the gap between theory and practice by practitioners investigating their practice. In this study, the researcher (a midwifery educator) analyzed the clinical support of midwifery students from a higher education institution and then developed a mentorship training program for midwifery practitioners who support midwifery students during clinical placement.

Plan: In this study, the researcher recognized that midwifery students placed in clinical facilities for experiential learning opportunities encounter challenges that affect their clinical learning and practice. The researcher planned to conduct three steps:

1. To conduct a literature review on midwifery students' clinical support.
2. To undertake a systematic scoping review to identify clinical support interventions available on a global context.
3. To explore the clinical support of midwifery students from a higher education institution placed at five public hospitals for clinical learning.

Act: The researcher began the literature review on the current clinical support available to midwifery students globally. The literature review helped the researcher identify, evaluate, and synthesize evidence on a specific focus of investigation (Fink, 2020). In this study, the researcher analyzed the evidence of midwifery students' clinical support and the associated challenges experienced by midwifery practitioners and midwifery students in a global context. The researcher then completed a systematic scoping review to identify and evaluate the mechanisms to strengthen midwifery clinical support. The review assisted the researcher in identifying gaps in existing clinical support mechanisms, looking at recommendations for improvements, and developing a

framework to guide mentorship training. Lastly, the researcher analyzed the current clinical support of undergraduate midwifery students using a self-evaluation questionnaire. The questionnaire included an overview of the clinical support received; and assessed the perceived competencies levels of minimum midwifery clinical requirements. The use of a rating scale of competence, ranging from not competent, needs improvement to fully competent, assessed the perceived competency levels of undergraduate midwifery students from a higher education institution.

Reflect: On completing these steps, the researcher reflected on the types and gaps in midwifery clinical support; and how to improve the situation which guided the development of this cycle. By the end of this cycle, the researcher developed a framework for mentorship training that underpinned the development of a guide for mentorship training. This step directed us to Cycle 2.

Cycle 2: Improvements implemented

Description: Cycle 2, which is the implementation or change phase of the PRAR model, aimed to transform practice. Change happens throughout the entire process and frequently leads to unpredictable outcomes. The PRAR model promotes the idea that theory and action develop together and are mutually interdependent. In such a reciprocal relationship, theory and practice inform and complement each other. Similarly, for a meaningful understanding of concepts, processes, and phenomena in midwifery education, the practical experience during clinical placement should complement theoretical knowledge. Hence in this study, the researcher promoted the idea that strengthening midwifery clinical support through mentorship training is likely to improve the clinical support of midwifery students during placement. By improving the clinical support, midwifery students will likely develop a good understanding of midwifery concepts, processes, and phenomena and thus become competent and safe practitioners.

Plan: In this cycle, the researcher planned to transform practice through mentorship training. So, the researcher developed a training program to support midwifery practitioners in their mentorship roles and responsibilities. Using the outcomes of the previous cycle, global guidelines, standards for midwifery clinical practice, South African Department of Health policies, protocols, and recommendations, the researcher planned to draft a document on how to develop a mentorship-

training program for midwifery practitioners. The plan was also to evaluate the quality of document using an evaluation checklist in a two round Delphi method.

Act: During this cycle, the researcher read extensively on how to develop and implement a mentorship training program. Considered were global interventions, guidelines, standards, and recommendations aligned with South African Department of Health documents and the population's social and healthcare needs. The researcher drafted a guide for developing a mentorship-training program and made improvements as new information developed. In round 1 of the Delphi, the researcher sent a copy of the developed guide to midwifery educators for review. Feedback comments received from reviewers improved the quality of the contents of the guide in preparation for the mentorship training. The researcher then converted the information from the finalized guide into 15 training sessions prepared using PowerPoint presentations, videos, and demonstrations. Midwifery practitioners who attended the mentorship training evaluated the training program in round 2 of the Delphi.

Reflect: Reviewers' feedback allowed the researcher to reflect on concepts, definitions, and processes to understand how these have evolved over the years through developments related to gender-based equities, respectful care practices, better birth initiatives, and best practices. Reviewers' feedback contained valuable comments, adding to the finalization of the guide's content for developing a mentorship-training program. The mentorship-training program required the researcher to extensively search literature, develop training guides, prepare training presentations, and design training materials, videos, and evaluation forms. The dynamic process required a plan, an action, and a reflection at each stage of development. The mentorship-training program contained 15 training sessions, including knowledge and skills related to mentorship, interpersonal relations, eight selected midwifery competencies, and mentor support material. Developing mentorship training programs are time-consuming and, therefore, not an easy task. The implementation of the mentorship training occurred during the COVID-19 pandemic and therefore delivered using an online platform.

Cycle 3: Review Changes

Description: The PRAR model is an essential element of reflection to identify potential strengths and weaknesses of the framework using multiple data to examine the improvements implemented.

Practitioners' understanding of problems and problem-solving approaches is vital in this model; such understanding involves collectively and openly discussing and reflecting upon challenges to deepen insights. In this cycle, the researcher evaluated the overall success of the mentorship training program through focus group discussions, and semi-structured interviews.

Plan: The researcher planned to explore the experiences of midwifery practitioners who attended the mentorship training in focus group discussions. The overall evaluation, including the strengths and weaknesses of the mentorship training, will be identified in semi-structured interviews with midwifery practitioners.

Act: Midwifery practitioners who attended the mentorship training participated in focus group discussions to explore their experiences of the mentorship training. Focus group guidelines were used to maintain the discussion. The researcher conducted semi-structured interviews to evaluate the overall success of the mentorship-training program.

Reflect: The results of this cycle evaluated the quality of the mentorship training program developed for midwifery practitioners. This cycle evaluates the strengths and weaknesses of the mentorship-training program and identifies recommendations for the project's sustainability. Consequently, this cycle is not the end of the action but proceeds to the beginning of a new cycle. The new cycle may lead to new developments in mentorship training.

Report and recommendations:

The PRAR framework for action research encouraged the implementation of improvements in cycles. Each cycle allowed the researcher to implement carefully planned actions and then reflect on its outcomes. In this study, the researcher conducted three action cycles. Cycle 1 analyzed the clinical support of midwifery students. In Cycle 2, the researcher aimed to strengthen midwifery students' clinical support through mentorship by developing a guide for mentorship training, and a mentorship training program for midwifery practitioners. In Cycle 3, the mentorship training program's evaluation revealed its strengths and weaknesses.

Following the PRAR action cycles, the researcher reassessed the clinical support of midwifery students in the next cohort of students in the same setting. The mentorship training program for

midwifery practitioners is new to the nursing discipline at the selected higher education institution. For the project's sustainability, the researcher plans to present the project and the training intervention to the relevant stakeholders from the Department of Health-South Africa.

1.10. LITERATURE REVIEW

This review aimed to collect, analyze, and understand valuable information about midwifery clinical support from a global perspective, and then critically compare and analyze the current clinical support available to midwifery students in a South African context. This literature review together with a systematic scoping review (chapter 2) was undertaken to achieve research objective 1 of this study.

1.10.1. Introduction

Unlike classroom teaching, midwifery clinical learning usually occurs in an unplanned, often fast-paced, and unpredictable maternity unit. In recent years, the high maternal and neonatal mortality rates have questioned the competence and safety of midwifery practitioners, and the quest to improve the quality of clinical support for undergraduate midwifery students has become a global concern. Exploring the challenges experienced by midwifery practitioners and students in clinical placements is paramount in strengthening existing clinical support methods.

This review focused on midwifery clinical support during the pre-and post-millennium phases, identified gaps and challenges in midwifery clinical support, and finally proposed mentorship as an effective method of support for undergraduate midwifery students during clinical practice.

1.10.2. Search Strategy

The search for literature related to the study area was in books, websites, full articles, abstracts, and government policies, using computerized databases such as PubMed, CINAHL, Google, Google Scholar, Science Direct, and EbscoHost. The search strategy included keywords such as midwifery students, clinical support, mentorship, preceptorship, clinical supervision, and midwifery practice. MeSH terms used in the search included midwifery education and clinical supervision, mentorship and midwifery education, models in nursing and mentorship, midwifery education and South Africa, midwifery educator core competencies, midwifery competency models, mentorship models, the South African Qualifications Authority, SANC rules, and

regulations, nursing education and training standards, ICM education recommendations, and midwifery education in Africa. The literature search was in the English language, and the search strategy excluded peer-reviewed articles related to community and psychiatry nursing.

1.10.3. Literature findings

This review presents literature from the pre- and post-millennium phases, hence, the researcher included literature from as early as 1980, the date of the first publishing of the articles related to the topics and when they became electronically accessible. Findings from this review helped the researcher in recognizing gaps in midwifery clinical support.

1.10.3.1. Clinical support during the pre-millennium phase

The clinical support of students within a healthcare setting is fundamental to the students' clinical development, as proposed decades before the millennium. According to literature findings, clinical support is an umbrella term linked to and not restricted to keywords such as clinical supervision, preceptorship, and mentorship. Despite gaining popularity in nursing practice since the late 1970s, the literature on clinical support and its importance to nursing practice gained momentum in the late 1980s, especially in the United States and Britain. This was the era in which nursing research was born in the United States, and articles related to nursing practice became widely publishable and accessible to readers. Literature between 1990 and 2000 identified 12 articles, none of which came from an African or South African context. A review of the 12 articles showed that clinical supervision remained the basis of clinical support, complementing other types of clinical support methods, such as preceptorship and mentorship. Preceptorship in nursing, as described by Myrick (1988), is an effective and viable alternative in clinical teaching; however, the preceptor role expectations are high, which sometimes hampers the intended purpose (Chickerella and Lutz, 1981).

Conversely, mentorship, conceptualized by Anderson and Shannon (1988), is an intentional and skilled activity undertaken by a more experienced (wiser) person and an understudy (protégé) that proposes that educational preparations, support, and recognition are necessary for mentors' personal and professional development. Consequently, support for mentors was red flagged long before the millennium. Interestingly, Anderson and Shannon's Comprehensive Mentoring Model

(1995) expanded on the mentoring relationship and proposed that mentoring requires leading incrementally and expressing care and concern. Thus, mentorship is a supportive relationship that involves a more personal interaction between the mentor (midwifery practitioner) and the mentee (midwifery student) during clinical placement.

In 1999, Mooi Standing critiqued the Comprehensive Mentoring Model. She found that although mentoring is a complex and comprehensive process, deficiencies, such as the negation of cognitive development, poor role initiation, and insufficient time for reflection, were a downside to the mentee's development. She developed a Supportive, Challenging, and Reflective Competency Education (SCARCE) mentoring model to support mentors in their roles. The application of this model focused on its significance to nursing education only. The relevance of the model to clinical practice was debatable and opened gateways for further expansion of mentorship in the post-millennium period.

1.10.3.2. Clinical support in the post-millennium phase

Clinical support through mentorship in nursing gained momentum in the early 2000s when Andrew and Wallis (2001) fully unpacked the definitions, roles, preparation, and effectiveness of mentorship in nursing. Mentorship in midwifery allows midwifery students to practice the clinical skills necessary for the job and become well-orientated to the real-life experiences through the guidance of more experienced midwifery practitioners they work with during placement (Beukes and Nolte, 2013; Jamshidi et al., 2016; Bharj and Embo, 2018; Carter, Dietsch and Sidebotham, 2020). The purpose is to prepare students to achieve the required competencies during clinical placement and thus become safe and competent practitioners upon registration of the qualification (Hallas, Biesecker, and Newland, 2012; Lawson and Bunyan, 2013; Maxwell, Black, and Baillie, 2015).

The ability to practice clinical midwifery skills in a supportive environment has benefits (Frazer, Connolly, Naughton, and Kow, 2014; Mirzakhani and Shorab, 2015; Snow and Torney, 2015; Back, Hildingsson, Sjoqvist, and Karlstrom, 2017; Phuma-Ngaiyaye, Bvumbwe, and Chipeta, 2017; and Power and Jewell, 2018). Undoubtedly, in midwifery the transfer of knowledge has a

strong link to students' learning preferences, clinical experiences, and the willingness of mentors to provide exciting, engaging, and compelling learning opportunities.

However, findings related to the quality of opportunities and support for midwifery students in placement learning are debatable, as some mentors felt unprepared for the new role (Wells and McLoughlin, 2014). Indeed, without mentorship training, midwifery practitioners would have minimal knowledge about their role expectations, hence they would feel this way. Gray and Brown (2016) evaluated a nurse-mentor preparation program and found that mentors had difficulties in teaching, assessing, supervising, supporting, and guiding students in practice, as did Wells and McLoughlin (2014).

1.10.4. The gap in midwifery clinical support

Despite the many clinical challenges, midwifery practitioners must manage high workloads as well as mentor students placed in clinical facilities. The additional responsibilities of clinical support and the lack of training and preparation for this role can become stressful for midwifery practitioners (Lawson and Bunyan, 2013; Velo and Smedley, 2014; Snow and Torney, 2015; Maxwell, Black, and Baillie, 2015; Phuma-Ngaiyaye, Bvumbwe, and Chipeta, 2017; Setati and Nkosi, 2017; McKellar and Graham, 2017; Fernandez, Sheppard-Law, Curtis, Bancroft and Smith, 2018). In retrospect, the competence of midwifery students is a crucial affair and midwifery practitioners who mentor students during placement should be well trained and supported in their roles (Skirton, Stephen, Doris, Avis, and Fraser, 2012; Yigsaw, Ayalew, Kim, Gelagay, Dejene, Gibson, Teshome, Broerse, and Stekelenburg, 2015).

Recent global reports prioritize investing and empowering midwifery practitioners through education (State of World Midwifery report, 2021; WHA Resolution 74, 2021; Global Strategic Direction for Nursing and Midwifery, 2021-2025). Interventions to improve midwifery clinical support through mentorship is visible globally, but none in South Africa.

In South Africa, limited academic support in the clinical areas and the uncertainties regarding the teaching function of qualified nurses and midwives, poses a huge problem for midwifery students. Furthermore, clinical training departments no longer exist in many health service institutions, which results in poor supervision of students (National Strategic Plan for Nurse Education, Training and Practice, 2012-2017). Therefore, the South African healthcare system urgently

requires a structured and sustainable mentorship model that will address the challenges and needs of midwifery clinical practice.

1.10.5. Application of PRAR model to literature review

This literature review aligned to action cycle 1 of the PRAR model which is the conceptual framework adopted in this study. Cycle 1 related to the current situational analysis on the clinical support of midwifery students and therefore looked at the clinical support in pre- and post-millennium phases. This review outcomes highlighted the gaps in midwifery clinical support globally.

1.10.6. Conclusions from the review

It is clear from the literature findings that clinical support of midwifery students is fundamental in producing graduates who become safe, competent, confident, and independent practitioners (Hallas, Biesecker, and Newland, 2012; Lawson and Bunyan, 2013; Maxwell, Black, and Baillie, 2015). Mentoring relationships in maternity wards are an effective method to develop professional competence (Sheehan, Elmir, Hammond, Schmied, Coulton, Sorensen, Arundell, Keedle, Dahlen, and Burns, 2021); thus, clinical mentorship has become a valuable mechanism to secure the profession's future.

It is apparent from the literature, that midwifery practitioners who take on mentor roles require ongoing support and training to carry out this role adequately and successfully (Wells and McLoughlin, 2014; Gray and Brown, 2016)

The South African healthcare system is in urgent need of a structured mentorship training model to address the challenges and needs of clinical practice. Lastly, midwifery practitioners who take on mentorship roles should be adequately prepared for the role through a formal structured training program.

1.11. RESEARCH METHOD

This section addresses the research methodology adopted in this study. It includes the research paradigm, philosophy, approach, design, data collection processes and the data management.

1.11.1. RESEARCH PARADIGM AND PHILOSOPHY

Paradigms are a collection of related assumptions or concepts that orient thinking and research. In this study, the researcher used a paradigm of pragmatism. Pragmatists believe the nature of knowledge, language, concepts, meaning, belief, and science involves practical uses and successes (Killam, 2013); hence, a pragmatic paradigm encourages the practical application of ideas, thoughts, and feelings through human experiences. This paradigm suited the researcher's belief that the best way of teaching and learning in midwifery is through practical experiences in the clinical setting. According to Efron and Ravid (2013), pragmatic paradigms allow for solution-driven research outcomes, encouraging action research and mixed-method approaches. Therefore, the researcher applied a pragmatic paradigm to undertake an action research and mixed methods research design for this study.

Research philosophy is a belief about how data regarding a phenomenon is gathered, analyzed, and interpreted (Cresswell and Clark, 2017). Three underlying assumptions guided the philosophical views of this research study. Firstly, the researcher used an ontological assumption that reality is the contextual field of information in social science. The researcher believes in the concept that "for every action, there is a different reaction," and concludes that there are multiple versions of reality. Likewise, human beings are involved in nature. Exploring a single phenomenon can produce multiple and varied perspectives or outcomes that can change the truth about existing knowledge. This social science study analyzed the clinical support available to midwifery students placed at clinical facilities for experiential learning. The researcher captured data from previous scientific investigations and the experiences of human interaction.

Secondly, the epistemological assumption of knowledge acquisition is related to the inquiry's nature, validity, and limits. The researcher is a specialist in midwifery clinical practice and education and used a positivistic perspective on knowledge development through changes, processes, and systems. Knowledge about clinical support is from scientific research knowledge and the participants' experiences. The researcher was directly involved in all cycles of the research process and therefore incorporated a more emic perspective to research.

Thirdly, the value/objectives of the study guided the research axiology. This study has four research questions that align with the research objectives. There was an analysis of the existing knowledge related to the study title, and new knowledge derived, collated, and reported

systematically. This study showed considerations for the rights of participants, addressed in the ethical considerations section of this chapter.

1.11.2. RESEARCH APPROACH

The researcher used a mixed-method and action research approach concurrently in this study.

Conducting mixed method approaches in research allows for multiple forms of data, which encourages an in-depth understanding of complex social phenomena allowing researchers to find new thoughts, feelings, beliefs, and ideas through creativity (Creswell and Clark, 2017). The researcher chose mixed methods research to mix all levels of the study, such as the research questions, research methods, data collection tools, data analysis, and data interpretation. Such combinations allow for many versions of reality that are aptly suited and aligned to this study's research paradigm and philosophy.

In action research, participants learn consciously from their practical experiences and observations in various forms. The purpose of action research is two-fold. First, action research fosters a deeper understanding of a situation or phenomena, and secondly, it brings about change in practice. This study adopted the Problem Resolving Action Research (PRAR) model by Piggot-Irvine (2001). The study was in three cycles, as illustrated in Figure 1.1: A Problem Resolving Action Research model (Piggot-Irvine, 2001). Each cycle of the theoretical framework was unique, and purposively linked to a corresponding phase of this study.

1.11.3. RESEARCH DESIGN

This study explored and described the clinical support of undergraduate midwifery students from a selected higher education institution in KwaZulu-Natal.

The researcher used an exploratory and descriptive research design to complement the purpose of conducting an action research and mixed methods approach. Exploratory and descriptive research designs ensure a deeper understanding of a specific phenomenon, thus allowing the researcher to make sense of the phenomenon and describe her findings explicitly (Kowalczyk, 2016).

An **exploratory** design focuses on gaining insights and familiarity with a particular topic. It allows researchers to understand how best to investigate an issue to bring about new ideas and assumptions. Exploratory designs are flexible and provide opportunities to define new terms and

clarify existing concepts (Cresswell and Clark, 2017). This study's exploratory aspects depended on the quality of the research instrument used.

A **descriptive** design allows the researcher to ask questions about who, what, when, where, and how of a particular phenomenon, yielding rich data that leads to valuable recommendations in practice (Kowalczyk, 2016; Bloomfield and Fisher, 2019). This study's descriptive design depended on the research instruments used.

In Cycle 1 of this study, a systematic scoping review mapped evidence on the clinical support interventions available to midwifery students globally. The development of the **protocol** followed an exploratory research design. In the same cycle, a **self-evaluation questionnaire** analyzed the clinical support of midwifery students, from a selected higher education institution, placed in five public hospitals for clinical learning and practice. This evaluation followed a descriptive research design.

In Cycle 2, the researcher developed a guide for mentorship-training program for midwifery practitioners, and adopted a two-round Delphi approach to assess the quality of the mentorship training program. An evaluation checklist complemented with a document review evaluated the quality of a guide for developing mentorship training in round 1 of the Delphi, thus encouraging both a descriptive and an exploratory research design.

The researcher then updated the guide for developing a mentorship training program and conducted the training with midwifery practitioners. The training attendees completed a post-training evaluation. The evaluation tool was quantitative and followed a descriptive design. In round 2 of the Delphi study, the researcher evaluated the mentorship training program using the evaluation checklist again.

In Cycle 3, the researcher conducted focus group discussions and semi-structured interviews with midwifery practitioners to further evaluate the outcomes of the developed mentorship training program. This action was to reach a consensus on the overall quality of the mentorship training program. The researcher adopted a qualitative research approach by applying an exploratory research design in the last cycle of this study.

1.11.4. RESEARCH SETTING

This research setting is a university within the province of KwaZulu-Natal (KZN), in the southeastern part of South Africa. By population, KZN is the second largest of the nine provinces of the country and has a proud heritage of academic excellence focusing on quality education and teaching, research scholarship, innovation, and community engagement. The research setting is one of five campuses that offers a full range of degree programs, including Nursing. Nursing programs are at undergraduate and postgraduate levels, and the midwifery module is in the fourth year of an undergraduate nursing program. The campus is central within the eThekweni district and offers a convenient location for the placement of undergraduate midwifery students at clinical learning sites. Midwifery students in the maternity departments rotate placement in the antenatal, labor/delivery, postnatal and neonatal units for experiential learning.

1.11.5. STUDY POPULATION

According to Gray, Grove, and Sutherland (2017), a population is a particular group of people or type of element that is the focus of the research. In this study, the researcher utilized three (3) populations.

Cycle 1: The study population included all undergraduate midwifery students from a Baccalaureate nursing program. These students enrolled for the midwifery module in the first and second semesters of the year 2020

Cycle 2: Midwifery educators with midwifery teaching and research experience, identified as experts in midwifery education, from various universities within South Africa, and midwifery practitioners who attended the mentorship training program

Cycle 3: Midwifery practitioners who attended the mentorship training program

1.11.6. SAMPLE, SAMPLING TECHNIQUE, AND SAMPLE SIZE

A *sample* is a subset of the population included in a study (Gray, Grove, and Sutherland, 2017). The study undertook an all-inclusive purposive and convenience *sampling technique*. The study adopted a non-probability research approach as the researcher was more concerned with findings and a deeper understanding of the clinical support of midwifery students from a higher education institution.

Firstly, the researcher selected undergraduate midwifery students from a Baccalaureate of nursing program. All students registered for the midwifery module in the first and second semesters in

2020 were in cycle 1 of the study; hence, a convenient sampling technique because the researcher worked at the same institution.

Secondly, the researcher selected highly experienced midwifery educators with teaching and research experience, from a list of contacts on a nursing education database, to evaluate a mentorship guide for midwifery practitioners. Thirdly, the researcher invited midwifery practitioners from the various local clinical facilities to attend the mentorship training program.

Determining the *sample size* is an act of choosing the number of people (or elements) for a study. The size of a sample differs when conducting descriptive from experimental studies. This study's mixed-method approach, exploratory and descriptive design, and the research technique determined the study's sample size.

In this study, the sample size was as follows:

In Cycle 1: Sixty-eight (N=68) undergraduate midwifery students

In Cycle 2: Ten (N=10) midwifery education experts and 40 (N=40) midwifery practitioners

In Cycle 3: Fifteen (N=15) midwifery practitioners and educators

1.11.7. RESEARCH TOOLS

The research tools comprised a scoping review protocol (published protocol found in Chapter 2), a questionnaire (Annexure 4), an evaluation checklist (Annexure 5.1), a post-training evaluation form (Annexure 5.2), guidelines for focus group discussions (Annexure 6), and a semi-structured interview guide (Annexure 7).

1.11.7.1. A scoping review protocol and the results paper

The researcher and a research collaborator conducted a systematic scoping review to determine the existing clinical support interventions available for midwifery students globally. The scoping review process involved developing electronic Google forms, which the researcher and the research collaborator used during the screening, data extraction, and quality appraisal phases. The screening and quality appraisal forms included multiple-choice options of yes or no. The data extraction forms allowed for short answer comments, as expected when conducting mixed-method studies. The protocol for the scoping review followed the Arksey and O'Malley methodology framework (2005). The results of the scoping review addressed research objective 1 of this study.

1.11.7.2. A Questionnaire for undergraduate midwifery students

The researcher borrowed ideas from the works of Hogan, Fox, and Barratt-See (2017) and developed questionnaire items that aligned with the objectives of this study. The researcher requested permission via email communication to adapt ideas from the original tool and permission received from the corresponding author (Annexure 8.4). The researcher and the research supervisor, specialists in midwifery education, developed a self-evaluation questionnaire (Annexure 4). The questionnaire consisted of three sections, which entailed all closed-ended questions. Section A addressed the study participant's demographic data, section B addressed the clinical support received during clinical placement, and section C evaluated the perceived level of perinatal competencies. The questionnaire was issued to undergraduate midwifery students and addressed research objective 2 of this study.

1.11.7.3. An evaluation checklist for midwifery education experts and midwifery practitioners

The checklist (Annexure 5), from Michael Scriven's works, was to evaluate the mentorship training program's quality (2013). In a two-round Delphi approach, midwifery education experts and midwifery practitioners evaluated the quality of the mentorship training program.

1.11.7.4. Focus group discussions

Focus group discussions are small groups of six to eight people who actively participate in an open discussion conducted by a skilled facilitator (George, 2021). In Cycle 3, the researcher conducted focus group discussions with midwifery practitioners who attended the mentorship training program (refer to Annexure 6). The facilitator of the focus group followed the six steps from the guidelines for conducting focus groups developed by Tegan George (2021). Focus groups ensure that researchers can find a deeper understanding of participants' experiences as they share their views, stimulate thoughts and feelings, and respect the opinions of all group members. Hence, the focus group results contributed to the evaluation of the mentorship training and aligned with research objective 4 of this study.

1.11.7.5. The semi-structured interview

The researcher and a research assistant conducted semi-structured interviews with midwifery practitioners who attended the mentorship training. Some questions included in the interview tool

were adapted from a study by Carolan-Olah, Kruger, Walter, and Mazzarino (2014); the researcher requested permission to use and amend the interview questions from the principal author. The interview method (see Annexure 7) comprised six stages: set your goals and objectives, design your questions, assemble your participants, decide your medium, conduct your interview, and present your results (George, 2021).

1.11.8. DATA COLLECTION PROCESS

The data collection process began once the University Ethics Committee (HSS/1509/018M) and the KwaZulu-Natal Department of Health (KZ_201810_020) granted approval (refer to Annexure 8.8 and 8.6). Data collection occurred concurrently in cycles, as described in the conceptual framework of this study. Table 1 shows the data collection process in summary.

Table 1: Summary of research process aligned with the conceptual framework of this study

	Action	Research Objective	Research participant	Research tools	Data Analysis	Outcome
Cycle 1:	1. Conduct a needs analysis by conducting a scoping review	1. To analyze the current clinical support available to midwifery students globally	Documents and desktop review	Scoping review protocol	Descriptive Statistical analysis Content Analysis	1. A scoping review protocol published in JMIR 2. A results paper on clinical support of midwifery students submitted to JMIR-in review
	2. Assess the current clinical support available to midwifery students from a higher education Institution.	2. To analyze the current clinical support available to midwifery students at a selected university.	Undergraduate midwifery students	Questionnaires	Descriptive statistical analysis	A published article in HSAG
Cycle 2:	3. Develop a guide and materials (videos and presentations) for developing a mentorship training program	3. To develop a mentorship training program for midwifery practitioners who support undergraduate midwifery students during clinical placement	Midwifery educators	Evaluation checklist Document review	Statistical analysis Feedback comments	A mentorship guide for midwifery practitioners Developed a mentorship training program consisting of five modules
	4. Conduct the mentorship training using the guides and materials developed for the intervention	4. To implement and evaluate the developed mentorship training program at the selected higher education institution	Midwifery practitioners	Evaluation checklist	Statistical Analysis	An article submitted to IJNM
Cycle 3	Evaluate the overall intervention and redefine the problem		Midwifery practitioners	Focus group sessions and semi-structured interviews	Content analysis	Report finding Identify limitations and suggest recommendations in a published article

1.11.9. DATA ANALYSIS

This study used a mixed-methods approach and integrated the quantitative and qualitative findings, as described in the different cycles of this study.

Quantitative aspects

A statistical software package for social sciences (SPSS Version 27) was used to analyze descriptive and inferential statistics. The researcher presented the descriptive results in tables, graphs, or process diagrams and made inferences and generalizations from the data outcomes. The

researcher consulted with a biostatistician for assistance during the analysis of quantitative data. There was audio-recording of all consultation sessions to facilitate the analysis process. The analysis of the data from the evaluation checklist used in the Delphi study was in numbers and percentages.

Qualitative aspect

Content analysis, as described by Erlingsson and Brysiewicz (2017), analyzed the qualitative findings. The analysis focused on the manifest and latent content to describe the obvious and deeper meaning of participants' views. Data results followed a four-stage condensation process. Firstly, there was verbatim transcription of the participants' spoken words from the audio-recordings, and similar ideas and thoughts grouped into meaning units. Secondly, color coding the meaning units highlighted similar meanings and ideas, condensing them into smaller groups. Thirdly, the researcher organized the data into six related categories. Lastly, the researcher refined, reduced, and developed the categories into three themes.

1.11.10. ETHICAL CONSIDERATIONS

The ethical aspects considered in this study highlight the respect for participants of the study, as described by Brink, van der Walt and van Rensburg (2018).

1.11.10.1. Informed Consent- All eligible participants who met the inclusion criteria received information about the purpose and process of data collection. The research assistant handed out the information sheet (Annexure 1) to all students, and the researcher read the form aloud and explained the data collection process. The researcher was available to answer any concerns or queries related to the study. Students were free to practice self-determination and autonomy, and therefore only students agreeable to participate in the study received a consent form (Annexure 5). Those who chose not to participate did not pay any penalty or experience any discrimination for non-participation.

1.11.10.2. Anonymity and confidentiality- There was no personal information divulged in this study, and all participants remained anonymous. All data completed on the consent forms, tests, questionnaires, and interviews remained confidential and kept with the researcher only.

1.11.10.3. Principle of beneficence- This study did not involve any screening, treatment, counseling, or invasive measures; it was purely about the experiences of mentorship in clinical practice. There were no expected risks or harm before, during or after this study.

1.11.10.4. Respect for Privacy- All participants were free to divulge or withhold private information according to his/her availability and general circumstances. There were no expected vulnerable groups of participants, nor a need for referral to a clinical psychologist who was available for unpredictable circumstances.

1.11.11. RESEARCH QUALITY

Validity and Reliability in quantitative research

Reliability refers to the accurate representation of the total population under study, whereby the study results replicate under a similar methodology (Brink, van der Walt and van Rensburg 2018). This study used a questionnaire and a checklist, as successfully used in previous studies. The original authors granted permission to use and amend the tools (Annexure 8.4). The design of the questions contained in the research tools was to purposively address the research objectives of this study.

Validity refers to the degree to which there is an accurate measure of a concept of interest (Brink, van der Walt and van Rensburg, 2018). The study used two quantitative tools. Firstly, the self-evaluation questionnaire evaluated the concepts of clinical support and perceived competency levels of undergraduate midwifery students. Secondly, the evaluation checklist measured the quality, effectiveness, and ease of use of a developed mentorship training program. Both tools were used in other studies previously to measure related concepts which produced valuable information. The same was applied and contributed to achieving the research objectives of this study.

Trustworthiness in qualitative research

Trustworthiness refers to the measures that ensure accuracy in research findings and, according to Connelly (2016), trustworthiness in qualitative research comprises four constructs, namely:

The credibility of the study shows the congruency of the research findings with reality aspects and demands accurate recording of all results. This study focused on issues related to midwifery clinical support in South Africa and evaluated the phenomena using participants directly involved in the clinical support process, namely, midwifery students, educators and practitioners.

Contributions of study participants showed a rich description of the views and experiences and served as a true representation of their unique involvement in the process. Consequently, the *purposive sampling method* added to the credibility of the study findings.

The study's transferability seeks to establish whether the findings of one study yield similar results to another situation or context. In this study, the researcher conducted structured focus group sessions and interviews. The researcher continued investigating the phenomena until similar findings prevailed and there was no new information gathered. On reaching *data saturation*, the interview process concluded. Consequently, other related studies can adopt or adapt the tools used in this study.

The dependability of the study – this construct emphasizes that an explicit explanation of overlapping methods achieves similar results within the same context and population of another study. According to Heale and Forbes (2013), the use of *triangulation* is to describe two or more research methods. This study used a mixed-method approach to produce overlapping results in the data. The researcher combined focus group discussions with one-to-one interviews to provide a fuller and more meaningful experience of participants. The researcher noted that information shared in the focus groups discussions provided a general perspective of experiences, whilst information gathered in interviews was private.

The confirmability of the study- ensures results are the participants' exact views and experiences, not those of the researcher. In qualitative studies, and *member checking* is a validation technique that ensures accuracy of findings (Birt, Scott, Cavers, Campbell, and Walter, 2016). Audio-recordings during focus group sessions and semi-structured interviews ensured correct reflection and capturing of the findings. The use of audio-recorded sessions allowed the researcher to repeatedly visit the data to verify it and capture verbatim the participants' words. Participants validated the analyzed data to confirm that data collected was a truthful reflection of what participants mentioned during the focus group sessions and interviews.

1.11.12. DATA MANAGEMENT AND DISPOSAL

The researcher collected, coded, and stored all data in a locked safe known only to the researcher. The writing up of the data was in the form of publications, and destroyed after a five-year period.

1.11.13. CONCLUSION

This chapter highlighted the aims and objectives of this study, the gaps in the clinical support of midwifery students and the research methodology, which underpins the unfolding of this study. The next chapters comprise a synopsis and the publications produced from this study.

1.11.14. THESIS STRUCTURE

Table 2 shows a summary of the thesis structure aligned to the research objectives and the methodology of this study.

TABLE 2: THESIS STRUCTURE					
Chapter 1: Introduction and Background	This chapter described the background information related to midwifery clinical support in a global and in a South Africa context. It also includes a literature review and the research methodology undertaken in this study.				
Manuscript Number	Title of the manuscript	Research Objectives	Research Approach	Data Collection	Contribution of the Manuscript
Chapter 2: Protocol	Analyzing evidence on interventions to strengthen the clinical support of midwifery students in placements: Protocol for a systematic scoping review (<i>published in JMIR, 2021</i>)		Mixed methods approach	Document and Desktop analysis	A protocol to undertake a systematic scoping review
Chapter 3: Manuscript 1	Clinical support interventions and a framework to guide mentorship training: The results of a systematic scoping review (<i>in review at JME ID #36380</i>)	1. To analyze the current clinical support available to midwifery students globally	Mixed methods approach	Document and Desktop analysis	Nine of the 10 interventions promoted mentorship as the foundation for midwifery clinical support Recommended is a framework for mentorship training
Chapter 4: Manuscript 2	Clinical support and perceived competency level of midwifery students: A descriptive analysis (<i>in press HSAG #1783</i>)	2.To analyze the existing clinical support available for undergraduate midwifery students at a selected higher education institution in South Africa.	Quantitative approach	Self-evaluation questionnaire	Most midwifery students (93%) are supported by midwifery practitioners without a speciality qualification Most clinical support (80%) is through clinical supervision; 93% found the clinical support received during placement, beneficial to their learning outcomes Students perceived themselves incompetent in 11.4% (eight out of 70) midwifery clinical requirements
Chapter 5: Developing mentorship training program and conducting the training	Developing and conducting the Mentorship training	3. To develop and conduct a mentorship training program for midwifery practitioners who support undergraduate midwifery students	Mixed method approach	An evaluation checklist	In round 1 of the Delphi, the overall quality score of the guide was 81%, as rated by six midwifery education experts. Feedback from the document analysis was selectively integrated to finalize the guide for mentorship training. The guide assisted the researcher to convert the contained information into a PowerPoint presentation and develop videos for training In round 2 of the Delphi, the overall quality score of 96% was obtained as rated by midwifery practitioners who attended the mentorship training
Chapter 6: Manuscript 3	Evaluating a mentorship training program for midwifery practitioners: An investment amid the COVID-19 pandemic (<i>In Review</i>) <i>IJNM ID #</i>	4. To evaluate the developed mentorship training program at the selected higher education institution	Qualitative	FDGs and interview	Focus group sessions revealed the mentorship training was a new phenomenon, empowered midwifery practitioners and is an investment towards midwifery leadership Results from semi-structured interviews showed that the mentorship training was a new, well-structured and valuable program; was a refresher course for midwifery practitioners and educators; was adequate to support midwifery practitioners in their mentorship roles and responsibilities; provided recommendations for midwifery practice and education
Chapter 7: Synthesis, Conclusion, Limitations and Recommendations	The chapter discusses the main findings of this study drawing conclusions from the previous chapters. This chapter highlights how the research objectives were met, and how the theoretical framework and the research methodology were linked. There is much relevance given to the value of the study and recommendations for midwifery practice, education, and research. The thesis concludes with the reference list and the annexures for this study.				

1.11.15. REFERENCE LIST

- Alghamdi, R. and Jarrett, P. (2016). Experiences of student midwives in the care of women with perinatal loss: A qualitative descriptive study. *British Journal of Midwifery*, 24(10), pp.715-722.
- Anderson, E. and Shannon, A. (1998). Towards a conceptualization of mentoring. *Journal of Teacher Education*, 39, pp. 38-42
- Andrews, M. and Wallis, M. (1999). Mentorship in nursing: a literature review. *Journal of advanced nursing*, 29(1), pp.201-207.
- Arksey, H. and O'Malley, L. (2005). Scoping studies: towards a methodological framework. *International Journal of Social Research Methodology*, 8(1), pp.19-32.
- Asirifi, M.A., Mill, J.E., Myrick, F. and Richardson, G. (2017). Implementation of Preceptorship in Ghana: "Marriage between school and clinical settings." *Quality Advancement in Nursing Education*, 3(2), p.7.
- Atakro, C.A., Armah, E., Menlah, A., Garti, I., Addo, S.B., Adatara, P. and Boni, G.S. (2019). Clinical placement experiences by undergraduate nursing students in selected teaching hospitals in Ghana. *BMC nursing*, 18(1), p.1.
- Back, L., Hildingsson, I., Sjoqvist, C. and Karlstrom, A. (2017). Developing competence and confidence in midwifery-focus groups with Swedish midwives. *Women and Birth*, 30(1), pp. e32-e38.
- Barrett, D. and Heale, R. (2020). What are Delphi studies? *Evidence-Based Nursing*; 23, pp. 68-69.
- Bethabile, L.D. and Simeon, K.O. (2013). Nursing education in Africa: South Africa, Nigeria, and Ethiopia experiences. *International Journal of Nursing and Midwifery*, 5(2), pp.14-21.
- Beukes, S. and Nolte, A.G. (2013). Guidelines for value-sensitive clinical accompaniment in community health nursing. *Journal of Nursing Management*, 21(2), pp.304-313.
- Bharj, K.K. and Embo, M. (2018). Factors affecting quality of midwifery students learning in the workplace: Results of two ICM congress workshops. *Midwifery*, 62, pp.116-118.

Birt, L., Scott, S., Cavers, D., Campbell, C. and Walter, F. (2016). Member checking: a tool to enhance trustworthiness or merely a nod to validation? *Qualitative health research*, 26(13), pp.1802-1811.

Bloomfield, J. and Fisher, M. (2019). Quantitative research design. *Journal of the Australasian Rehabilitation Nurses' Association*. 22. 27-30. 10.33235/jarna.22.2.27-30.

Bogren, M., Ndela, B., Toko, C. and Berg, M. (2020). Midwifery education, regulation and association in the Democratic Republic of Congo (DRC) – current state and challenges. *Global health action*, 13(1), p.1717409.

Botma, Y., Jeggels, J. and Uys, L. (2012). Preparation of clinical preceptors. *Trends in Nursing*, 1(1), pp.67-78.

Bradford, H., Hines, H.F., Labko, Y., Peasley, A., Valentin-Welch, M. and Breedlove, G. (2022). Midwives Mentoring Midwives: A Review of the Evidence and Best Practice Recommendations. *Journal of Midwifery & Women's Health*, 67(1), pp.21-30.

Brink, H., van der Walt, C., and van Rensburg, G. (2018). Fundamentals of Research Methodology for Healthcare Professionals. Fourth edition, Juta and Company Ltd, Cape Town, South Africa, pages 130-146.

Britannica, T. Editors of Encyclopaedia (2020). KwaZulu-Natal. *Encyclopaedia Britannica*. Retrieved on 30 May 2022 from <https://www.britannica.com/place/KwaZulu-Natal>

Bvumbwe, T., Malema, A. and Chipeta, M. (2015). Registered nurses' experiences with clinical teaching environment in Malawi. *Open Journal of Nursing*, 5(10), p.927.

Carolan-Olah, M., Kruger, G., Walter, R. and Mazzarino, M. (2014). Final year students' experiences of the Bachelor of Midwifery course. *Midwifery*, 30(5), pp.519-525.

Carter, J., Dietsch, E. and Sidebotham, M. (2020). The impact of pre-registration education on the motivation and preparation of midwifery students to work in continuity of midwifery care: An integrative review. *Nurse Education in Practice*. 48. 102859. 10.1016/j.nepr.2020.102859.

Chickerella, B. G., & Lutz, W. J. (1981). Professional Nurturance: Preceptorships for Undergraduate Nursing Students. *The American Journal of Nursing*, 81(1), 107–109. <https://doi.org/10.2307/3462542>

Clark, L. and Casey, D. (2016). Support for mentors—an exploration of the issues. *British Journal of Nursing*, 25(20), pp.1095-1100.

Clements, V., Fenwick, J. and Davis, D. (2012). Core elements of transition support programs: the experiences of newly qualified Australian midwives. *Sexual & reproductive healthcare: Official Journal of the Swedish Association of Midwives*, 3(4), 155–162.
<https://doi.org/10.1016/j.srhc.2012.08.001>

Coldridge, L. and Davies, S. (2017). Am I too emotional for this job? An exploration of student midwives' experiences of coping with traumatic events in the labor ward. *Midwifery* 45: 1-6.

Connelly, L. M. (2016). “Trustworthiness in Qualitative Research,” *Medical surgical nursing: Official Journal of the Academy of Medical-Surgical Nurses*, 25(6), pp. 435–6.

Creswell, J.W. and Clark, V.L.P. (2017). Designing and conducting mixed methods research. Third edition, SAGE publications Inc, Los Angeles, pp. 143-173

Davis, D., Foureur, M., Clements, V., Brodie, P. and Herbison, P. (2012). The self-reported confidence of newly graduated midwives before and after their first year of practice in Sydney, Australia. *Women and Birth*, 25(3), pp. e1-e10.

Department of Health - South Africa. (2013). National Strategic Plan for nurse education, training and practice 2012/3-2016/7. Pretoria, Government Printers, pp 21-31

Durham, W.J., Kingston, P. and Sykes, C. (2012). Implementing a sign off mentor preparation workshop—A tripartite approach. *Nurse education today*, 32(3), pp.273-277.

Edwards, G., Hellen, K. and Brownie, S. (2018). Developing a work/study program for midwifery education in East Africa. *Midwifery*, 59, pp.74-77.

Efron, S.E. and Ravid, R. (2013). *Action research in education: A practical guide*. New York, NY: Guilford Press, pp. 268

Erlingsson, C. and Brysiewicz, P. (2017). A hands-on guide to doing content analysis. *African Journal of Emergency Medicine*, 7(3), pp.93-99.

Fasan, J., Zavarise, D., Palese, A. and Marchesoni, D. (2012). Midwifery students' perceived independence within the core competencies expected of the midwifery community upon graduation: an Italian study. *International nursing review*, 59(2), pp.208-214.

Fernandez, R., Sheppard-Law, S., Curtis, S., Bancroft, J. and Smith, W. (2018). Exploring the experiences of neophyte nurse mentors: A qualitative study. *Nurse education in practice*, 29, pp.76-81.

Fink, A. (2020). Conducting research literature reviews: From the Internet to paper. 5th edition, Sage Publishers, United Kingdom, pp 6.

Frazer, K., Connolly, M., Naughton, C. and Kow, V. (2014). Identifying clinical learning needs using structured group feedback: First year evaluation of pre-registration nursing and midwifery degree programs. *Nurse Education Today*, 34(7), pp.1104-1108.

George, T. (2021). What are focus groups-step by step guide and examples. Retrieved June 7, 2022, from <https://www.scribbr.com/methodology/focus-group/>

Gray, J., Grove, S. K., and Sutherland, S. (2017). Burns and Grove's the practice of nursing research: appraisal, synthesis, and generation of evidence. Eighth edition, St. Louis, Missouri: Elsevier, page 516

Gray, M., Malott, A., Davis, B.M. and Sandor, C. (2016). A scoping review of how new midwifery practitioners' transition to practice in Australia, New Zealand, Canada, United Kingdom and The Netherlands. *Midwifery*, 42, pp.74-79.

Gray, O. and D. Brown (2016). Evaluating a nurse mentor preparation programme. *British Journal of Nursing* 25(4): 212-217.

Hallas, D., Biesecker, B., Brennan, M., Newland, J.A. and Haber, J. (2012). Evaluation of the clinical hour requirement and attainment of core clinical competencies by nurse practitioner students. *Journal of the American Academy of Nurse Practitioners*, 24(9), pp.544-553.

Heale, R. and Forbes, D. (2013). Understanding triangulation in research. *Evidence-based nursing*, 16(4), pp.98-98.

- Heidari, M.R. and Norouzadeh, R. (2015). Nursing students' perspectives on clinical education. *Journal of Advances in Medical Education & Professionalism*, 3(1), p.39-43.
- Hilli, Y., Salmu, M. and Jonsen, E. (2014). Perspectives on good preceptorship: A matter of ethics. *Nursing ethics*, 21(5), pp.565-575.
- Hogan, R., Fox, D. and Barratt-See, G. (2017). Peer to peer mentoring: Outcomes of third-year midwifery students mentoring first-year students. *Women and birth: Journal of the Australian College of Midwives*, 30(3), 206–213. <https://doi.org/10.1016/j.wombi.2017.03.004>
- Houghton, C.E. (2014). 'Newcomer adaptation': a lens through which to understand how nursing students fit in with the real world of practice. *Journal of Clinical Nursing*, 23(15-16), pp.2367-2375.
- Hugo, L. and Botma, Y. (2019). Looking beneath the surface of a preceptor-training program through a realist evaluation. *Evaluation and program planning*, 73, pp.195-203.
- Jamshidi, N., Molazem, Z., Sharif, F., Torabizadeh, C. and Najafi Kalyani, M. (2016). The challenges of nursing students in the clinical learning environment: A qualitative study. *The Scientific World Journal*, 2016.
- Joolae, S., Ashghali Farahani, M., Jafarian Amiri, S. R., and Varaei, S. (2016). Support in Clinical Settings as Perceived by Nursing Students in Iran: A Qualitative Study. *Nursing and midwifery studies*, 5(1), e31292. <https://doi.org/10.17795/nmsjournal31292>
- Killam, L. (2013). Research terminology simplified: Paradigms, axiology, ontology, epistemology and methodology. Sudbury, ON: Author Kolb, D.A. (2014). Experiential learning: Experience as the source of learning and development. Second edition, Pearson Publication LTD, FT press, USA
- Kowalczyk, D. (2016). Research methodologies: Quantitative, qualitative, and mixed methods [video file]. Retrieved from <http://study.com/academy/lesson/research-methodologies-quantitative-qualitative-mixed-method.html>

Kuliukas, L., Hauck, Y., Sweet, L., Vasilevski, V., Homer, C., Wynter, K., Wilson, A., Szabo, R. and Bradfield, Z. (2021). A cross sectional study of midwifery students' experiences of COVID-19: Uncertainty and expendability. *Nurse education in practice*, 51, p.102988.

Lawal, J., Weaver, S., Bryan, V., Lindo, J.L.M. (2015). Factors that influence the clinical learning experience of nursing students at a Caribbean school of nursing. *Journal of Nursing Education and Practice* 6 (4): 32-39.

Lawson, L. and Bunyan, C. (2013). The role of the mentor in evaluating learning. *The Practicing Midwife*, 16(8), pp.15-17.

Mampunge, F., Seekoe, E. and Peter, Z.P. (2015). The impact of clinical learning environment on the preparedness of fourth year nursing students at a public college of nursing in the Eastern Cape Province, South Africa. *African Journal for Physical Health Education, Recreation and Dance*, 21(2.1), pp.132-140.

Maputle, M.S. and Netshisaulu, K.G. (2018). Expected clinical competence from midwifery graduates during community service placement in Limpopo Province, South Africa. *Health SA Gesondheid*, 23(1), pp.1-7.

Maxwell, E., Black, S. and Baillie, L. (2015). The role of the practice educator in supporting nursing and midwifery students' clinical practice learning: An appreciative inquiry. *Journal of Nursing Education and Practice*, 5(1), pp.35-45.

McKellar, L. and Graham, K. (2017). A review of the literature to inform a best-practice clinical supervision model for midwifery students in Australia. *Nurse education in practice*, 24, pp.92-98.

McPherson, S., Reese, C. and Wendler, M.C. (2018). Methodology update: Delphi studies. *Nursing research*, 67(5), pp.404-410.

McSharry, E. and Lathlean, J. (2017). Clinical teaching and learning within a preceptorship model in an acute care hospital in Ireland; a qualitative study. *Nurse education today*, 51, pp.73-80.

Mirzakhani, K. and Shorab, N.J. (2015). Study of the self-confidence of midwifery graduates from Mashhad College of Nursing and Midwifery in fulfilling clinical skills. *Electronic physician*, 7(5), p.1284.

Moran, M. and Banks, D. (2016). An exploration of the value of the role of the mentor and mentoring in midwifery. *Nurse education today*, 40, pp.52-56.

Msiska, G., Smith, P. and Fawcett, T. (2014). The “lifeworld” of Malawian undergraduate student nurses: The challenge of learning in resource poor clinical settings. *International Journal of Africa Nursing Sciences*, 1, pp.35-42.

Mukamana, D., Uwiyeze, G. and Sliney, A. (2015). Nursing and midwifery education in Rwanda: Telling our story. *Rwanda Journal*, 2(2), pp.9-12.

Mulder, M. and Uys, L. (2012). Baseline measurement of the implementation process of the proposed model for clinical nursing education and training in South African universities. *Trends in Nursing*, 1(1), pp.51-66.

Myrick, F. (1988) Preceptorship: A viable alternative clinical teaching strategy. *Journal of Advanced Nursing*, 13, 588-591.

Nowell, L., White, D.E., Benzies, K. and Rosenau, P. (2017). Exploring mentorship programs and components in nursing academia: A qualitative study. *Journal of Nursing Education and Practice*, 7(9), pp.42-53.

Nursing and Midwifery Council, (2019). Part 3: Standards for pre-registration midwifery programme. Retrieved from <https://www.nmc.org.uk/globalassets/sitedocuments/standards/standards-for-pre-registration-midwifery-programmes.pdf>

Phuma-Ngaiyaye, E., Bvumbwe, T. and Chipeta, M.C. (2017). Using preceptors to improve nursing students' clinical learning outcomes: A Malawian students' perspective. *International Journal of Nursing Sciences*, 4(2), pp.164-168.

Piggot-Irvine, E. (2001). Appraisal: reducing control, enhancing effectiveness: a thesis submitted in partial fulfilment of the requirements for the degree of Ph. D. in Education at Massey University, Albany Campus, Auckland, New Zealand.

Power, A. and Jewell, L. (2018). Students in practice: The role of the student support midwife. *British Journal of Midwifery*, 26(7), pp.475-477.

Robinson, F., Piggot Irvine, E., Youngs, H. and Cady, P. (2019). Struggling to achieve desired results from your AR projects? Insights from the evaluative study of action research may help. *Educational Action Research*, 27(5), pp.778-797.

Russell, K., Allix, S. and Gluyas, H. (2016). The art of clinical supervision: Its development and descriptive mixed method review. *Australian Journal of Advanced Nursing, The*, 33(4), p.6.

Scriven, M. (2013). The foundation and future of evaluation. *The future of evaluation in society: A tribute to Michael Scriven*, pp.11-44.

Setati, C.M. and Nkosi, Z.Z. (2017). The perceptions of professional nurses on student mentorship in clinical areas: A study in Polokwane municipality hospitals, Limpopo Province. *Health SA Gesondheid*, 22(1), pp.130-137.

Sheehan, A., Elmir, R., Hammond, A., Schmied, V., Coulton, S., Sorensen, K., Arundell, F., Keedle, H., Dahlen, H., and Burns, E. (2021). The midwife-student mentor relationship: Creating the virtuous circle. *Women and birth: Journal of the Australian College of Midwives*, S1871-5192(21)00179-7. Advance online publication. <https://doi.org/10.1016/j.wombi.2021.10.007>

Sheen, K., Spiiby, H. and Slade, P. (2015). Exposure to traumatic perinatal experiences and posttraumatic stress symptoms in midwives: prevalence and association with burnout. *International Journal of Nursing Studies*, 52(2), pp.578-587.

Skirton, H., Stephen, N., Doris, F., Cooper, M., Avis, M. and Fraser, D.M. (2012). Preparedness of newly qualified midwives to deliver clinical care: an evaluation of pre-registration midwifery education through an analysis of key events. *Midwifery*, 28(5), pp. e660-e666.

Snow, S. and Torney, L. (2015). An evaluation of the first year of an enquiry-based learning midwifery curriculum. *British Journal of Midwifery*, 23(12), pp.894-900.

South African Nursing Council (2004-2016). Under the provisions of the Nursing Act, 2005 (Act 33 of 2005). Section 3. Pretoria. Government Printers.

South African Nursing Council. (2013). Regulations Relating to the Accreditation of Institutions as Nursing Education Institutions. Government Notice No. R. 173. 8 March 2013. Pretoria. Government Printers

Standing, M. (1999). Developing a supportive/challenging and reflective/competency education (SCARCE) mentoring model and discussing its relevance to nurse education. *Mentoring and Tutoring*, 6(3), pp.3-17.

Sundler, A.J., Bjork, M., Bisholt, B., Ohlsson, U., Engstrom, A.K. and Gustafsson, M. (2014). Student nurses' experiences of the clinical learning environment in relation to the organization of supervision: a questionnaire survey. *Nurse education today*, 34(4), pp.661-666.

Taylor, K. and Blease, M. (2015). Being a preceptor-rewarding yet challenging. *The practicing midwife*, 18(11), pp.26-30.

The Nursing Education Stakeholders Group NES (2012). A Proposed Model for Clinical Nursing Education and Training in South Africa. *Trends in Nursing- Fundisa*. 3(1).

Thunes, S. and Sekse, R.J. (2015). Midwifery students first encounter with the maternity ward. *Nurse Education in Practice* 15(3): 243-248.

Tweedie, K., Yerrell, J. and Crozier, K. (2019). Collaborative coaching and learning in midwifery clinical placements. *British Journal of Midwifery*, 27(5), pp.324-329.

United Nations Population Fund, International Confederation of Midwives, World Health Organization. (2021). State of the world's midwifery 2021. New York: United Nations Population Fund, pp. 1-13.

Van Heerden, C., Janse van Rensburg, E.S. and Maree, C. (2021). Action research as sustainable healthcare quality improvement: Advances in neonatal care emphasising collaboration, communication, and empowerment. *Action Research*, 19(4), pp.710-727.

Velo, K. and Smedley, A. (2014). Using reflection to enhance the teaching and learning of midwifery students. *British Journal of Midwifery*, 22(2), pp.129-133.

Wells, L. and McLoughlin, M. (2014). Fitness to practice and feedback to students: A literature review. *Nurse education in practice*, 14(2), pp.137-141.

Wilsom Mukan, S., Kulai, D., and Haji Che Md Nor, R. (2021). Nursing Students' Perceived Effective Clinical Teachers' Behaviors. *Asian Journal of University Education*, 16(4), 200-210. doi:10.24191/ajue.v16i4.11956

World Health Organization, (2021). Global Strategic direction for nursing and midwifery 2021-2025. Geneva, License: CC-BY-NC-SA 3.0. IGO

Wynn, S., Holden, C., Romero, S. and Julian, P. (2021) The Importance of Mentoring in Nursing Academia. *Open Journal of Nursing*, 11, 241-248. <https://doi.org/10.4236/ojn.2021.114021>

Yigzaw, T., Ayalew, F., Kim, Y.M., Gelagay, M., Dejene, D., Gibson, H., Teshome, A., Broerse, J. and Stekelenburg, J. (2015). How well does pre-service education prepare midwives for practice: competence assessment of midwifery students at the point of graduation in Ethiopia. *BMC medical education*, 15(1), p.130.

Zhang, Y., Qian, Y., Wu, J., Wen, F. and Zhang, Y. (2016). The effectiveness and implementation of mentoring program for newly graduated nurses: A systematic review. *Nurse education today*, 37, pp.136-144.

CHAPTER 2: A SYSTEMATIC SCOPING REVIEW PROTOCOL

FIRST PUBLICATION: A SYSTEMATIC SCOPING REVIEW PROTOCOL PUBLISHED IN AN APPROVED JOURNAL

Protocol

Analyzing Evidence on Interventions to Strengthen the Clinical Support for Midwifery Students in Clinical Placements: Protocol for a Systematic Scoping Review

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Abstract

Background: The benefits of clinical support are evident in various mentorship, preceptorship, or clinical supervision models. Poor collaboration between lecturers and clinical staff, lack of confidence about student support, large student intakes coupled with core demands create negative attitudes toward student supervision, and this poses a huge challenge to midwifery students who are expected to become competent in the process.

Objective: This study aims to identify and analyze interventions, strategies, and/or mechanisms in order to strengthen the clinical support for midwifery students in clinical practice areas from a global perspective.

Methods: This review will follow the Arksey and O'Malley framework (2005). The search strategy will include primary studies searched for in electronic databases such as EBSCOhost (CINAHL, MEDLINE, and Health Source: Nursing/Academic edition), PubMed, Google, and Google Scholar. Keywords such as "midwifery students," "midwifery education," and "clinical support" will be used to search for related articles. The search will include articles from the cited by search, as well as citations from the reference list of included articles. All title-screened

articles will be exported to an EndNote library, and duplicate studies will be removed. Two independent reviewers will concurrently carry out the abstract and full-text article screening according to the eligibility criteria. Extracted data will highlight the aims, geographical setting, and level of training; intervention outcomes; and the most relevant and most significant findings. This review will also include a mixed methods quality appraisal check. A narrative summary of data extracted will be analyzed using content analysis.

Results: Interventions to strengthen the clinical support for midwifery students in practice will be extracted from this review, and data will be analyzed and extracted to develop a comprehensive guide or framework for clinical mentorship. As of August 2021, the electronic search, the data extraction, and the analysis have been completed. The results paper is expected to be published within the next 6 months.

Conclusions: It is expected that this review will contribute to midwifery education by identifying quality evidence on clinical support interventions available to midwifery students globally, as well as best practice methods, procedures, or interventions that can be used to develop a midwifery mentorship training program.

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KEYWORDS

midwifery students; registered midwives; clinical support interventions; midwives; midwifery; students; mentorship; clinical

supervision; collaboration; clinician attitudes

Introduction

The clinical support for midwifery students is critical to the quality of graduates produced at higher education institutions. A significant concern for lecturers and registered midwives is to produce graduates who are safe and competent practitioners [1-3]. Midwifery students spend 50% of module time in clinical placements for work-integrated learning. Therefore, a registered midwife who supports students in clinical placements has an extremely important role to create and maintain a positive working experience, increasing students' enthusiasm and ensuring their retention in the profession [4-6].

Midwifery students value the clinical support they receive during their transition from a student to a confident midwife practitioner. The benefits of clinical support are evident in various mentorship, preceptorship, or clinical supervision models, and it is supported widely in the literature [7-9]. However, literature on the perceptions of mentors or preceptors concurs that clinical staff feel unprepared in their roles to support students in clinical placements [10-15].

Furthermore, time constraints and the core function of registered midwives, which is to deliver patient care, hampers opportunities to support students during clinical placement for learning [15].

Findings from other studies also showed positive outcomes in the student-mentor relationship, even more so when mentoring is undertaken in a planned method [3,6]. In addition, providing support and training to registered midwives to take on the role of a clinical mentor or preceptor is highly recommended in many developed countries such as New Zealand, Scotland, and the United Kingdom [15-18]. Very few studies conducted in African countries relate to the clinical support for midwifery students [2,19]. One study called the MOMENTUM project was conducted in Uganda and supported by the Royal College of Midwives (United Kingdom). The project aimed to address the poor quality of mentorship for midwifery students by developing a context-specific model for mentorship in Uganda [19].

In South Africa, registered midwives working in clinical placements assume the role of clinical mentors. These clinical mentors do not receive any formal support or training and, therefore, experience conflicts in their roles and expectations. Poor collaboration between lecturers and clinical staff, negative feelings, lack of confidence about student support, and large

Table 1. The population, concept, context framework.

Eligibility criteria	Elements of the study
Population	Studies that include training of midwifery undergraduate and/or postgraduate students. Studies that include the perspectives of mentors and mentees.
Concept	To strengthen clinical support for midwifery students. Clinical support terms such as “clinical supervision,” “mentorship,” and “preceptorship” are used interchangeably in nursing and midwifery practice.
Context	Midwifery education and training, globally.

student intakes create negative attitudes toward clinical supervision [2,20]. Currently, in South Africa, there are no known support structures for registered midwives who support students in clinical practice. Hence, the quality of midwifery mentorship is questionable, and the need to train and support registered midwives to mentor students in maternity care units has become necessary.

Identifying and analyzing the interventions to support mentorship training on a global capacity has not been previously conducted in South Africa. There are also no scoping reviews on clinical support structures or interventions to strengthen midwifery clinical support. The results of this systematic scoping review will identify interventions to strengthen the clinical support for midwifery students; subsequently, through data analysis, these results could help in developing a comprehensive mentorship training guide for midwifery clinical practice.

Methods

Study Design

This systematic scoping review will focus on retrieving and reviewing studies on clinical support interventions available to midwifery students globally. The review will follow the Arksey and O'Malley (2005) framework [21] using the following steps: (1) identifying the research question; (2) identifying the relevant studies; (3) study selection; (4) charting the data; (5) collating, summarizing, and reporting the results; and (6) consultation (optional).

Objectives

The objective for this systematic scoping review is to identify and analyze best practice guidelines, interventions, strategies, and/or mechanisms in order to

support midwifery students in clinical practice areas on a global perspective.

Identifying the Research Question

What evidence is available on interventions to strengthen the current clinical support for midwifery students globally?

Eligibility of the Research Question

The review will use the population, concept, context (PCC) framework, as described by Levac et al [22,23], to determine the research question's eligibility criteria. Table 1 shows the eligibility criteria and the elements to be used in the review.

Identifying Relevant Studies

This scoping review will select preliminary studies using qualitative, quantitative, and mixed methods related to clinical support for midwifery students. Electronic platforms such as

EBSCOhost (CINAHL, MEDLINE, Health Source: Nursing/Academic Edition), PubMed, Science Direct, Google, and Google Scholar will be searched to find articles published in peer-reviewed journals and the grey literature. The search strategy involves using search terms such as “midwifery students,” “clinical supervision OR mentorship OR preceptorship,” and “midwifery education.” The search will be limited to English-language articles and confined within the last 10 years (2010-2020) to identify support interventions and strategies that are up to date and current.

The review will include a manual search of the main published articles and citations from the “related literature” list. Eligibility criteria to ensure specific information relating to the research question will be used in the studies. It will include Boolean terms (“midwifery AND clinical support,” OR “mentorship,” OR

“clinical supervision,” OR “preceptorship”), medical subject headings (MESH) terms (“midwifery students AND clinical support interventions,” “mentorship AND midwifery students,” and “midwifery practice and clinical supervision models”). If full-text articles are unobtainable, the researchers will consult with the librarian for assistance. All researchers will maintain an electronic search record of all literature searched.

Study Selection

The researcher will design a form for abstract and full-text screening by using Google Forms. The search strategy will follow a 3-stage system of title screening, abstract screening, and full-text screening, as determined by the inclusion criteria mentioned below. All selected articles from the screening process will be saved in an EndNote software folder.

Inclusion Criteria

The following studies will be included: (1) studies that present evidence on midwifery students; (2) studies that present evidence on clinical support such as mentorship, preceptorship,

(2) studies that do not include an intervention or strategy.

The Screening Process

The primary investigator will conduct a thorough title-screening process using relevant databases. All articles selected will be exported to an EndNote library. Duplicated articles will be extracted from the reference list. The primary investigator and an independent collaborator will screen all saved abstracts using a standardized Google Forms as a tool. Both the primary investigator and the independent collaborator will apply the inclusion criteria developed for the search. The eligible articles selected from the abstract-screening stage will then undergo a full-text article screening process using another standardized Google Forms. Both the primary investigator and the research collaborator will work independently. Both screeners will also compile a screening report for both the abstract and full-text screening. A third reviewer (the research supervisor) will resolve any discrepancies that may emerge.

Charting the Data

Textbox 1. Variables used in the data charting stage.

Variables used in the data charting form:

- Author and date
- Full journal reference
- Study aims or research question
- Geographical setting
- Level of training
- Intervention outcomes (methods, procedures, evaluation, removal and monitoring, preferences, and acceptability)
- Most relevant findings
- Most significant findings
- Comments

and clinical supervision; (3) studies that present evidence on midwifery education; (4) studies conducted between 2010 and 2020; (5) studies that include a support intervention or strategy; and (6) peer-reviewed articles and studies from the grey literature, which may include governmental policies and guidelines.

Exclusion Criteria

The following studies will be excluded from the analysis: (1) studies that do not include midwifery students and

In this stage, the researcher will design a data charting tool using Google Forms. [Textbox 1](#) shows the variables used in the data charting tool. The data charting tool will highlight the study’s aims, intervention outcomes, the most relevant findings, and the most significant findings, and author comments.

All researchers will collectively conduct a content analysis to extract relevant outcomes. All emerging themes and variables will be used to answer the

research question. The data charting tool will be updated continually.

Quality Appraisal

This study will include a quality check as recommended by Levac et al [23]. A mixed methods quality appraisal

mixed methods section. A scoring metrics system will present all outcomes according to the

Table 2. Scoring metrics summary (example).

number of criteria met. Table 2 shows an example summary of the scoring metric, presented according to the study design, the number of criteria met, and the

Study design and number of criteria met	Score (%)	Descriptors
Qualitative and quantitative studies		
1	25	*
2	50	**
3	75	***
4	100	****
Mixed method studies		
0	25	*
1	50	**
2	75	***
3	100	****

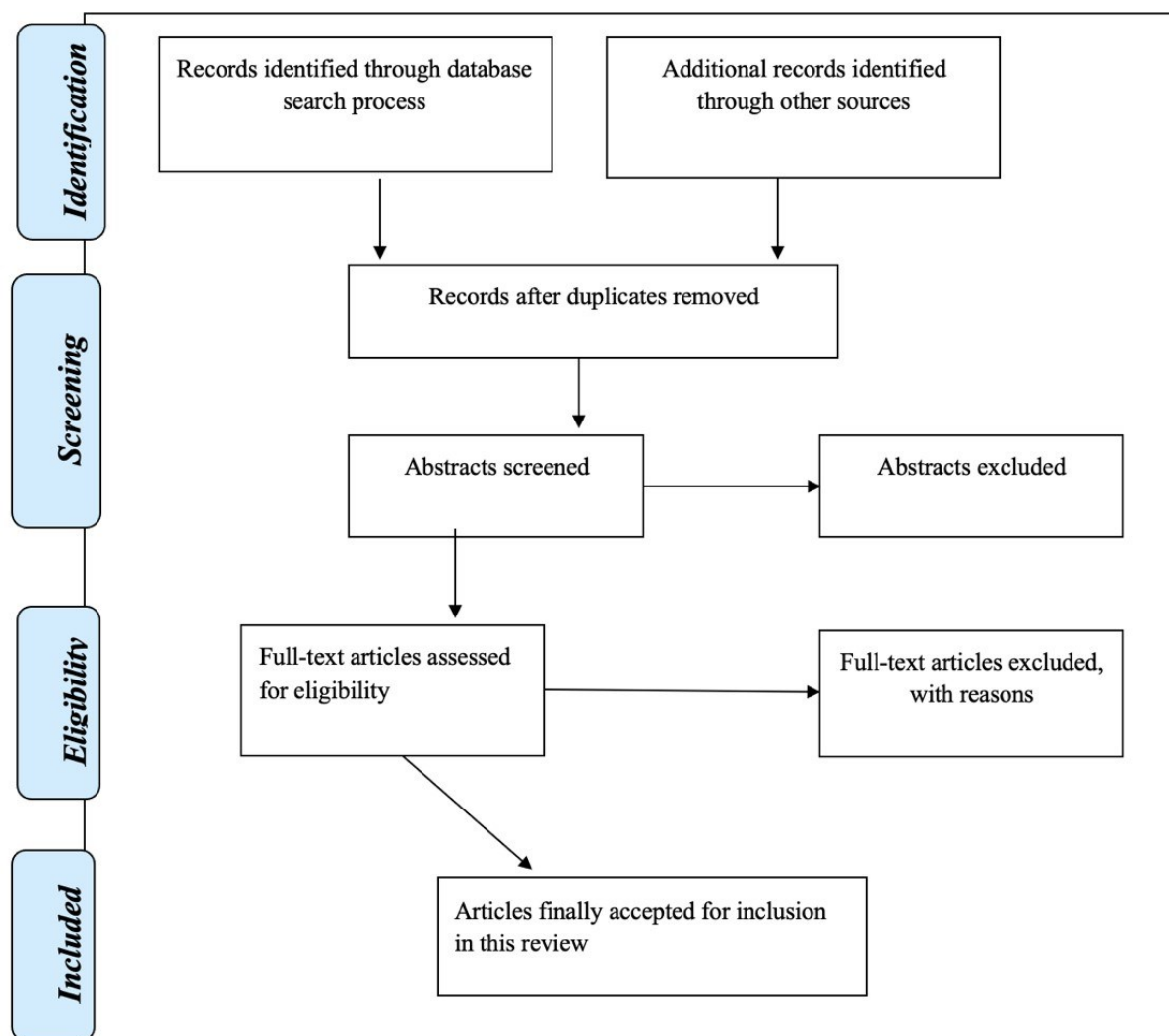
tool designed by Pluye et al [24] will be used to assess the methodological quality of studies retrieved. According to the mixed methods quality appraisal tool, there are 4 different criteria used in both qualitative and quantitative study designs and 3 criteria used in the

percentage score; the corresponding descriptors will be recorded alongside.

A score of 75% and higher indicates a high-quality outcome and will be included in the study. A score of 25% and below indicates a low-quality outcome and will not be included in the study.

Collating, Summarizing, and Reporting the Results

A narrative summary of data extracted will be analyzed using content analysis. Only the most relevant and most significant data in line with the research question will be included in the study. The results of the systematic scoping review will be mapped in a 2009 PRISMA (Preferred Reporting Items for Systematic reviews and Meta-analyses) flow diagram, as shown in Figure 1. Once the protocol is accepted, the systematic scoping review findings will be published in an accredited journal in an electronic format. Results will also be presented at midwifery and nursing education conferences nationally and/or internationally.

Figure 1. PRISMA (Preferred Reporting Items for Systematic reviews and Meta-analyses) flow diagram presenting screening results.

Ethics Approval and Consent to Participate

The study was approved by the affiliated university's ethics committee for Human Social Science (Ethics approval no. HSS/1509/018M).

Availability of Data and Materials

All data generated and analyzed from this study will be included in the published systematic review article and will be available on request.

Results

Interventions to strengthen the clinical support for midwifery students in practice will be extracted from this review, and data will be carefully analyzed to develop a comprehensive guide or framework for clinical mentorship. As of August 2021, the electronic search, the data extraction, and the analysis have been completed. The results paper is expected to be published within the next 6 months.

Discussion

The quality of clinical support for midwifery students in placement learning is well debated as some clinical staff feel unprepared to instruct new students [12,13]. Mentors play a vital role in shaping students as qualified midwives, and the mentor-student relationship affects confidence in practice [25,26]. Thus, the poor support

received during clinical practice may lead to inadequately prepared graduates who contribute to the high maternal mortality rates, especially in African countries such as Botswana, Lesotho, Swaziland, Zimbabwe, Malawi, Namibia, Mozambique, Angola, and South Africa.

According to the 2008 Nursing and Midwifery Council (NMC) requirements, trained mentors undertake assessments and provide feedback on preregistration midwifery students' proficiencies. This expectation can be especially useful in the South African context, as students have to fulfill long hours in clinical placements to achieve clinical requirements and hours. However, contrary findings were found in other studies using the same, abovementioned requirements. Studies found that mentors had difficulties assessing, supervising, supporting, and guiding students in practice [11,27-29].

The fundamental aim of midwifery education is to develop a safe and competent practitioner who will resume full responsibility and accountability for practice [30]. Ensuring that midwifery students are equipped with the necessary skills to provide high standards of care remains a challenge for lecturers and clinical mentors. Therefore, reviewing and analyzing best practice interventions, strategies, or models that strengthen clinical support for midwifery students is urgently needed.

This systematic scoping review aims to review and analyze the current clinical support systems available to midwifery students globally and identify a suitable intervention to strengthen clinical support for midwifery students in South Africa.

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Authors' Contributions

HA conceptualized and prepared the protocol under the guidance of CM. HA and CM contributed to reviewing of the draft manuscript. All authors read and approved the final version of the manuscript.

Conflicts of Interest None declared.

References

1. Andrews M, Brewer M, Buchan T, Denne A, Hammond J, Hardy G, et al. Implementation and sustainability of the nursing and midwifery standards for mentoring in the UK. *Nurse Educ Pract* 2010 Oct;10(5):251-255. [doi: [10.1016/j.nepr.2009.11.014](https://doi.org/10.1016/j.nepr.2009.11.014)] [Medline: [20022562](https://pubmed.ncbi.nlm.nih.gov/20022562/)]
2. Phuma-Ngaiyaye E, Bvumbwe T, Chipeta MC. Using preceptors to improve nursing students' clinical learning outcomes: a Malawian students' perspective. *Int J Nurs Sci* 2017 May 10;4(2):164-168 [[FREE Full text](#)] [doi: [10.1016/j.ijnss.2017.03.001](https://doi.org/10.1016/j.ijnss.2017.03.001)] [Medline: [31406737](https://pubmed.ncbi.nlm.nih.gov/31406737/)]
3. Sayani AH, Jan R, Lennox S, Mohammad YJ, Awan S. Evaluating the results of mentorship training for community midwives in Sindh, Pakistan. *Br J Midwifery* 2017 Aug 02;25(8):511-518. [doi: [10.12968/bjom.2017.25.8.511](https://doi.org/10.12968/bjom.2017.25.8.511)]
4. Bradshaw C, Murphy Tighe S, Doody O. Midwifery students' experiences of their clinical internship: a qualitative descriptive study. *Nurse Educ Today* 2018 Oct;68:213-217. [doi: [10.1016/j.nedt.2018.06.019](https://doi.org/10.1016/j.nedt.2018.06.019)] [Medline: [29966883](https://pubmed.ncbi.nlm.nih.gov/29966883/)]
5. Gilmour C, McIntyre M, McLelland G, Hall H, Miles M. Exploring the impact of clinical placement models on undergraduate midwifery students. *Women Birth* 2013 Mar;26(1):e21-e25. [doi: [10.1016/j.wombi.2012.06.004](https://doi.org/10.1016/j.wombi.2012.06.004)] [Medline: [22819545](https://pubmed.ncbi.nlm.nih.gov/22819545/)]
6. Gray M, Malott A, Davis BM, Sandor C. A scoping review of how new midwifery practitioners transition to practice in Australia, New Zealand, Canada, United Kingdom and The Netherlands. *Midwifery* 2016 Dec;42:74-79. [doi: [10.1016/j.midw.2016.09.018](https://doi.org/10.1016/j.midw.2016.09.018)] [Medline: [27769012](https://pubmed.ncbi.nlm.nih.gov/27769012/)]

7. Hilli Y, Salmu M, Jonsén E. Perspectives on good preceptorship: A matter of ethics. *Nurs Ethics* 2014 Aug 30;21(5):565-575. [doi: [10.1177/0969733013511361](https://doi.org/10.1177/0969733013511361)] [Medline: [24380890](https://pubmed.ncbi.nlm.nih.gov/24380890/)]
8. McSharry E, Lathlean J. Clinical teaching and learning within a preceptorship model in an acute care hospital in Ireland; a qualitative study. *Nurse Educ Today* 2017 May;51:73-80. [doi: [10.1016/j.nedt.2017.01.007](https://doi.org/10.1016/j.nedt.2017.01.007)] [Medline: [28130976](https://pubmed.ncbi.nlm.nih.gov/28130976/)]
9. Sidebotham M, Fenwick J. Midwifery students' experiences of working within a midwifery caseload model. *Midwifery* 2019 Jul;74:21-28. [doi: [10.1016/j.midw.2019.03.008](https://doi.org/10.1016/j.midw.2019.03.008)] [Medline: [30921548](https://pubmed.ncbi.nlm.nih.gov/30921548/)]
10. Bennett M, McGowan B. Assessment matters-mentors need support in their role. *Br J Nurs* 2014 May 09;23(9):454-458. [doi: [10.12968/bjon.2014.23.9.454](https://doi.org/10.12968/bjon.2014.23.9.454)] [Medline: [24820808](https://pubmed.ncbi.nlm.nih.gov/24820808/)]
11. Casey DC, Clark L. Roles and responsibilities of the student nurse mentor: an update. *Br J Nurs* 2011 Aug 11;20(15):933-937. [doi: [10.12968/bjon.2011.20.15.933](https://doi.org/10.12968/bjon.2011.20.15.933)] [Medline: [21841658](https://pubmed.ncbi.nlm.nih.gov/21841658/)]
12. Jokelainen M, Turunen H, Tossavainen K, Jamookeah D, Coco K. A systematic review of mentoring nursing students in clinical placements. *J Clin Nurs* 2011 Oct;20(19-20):2854-2867. [doi: [10.1111/j.1365-2702.2010.03571.x](https://doi.org/10.1111/j.1365-2702.2010.03571.x)] [Medline: [21429055](https://pubmed.ncbi.nlm.nih.gov/21429055/)]
13. Myall M, Levett-Jones T, Lathlean J. Mentorship in contemporary practice: the experiences of nursing students and practice mentors. *J Clin Nurs* 2008 Jul;17(14):1834-1842. [doi: [10.1111/j.1365-2702.2007.02233.x](https://doi.org/10.1111/j.1365-2702.2007.02233.x)] [Medline: [18578757](https://pubmed.ncbi.nlm.nih.gov/18578757/)]
14. Mead D, Hopkins A, Wilson C. Views of nurse mentors about their role. *Nurs Manag (Harrow)* 2011 Oct 27;18(6):18-23. [doi: [10.7748/nm2011.10.18.6.18.c8716](https://doi.org/10.7748/nm2011.10.18.6.18.c8716)] [Medline: [22017148](https://pubmed.ncbi.nlm.nih.gov/22017148/)]
15. Moran M, Banks D. An exploration of the value of the role of the mentor and mentoring in midwifery. *Nurse Educ Today* 2016 May;40:52-56. [doi: [10.1016/j.nedt.2016.02.010](https://doi.org/10.1016/j.nedt.2016.02.010)] [Medline: [27125150](https://pubmed.ncbi.nlm.nih.gov/27125150/)]
16. Dixon L, Calvert S, Tumilty E, Kensington M, Gray E, Lennox S, et al. Supporting New Zealand graduate midwives to stay in the profession: An evaluation of the Midwifery First Year of Practice programme. *Midwifery* 2015 Jul;31(6):633-639. [doi: [10.1016/j.midw.2015.02.010](https://doi.org/10.1016/j.midw.2015.02.010)] [Medline: [25819705](https://pubmed.ncbi.nlm.nih.gov/25819705/)]
17. Hogan R, Fox D, Barratt-See G. Peer to peer mentoring: Outcomes of third-year midwifery students mentoring first-year students. *Women Birth* 2017 Jul;30(3):206-213. [doi: [10.1016/j.wombi.2017.03.004](https://doi.org/10.1016/j.wombi.2017.03.004)] [Medline: [28366500](https://pubmed.ncbi.nlm.nih.gov/28366500/)]
18. Tweedie K, Yerrell J, Crozier K. Collaborative coaching and learning in midwifery clinical placements. *Br J Midwifery* 2019 May 02;27(5):324-329. [doi: [10.12968/bjom.2019.27.5.324](https://doi.org/10.12968/bjom.2019.27.5.324)]
19. Kemp J, Shaw E, Musoke MG. Developing a model of midwifery mentorship for Uganda: The MOMENTUM project 2015-2017. *Midwifery* 2018 May;59:127-129. [doi: [10.1016/j.midw.2018.01.013](https://doi.org/10.1016/j.midw.2018.01.013)] [Medline: [29425895](https://pubmed.ncbi.nlm.nih.gov/29425895/)]
20. The National Strategic Plan for nurse education, Training and Practice 2012/3-2016/7. 2013 Mar. URL: https://www.hst.org.za/publications/NonHST%20Publications/Strategic_Plan_for_Nurse_Education_Training_and_Practice.pdf [accessed 2021-08-26]
21. Arksey H, O'Malley L. Scoping studies: towards a methodological framework. *Int J Soc Res Methodol* 2005 Feb;8(1):19-32. [doi: [10.1080/1364557032000119616](https://doi.org/10.1080/1364557032000119616)]

22. Colquhoun HL, Levac D, O'Brien KK, Straus S, Tricco AC, Perrier L, et al. Scoping reviews: time for clarity in definition, methods, and reporting. *J Clin Epidemiol* 2014 Dec;67(12):1291-1294. [doi: [10.1016/j.jclinepi.2014.03.013](https://doi.org/10.1016/j.jclinepi.2014.03.013)] [Medline: [25034198](#)]
23. Levac D, Colquhoun H, O'Brien KK. Scoping studies: advancing the methodology. *Implement Sci* 2010 Oct 20;5:69 [FREE Full text] [doi: [10.1186/1748-5908-5-69](https://doi.org/10.1186/1748-5908-5-69)] [Medline: [20854677](#)]
24. Pluye P, Robert E, Cargo M, Bartlett G, O'Cathain A. Proposal: A mixed methods appraisal tool for systematic mixed studies reviews. Montreal: McGill University; 2011. URL: <http://mixedmethodsappraisaltoolpublic.pbworks.com/w/file/view/84371689/MMAT%202011%20criteria%20and%20tutorial%202011-06-29updated2014.08.21.pdf> [accessed 2021-08-31]
25. Hughes AJ, Fraser DM. "There are guiding hands and there are controlling hands": student midwives experience of mentorship in the UK. *Midwifery* 2011 Aug;27(4):477-483. [doi: [10.1016/j.midw.2010.03.006](https://doi.org/10.1016/j.midw.2010.03.006)] [Medline: [20462677](#)]
26. Sundler AJ, Björk M, Bisholt B, Ohlsson U, Engström AK, Gustafsson M. Student nurses' experiences of the clinical learning environment in relation to the organization of supervision: a questionnaire survey. *Nurse Educ Today* 2014 May;34(4):661-666. [doi: [10.1016/j.nedt.2013.06.023](https://doi.org/10.1016/j.nedt.2013.06.023)] [Medline: [23850574](#)]
27. Carter AG, Wilkes E, Gamble J, Sidebotham M, Creedy DK. Midwifery students experiences of an innovative clinical placement model embedded within midwifery continuity of care in Australia. *Midwifery* 2015 Aug;31(8):765-771. [doi: [10.1016/j.midw.2015.04.006](https://doi.org/10.1016/j.midw.2015.04.006)] [Medline: [25921953](#)]
28. Gray O, Brown D. Evaluating a nurse mentor preparation programme. *Br J Nurs* 2016;25(4):212-217. [doi: [10.12968/bjon.2016.25.4.212](https://doi.org/10.12968/bjon.2016.25.4.212)] [Medline: [26911167](#)]
29. Veeramah V. Effectiveness of the new NMC mentor preparation course. *Br J Nurs* 2012 Apr 12;21(7):413-6, 418. [doi: [10.12968/bjon.2012.21.7.413](https://doi.org/10.12968/bjon.2012.21.7.413)] [Medline: [22585019](#)]
30. The Nursing and Midwifery Council. URL: <https://www.nmc.org.uk/> [accessed 2021-08-26]

Abbreviations

NMC: Nursing and Midwifery Council

PCC: population, concept, context

PRISMA: Preferred Reporting Items for Systematic reviews and Meta-analyses

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CHAPTER 3: MANUSCRIPT 1

3.1. FIRST AUTHOR CONTRIBUTIONS

PUBLICATION 2: Clinical support interventions and a framework to guide mentorship training for midwifery practitioners who support midwifery students during clinical placement. The results of a systematic scoping review. The manuscript was submitted to Journal of Medical Internet Research in January 2022 and is currently under review. The author guidelines for this journal can be accessed at <https://www.jmir.org/author-information/instructions-for-authors>

The first author (HBA) conceptualized and prepared the review under the guidance of the research supervisor (Dr. SWM). Both authors contributed to reviewing of the draft manuscript and approved the final version of this results paper.

3.2. SYNOPSIS TO MANUSCRIPT 1

A SYSTEMATIC SCOPING REVIEW RESULTS PAPER SUBMITTED TO JOURNAL OF MEDICAL RESEARCH- in review

Publication 2 is entitled: **“Clinical support interventions and a framework to guide mentorship training: The results of a systematic scoping review.”** To identify best practices to strengthen the clinical support of midwifery students during placement, this review scoped various clinical support interventions, from a global perspective. This review article addressed research objective 1 and research question 1 of this study: What interventions are available to strengthen the current clinical support for midwifery students, globally?

This systematic scoping review followed a protocol which was conceptualized to guide this review. The aim of this review was to identify interventions to strengthen the clinical support of midwifery students. By identifying, analyzing and then integrating the outcomes of this systematic scoping review, the researchers recognized core components to be considered when designing mentorship training programs. Quite aptly, these outcomes complemented conducting action research studies. Firstly, action research encouraged a deeper meaning of the current situation. In this phase of the study, the literature searched broadened the understanding of clinical support interventions available to midwifery students within a global context. Secondly, action research

encouraged change in practice. In this phase, data from retrieved articles allowed the researcher to interrogate the information and arrange identical meanings and concepts into codes, categories and themes. This helped the researcher to identify core components for effective mentorship training and thus develop a new framework to guide mentorship training for midwifery practitioners in South Africa. Refer to Figure 2: A framework to guide mentorship training (Amod and Mkhize, 2022, in review) is the outcomes of the SSR. The framework is likely to assist policy-makers, midwifery educators and nurse managers who have an interest in strengthening clinical support through mentorship training for midwifery practitioners. The manuscript was submitted on the 12 January 2022 to Journal of Medical Internet Research. The manuscript is currently in round 1 of the review process.

3.3. SECOND PUBLICATION: A SYSTEMATIC REVIEW ARTICLE

Submitted to the Journal of Medical Education – (currently in review)

Title: Clinical support interventions and a framework to guide mentorship training: The results of a systematic scoping review

Abstract:

Introduction: Midwifery educators are highly concerned about the quality of clinical support offered to midwifery students placed at healthcare facilities for clinical learning. The unpreparedness of midwifery practitioners to carry out mentorship responsibilities threatens the quality of midwifery clinical education.

Research Objective: This review was undertaken to identify clinical support interventions available for midwifery students, globally.

Methods: The Arksey and O'Malley (2005) methodological framework guided this review. Keywords such as midwifery students, clinical support or mentorship, and midwifery clinical practice were used during the literature search. Primary articles of quantitative, qualitative, and mixed methods design published between 2010 and 2020 were considered for this review. Data

charting and synthesis captured studies related to clinical support interventions available to midwifery students in practice; and data were analyzed using a thematic content analysis approach.

Results: The analysis of findings highlighted four themes; (1) Strong partnerships and collaborations between HEI and hospital placements provides opportunities to train and support registered midwives who mentor midwifery students during clinical placements; (2) Continued consultations between crucial stakeholders contribute to a better understanding of students' clinical expectations; (3) The duration and structure of the training should consider the core responsibilities of clinical practice and; (4) The program content is central to the quality of support offered to midwifery students during clinical practice. These themes are thus carefully integrated to develop a framework for mentorship training (Figure2).

Conclusion: Training midwifery practitioners on mentorship is likely to improve the quality of clinical support that midwifery students receive during clinical placement. A framework for mentorship training may be solution that midwifery educators are awaiting.

Implications for midwifery clinical education: The developed framework for mentorship training is likely to encourage midwifery educators to pursue more mentorship training opportunities and hence improve the quality of midwifery clinical education.

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Keywords: Clinical support, mentorship training, midwifery clinical education

INTRODUCTION:

The quality of clinical support offered to midwifery students is a significant concern for midwifery educators globally. In developing countries, this concern is exacerbated by the challenges of clinical placements, such as shortage of staff and resources; negative feelings about teaching; time constraints; and uncertainties in the mentoring role of a registered midwife (Jamshidi, 2012; Bradshaw, Noonan and Atkinson, 2013; Phuma-Ngaiyaye, Bvumbwe and Chipeta, 2017). The responsibilities towards clinical support in African countries has increased in recent years and according to Phuma-Ngaiyaye, Bvumbwe and Chipeta (2017), is attributed to the increase in the number of student enrolment rates and subsequent increased workload in higher education institutions and clinical placements.

Globally, various clinical support models such as mentorship, preceptorship and clinical supervision models, have shown to have positive outcomes on clinical learning of midwifery students (Hilli, Salmu, and Jonsen, 2014; Sundler, Bjork, Bisholt, Ohlsson, Engstrom and Gustafsson, 2014; McSharry and Lathlean, 2017; Kemp, Shaw and Musoke, 2018). However, findings related to the quality of clinical support for midwifery students appears to be substandard as some midwifery practitioners, who assume the role of preceptors/mentors, are not trained in these roles and therefore share difficulties in supervising students (Gray and Brown, 2016; Clark and Casey, 2016; Wells and McLoughlin, 2014). Similar findings were from Mayall, Levett-Jones and Lathleen (2017); Jokelainen, Turunen, Tossavainen, Jamookeah and Coco (2011); and Gray (2018) which showed that some clinical staff were unprepared in the roles and responsibilities of mentorship. For midwifery educators, the unpreparedness of and lack of support from midwifery practitioners to carry out mentoring responsibilities poses a substantial gap in the quality of midwifery clinical education (Simane-Netshisaulu, 2018). Preparing midwifery practitioners in their mentorship roles is warranted, however the guidance on conducting formal mentorship training has not been well established globally (Kemp, Shaw and Musoke, 2018; Tweedie, Yerrel and Crozier, 2019).

This review scoped various clinical support interventions from a global perspective to identify best practices to strengthen the clinical support of midwifery students during placement.

METHODS

This systematic scoping review followed a protocol which was developed to analyze the evidence on interventions to strengthen the clinical support of midwifery students in clinical practice (Amod, Mkhize and Muraraneza, 2021). The Population, Concept and Context framework as described by Arksey and O'Malley (2005) was followed. The review focused on the concept of the clinical support available to midwifery students in clinical placements (population), globally.

1. Identifying the research question

This review answers the following research question: What interventions are available to strengthen the current clinical support for midwifery students, globally?

By identifying and analyzing the clinical support interventions available on a global platform, the researchers desired to integrate these interventions to develop a new framework for mentorship training in South Africa.

2. Identifying the relevant studies

Primary studies related to the clinical support offered to midwifery students were searched in electronic databases as follows, EBSCOHost (CINAHL, MEDLINE, Health Source: Nursing/Academic Edition), PubMed, Science Direct and Google Scholar. The search strategy included the keywords midwifery students, clinical support, or mentorship, and midwifery clinical practice. The search was refined to the English language and confined to the last 10 years (January 2010- August 2020) to ensure that only the current and updated clinical support interventions were included for this review.

The review included a hand search through the main published articles and citations from the 'related literature' list. Boolean terms (midwifery and clinical support, mentorship, clinical supervision, and preceptorship), MeSH terms (midwifery students and clinical support, mentorship and clinical support) were used to identify relevant articles for this review. An electronic record of all articles searched was kept. The factor of interest which is clinical support interventions for midwifery students was assessed in line with the question asked.

3. Study selection

The researchers designed an abstract and full text screening form using Google forms. The search strategy followed a 3-stage system of title screening, abstract screening and full-text screening as determined by an inclusion criterion. The selection included qualitative, quantitative, and mixed methods articles published in peer review journals and grey literature, which included governmental policies and guidelines. The inclusion criteria were primary studies conducted between 2010- 2020; used midwifery students as participants; presenting evidence on clinical support such as mentorship, preceptorship and clinical supervision; and included a clinical support intervention or strategy. The exclusion criteria were studies that did not include a program, training, or intervention and articles that were not primary studies. All selected articles from the screening process were saved in an Endnote software folder.

4. Data charting

This review identified articles which included clinical support interventions. The data charting variables, included the author's name, the year of publication, the aims of the study, intervention outcomes, and the most significant findings. Data were extracted and analyzed using thematic content analysis as described by Vaismoradi, Jones, Turunen and Snelgrove (2016).

Quality Appraisal

The quality of all included studies was appraised using a MMAT tool designed by Pluye, Robert, Cargo, Bartlett, O'Cathain, Boardman, Gagnon, and Rousseau (2011) to avoid reading flawed literature and prevent bias or untrustworthy information into practice. There were five qualitative articles of which three scored 100% and two scored 75% in quality assessment. The quality of four mixed-method designs showed scores between 50-100%, and the remaining one quantitative design article scored 100%. These results indicate that all articles were of high quality and complemented the purpose of conducting a systematic scoping review.

5. Collating, summarizing and reporting the results

The results section of this systematic scoping review included the screening results and data extraction results.

Screening results

All studies included in the review followed a three-stage screening process of title, abstract, and full-text screening. The researchers designed the screening forms for all three stages of screening using Google forms. A third reviewer who is the research supervisor was available to finalize the screening results by resolving discrepancies. The involvement of three screeners prevented bias in the selection of articles. Finally, ten articles remained for data extraction. The PRISMA flow diagram below (Figure 1) presents the screening results for this review.

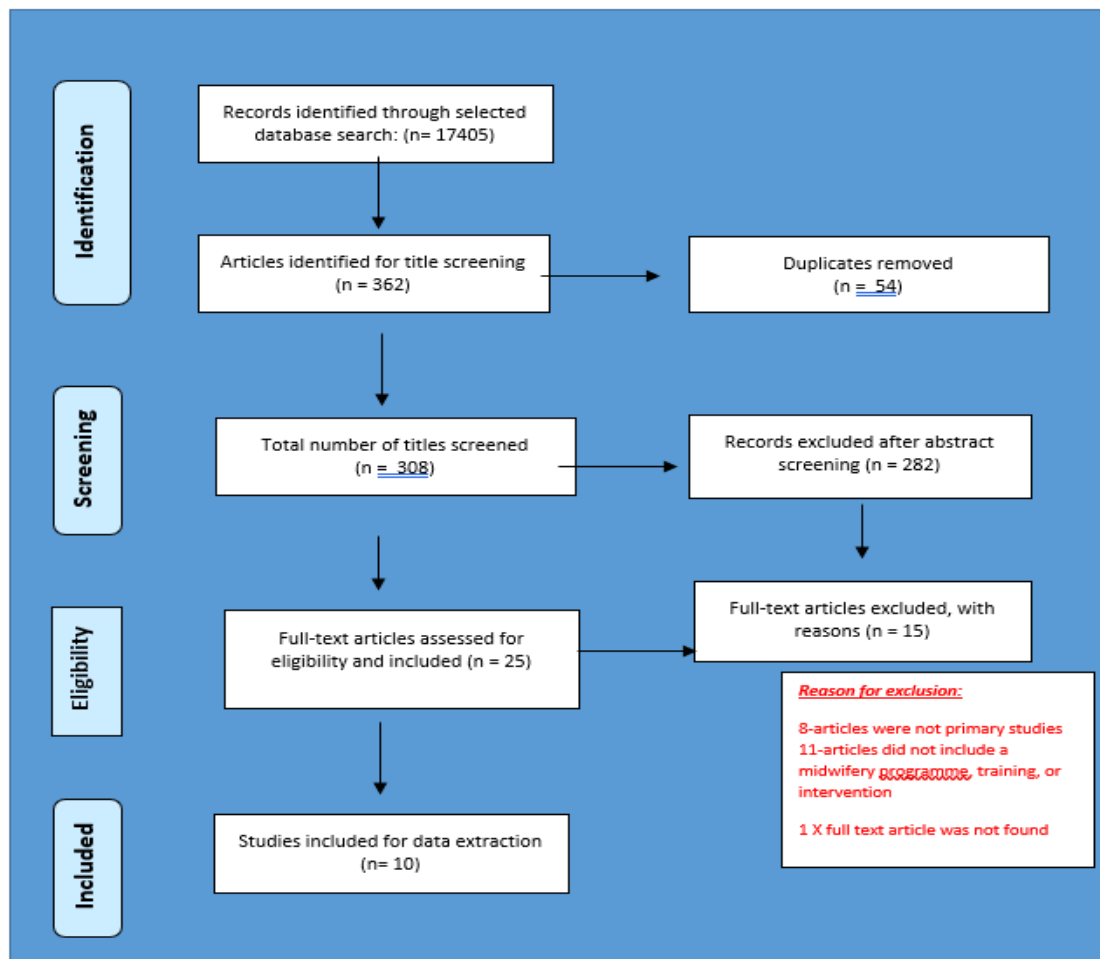


Figure 1: PRISMA flow diagram showing the screening results

Characteristics of included studies

The research approaches: The research approach included five qualitative articles (Broad et al., 2011; Barker et al., 2011; Clements et al., 2012; Thunes and Sekse, 2015; and Moran and Banks, 2016); four mixed methods articles (Durham, Kingston and Sykes, 2012; Hogan, Fox, and Barratt-

See, 2017; Kemp, Shaw and Musoke, 2018; and Tweedie, Yerrell and Crozier, 2019) one quantitative article (Dixon et al., 2015), which used a longitudinal observational study.

The study settings: Four studies were in the United Kingdom (Broad, Walker, Broden and Barnes, 2011; Barker, Blascow, Cosgrove, Howorth, Jackson and MacMahon, 2011; Durham, Kingston, and Sykes, 2012 and Tweedie, Yerrell and Crozier, 2019) one in Scotland (Moran and Banks, 2016) and two in Australia (Clements, Fenwick and Davis, 2012 and Hogan, Fox and Barratt-See, 2017). One study was done in the United States of America (Thunes and Sekse, 2015) and another in New Zealand (Dixon, Calvert, Tumilty, Kensington, Gray, Lennox, Campbell, and Pairman, 2015). One study, done in partnership with the United Kingdom, was conducted in Uganda, (Kemp, Shaw and Musoke, 2018).

Clinical support interventions identified: The findings showed that seven studies implemented a mentorship/ preceptorship program (Broad et al., 2011, Clements, Fenwick and Davis, 2012; Dixon et al., 2015; Moran and Banks, 2016; Hogan, Fox and Barratt-See, 2017; Kemp, Shaw and Musoke, 2018 and Tweedie, Yerrell and Crozier, 2019). Two studies conducted a training workshop (Barker et al., 2011; Durham, Kingston and Sykes, 2012), and one study included an intervention guideline (Thunes and Sekse, 2015). Table 1 displays the ten articles included for data extraction.

Table 1: Data extraction results

<i>Author and date</i>	<i>Aims of the study</i>	<i>Intervention Used</i>	<i>Significant Findings</i>
<i>Broad et.al, 2011</i>	To support pre-registration midwifery students during clinical placement	Evaluation of previous preceptorship module (module 9) and introduction of a transition model of preceptorship	Facilitates midwifery students learning in practice through the guidance of a preceptor. Increases confidence and competence of newly qualified midwives. Contributes to staff retention, increase co-operation, quality of care given, Increased investment in health care and education
<i>Barker et.al, 2011</i>	To train and support the role of mentors in assessing clinical competence of midwifery students	Protected time for SOM's to attend workshops, support from Practice education facilitators. Improved assessment skills	Support for mentors are critical to improve student facilitation and support in clinical practice. better patient care outcomes increased collaboration between mentors, PEF and university
<i>Durham et.al, 2012</i>	To develop skills in mentorship using a developmental program	Using a developmental program to support mentors A tripartite role is beneficial to the institution and the SOM.	The program promoted high standards of mentoring knowledge and skills and improved understanding and accountability of the mentorship roles
<i>Clements et.al, 2012</i>	To evaluate the core elements of a transition support program for newly qualified midwives from undergraduate and postgraduate nursing programme	Evaluation of a transition support program for newly qualified midwives- a structured support during this transitional phase is necessary to ensure quality and safe practice of midwives.	Clinical rotations were difficult when the plan was changed. Supernumerary time was highly valued but not always available study days to connect mixed messages from managers workload impacts on experience midwifery educators in demand importance of experienced midwives- midwife to midwife support, increases mentor confidence, competence and retention of newly qualified staff.
<i>Thunes and Sekse, 2015</i>	To gain a better understanding of midwifery students' first encounter in the maternity wards and what was essential to them in the learning environment.	Evaluation of mentor support in 2 placement hospitals in Norway. A planned clinical practice approach for student-mentor relationships are crucial for students' achievements and learning outcome.	Midwifery student's needed to feel valued and included in the team, learning was based on students' expectations, understanding and previous experience. Mutual engagement with mentors.
<i>Dixon et.al, 2015</i>	To explore the retention of new graduates in midwifery practice following participation in the Midwifery First Year of Practice program.	To evaluate a Midwifery first year of practice program and its relation to retention and attrition rates of new graduates.	The program provided mentor support to new graduate and increased their confidence in the first year of practice as a registered midwife.
<i>Moran and Banks, 2016</i>	To explore the experiences and the value of 'sign-off mentors.'	Evaluation of the role of SOM and the value they hold to this role.	Mentor valued their role and found it to be essential to the supervision of midwifery students in practice.

			Students value mentors for continuity, feedback and planning senior managers do not appreciate mentors lack of time to teach and support students
<i>Hogan, Fox and Barratt-See, 2017</i>	To explore the benefits of a peer mentoring program for midwifery students	Evaluation of a peer mentoring program in midwifery clinical placement. A peer mentoring program benefits midwifery student in their transition during clinical placement.	benefits to the mentee- reduced anxiety of first year students, smoother transition to clinical practice, mentors were encouraging, understanding, reassuring and positive benefits to the mentor- building communication skill, self-confidence, increased employability
<i>Kemp, Shaw and Musoke, 2018</i>	To develop a model of mentorship for Ugandan midwifery students to improve the quality of midwifery care	The MOMENTUM project 2015-2017	Showed improved knowledge, skills and attitudes of students and mentors Improved audit scores at clinical sites Improved confidence and clinical competence Mentors do not assess students' clinical skills in practice Inconsistencies in paperwork
<i>Tweedie, Yerrell and Crozier, 2019</i>	To evaluate the model of coaching and collaborative learning. The role of the clinical education midwife	Collaborative coaching and learning model adapted from the CLiP model by Lobo and Andrew (2014)	Improved students' confidence in knowledge and clinical and communication skills Student support through a clinical education midwife Ensured partnership between HEI and hospitals

The results of this review identified various clinical support interventions offered to midwifery students during clinical practice. Clinical support interventions used included training and coaching models, workshops, and programs such as developmental, support, and peer mentoring programs. These interventions supported either midwifery students or clinical mentors who supported midwifery students during clinical placements. The benefits of using clinical support interventions showed improvements in students confidence levels, competence and readiness for role taking; it also revealed benefits for the clinical mentor in terms of improved mentorship knowledge, skills and accountability (Hogan, Fox and Barratt-See, 2017; Kemp, Shaw and Musoke, 2018). Yet, the benefits of utilizing a good clinical support intervention is not restricted to students and midwifery practitioners. Beyond these benefits, clinical support interventions have shown improved patient care outcomes (Broad et.al, 2011; Barker et. al, 2011) and collaborations between clinical facilities and HEI's (Barker et.al, 2011; Tweedie, Yerrell and Crozier, 2019).

Significant findings: All significant findings from the included articles were initialized, constructed, rectified and finalized into themes as described by Vaismoradi, Jones, Turunen & Snelgrove (2016).

Table 2: Coding to identify themes

Significant results	Constructed codes
Partnership between the clinical placement facility and the higher education institution is essential when designing an intervention for clinical support of midwifery students	Academic-Service Partnership
Partnership includes liaison between various stakeholders such as University academics, Nurse managers, Government personnel (if necessary) Mentors/preceptors/clinical facilitators and expert advisory groups.	
Continuous collaboration between the University and the hospital through a Link lecturer is important,	Collaboration and Consultation
Consultation with clinical mentors, student midwives, students support services, Quality assurance teams and previous cohort of students.	
A presentation- ranging from 3-hours to half day workshops for clinical mentors Included case scenarios, OSCE for evaluating mentor knowledge and skills	Clinical support methods
Structured clinical support program for students which includes student rotation plans, supernumerary time, study days	
Includes support for clinical mentors from universities, colleges, colleagues, senior managers	
Structured Midwifery first year of Practice program for newly qualified registered midwives	
10-day study program validated by the NMC guidelines	
Peer to peer mentoring- 3-hour training of 3 rd year students (clinical mentor)	
Pilot sampling of intervention was adopted in 2 studies	
Nursing and Midwifery Council Guidelines (2018a)	Clinical support Guidelines
Australian and New Zealand support services Association Incorporated guidelines	
Workbooks, Portfolios, booklets, information pack and a toolkit	Materials used in Clinical support training sessions
Role of the clinical mentor and mentee – named preceptors	Course content
Outline of the program	
Practical component/ areas of practice/ placement schedules/ clinical rotations	
Professional issues	
NMC guidelines/ standards for mentors	
Responsibilities/ role expectations of clinical mentors-includes boundary restrictions	
Self-care/ Support services available and referrals	
Study days/ skills education days	
Feedback and debriefing opportunities	
Relationship building, communication skills	

These codes were further finalized into themes which describes the core components to be considered when developing a mentorship training program for registered midwives who support midwifery students during clinical learning and practice.

Four (4) themes were identified and are described narratively in the paragraphs below.

1. Strong partnerships and collaborations between HEI and hospital placements provides opportunities to train and support registered midwives who mentor midwifery students during clinical placements

A study conducted by Broad et al. (2011), the transition model of Preceptorship, began through the regular meetings between the Assistant Director of Nursing and the Head of School. This strategy aimed to link the education and practice setting through a preceptorship model which assisted midwifery students to achieve the required standard for clinical practice. According to Barker et al. (2011) and Durham, Kingston, and Sykes (2012) Tweedie, Yerrell and Crozier (2019), collaboration between the health facility, the facilitator, and the nursing education institution is the cornerstone for success especially when negotiating protected time for mentors to attend workshops (Barker et al., 2011), or to conduct mentor skills training (Durham, Kingston, and Sykes, 2012). Support, from liaison facilitators employed at hospital facilities and lecturers of higher education facilities, helped mentors to gain confidence in teaching and supervising students in practice. Moran and Banks (2016), Hogan et al. (2017), and Kemp, Shaw, and Musoke (2018) also supported collaboration between HEI and the clinical facilities to improve the clinical support of midwifery students.

2. Continued consultation between academics, trained mentors and midwifery students is pivotal in understanding mentorship role expectations.

The review revealed that key stakeholders such as the nurse managers, regional or placement coordinator, clinical preceptor/ mentor, registered midwives, practice educator, or a link lecturer have their own roles in supporting midwifery students in the clinical placements. Six articles showed that knowing the role of the mentor/preceptor, a named preceptor, contact details, clinical rotation, study days and supernumerary time were factors that influenced the degree of clinical support offered to students by midwifery practitioners (Broad et al. 2011; Barker et al. 2011; Clements, Fenwick, and Davis, 2012; Durham, Kingston, and Sykes, 2012; Moran and Banks,

2015; and Hogan, Fox, and Barratt-See, 2017) also noted that continuity in students' support by the same preceptor with a planned/ structured clinical plan influenced students' learning outcomes (Thunes and Sekse, 2015; Tweedie, Yerrell and Crozier, 2019). These authors further recommended that mutual engagement, shared knowledge, and shared goals are imperative to improving students learning outcomes. Therefore, it is necessary that continuous relations should be encouraged among midwifery educators and midwifery practitioners who have shared responsibility in mentoring midwifery students during clinical placements.

According to Thunes and Sekse (2015), mentor relationships affect the students' perceptions of clinical practice. Students felt that they were dependent on mentors to teach, show, and help them. Mentors were also motivated and interested in students' expectations engaged with students through good teamwork and communication. Moran and Banks (2016) reveal that the mentors enjoyed their roles and found it to be a positive experience. Furthermore, the mentor roles were valued because they played an essential role. Therefore, describing the mentor's role and expectation is critical in the training program, and this should clearly be defined at the onset of the program (Durham, Kingston and Sykes, 2012).

3. The program content is central to the quality of support offered to midwifery students in clinical practice

In clinical education programs, such as midwifery, clinical placement is a perfect opportunity to achieve the skills necessary to become a safe and competent practitioner. The researcher is concerned about the quality of clinical support offered by midwifery practitioners to midwifery students during clinical placements. Durham et al. (2012) study, showed that a developmental training program to support mentors in their role focused on the content of the course and included a theory and practical component to support this training. The training content may include discussions on role and responsibilities, professional issues, and boundaries to mentorship (Broad et al., 2011). Therefore, it is important that mentorship training programmes include the policies and guidelines that govern midwifery education, practice and training. In this review, nine studies were conducted in first world countries that were guided by the NMC (2018a) -Guidelines for

mentorship whilst one peer mentoring study (Hogan et al., 2015) used the 'Australian and New Zealand Support services Association Incorporated guidelines' for peer mentoring which included the program's aims and objectives, the program resources, and the program evaluation.

According to Thunes and Sekse (2015) mentorship training programmes should have a planned clinical practice approach that emphasizes students' knowledge, skills, and learning needs to provides an overview of what is expected from the mentor. Therefore, training courses for mentors should have knowledge of student expectations of the midwifery curriculum, clinical practice requirements, and competencies to completed during clinical placements. Midwifery practitioners who mentor students should be familiar with these requirements which may be outlined in midwifery clinical workbooks and portfolios (Durham et al. 2015); or clinical booklets (Hogan et al. 2016). These clinical requirements should be discussed in mentorship training program so that mentors have the knowledge on how to facilitate the attainment of these requirements timeously during clinical placement.

4. The duration and structure of the training should aim to empower of the clinical mentor

This review identified clinical support interventions that range from a 3-hour face-to-face training session to a 10-day study program and extended to a 12-month program. Training sessions were either informal/unplanned or formal and planned and took place in the clinical placement site. Findings showed that mentors involved in informal, shorter or fragmented training sessions were not able to attend all training sessions as they experienced challenges with leaving the wards, and received poor support from senior colleagues and managers (Barker et al., 2011, Clements et al., 2012 and Hogan et al. 2017). Hence, it may appear more convenient to have mentorship training programme that are well planned, formal, non-fragmented and time conscious. Thunes and Sekse (2015) and Hogan, Fox, and Barratt-See (2017) revealed that a well-planned and structured mentor training program could strengthen clinical support.

These four themes identified in this review can be considered as core components when developing mentorship training programs for midwifery practitioners and hence the outcomes of this review proposed as a generic framework to guide mentorship training for midwifery practitioners.

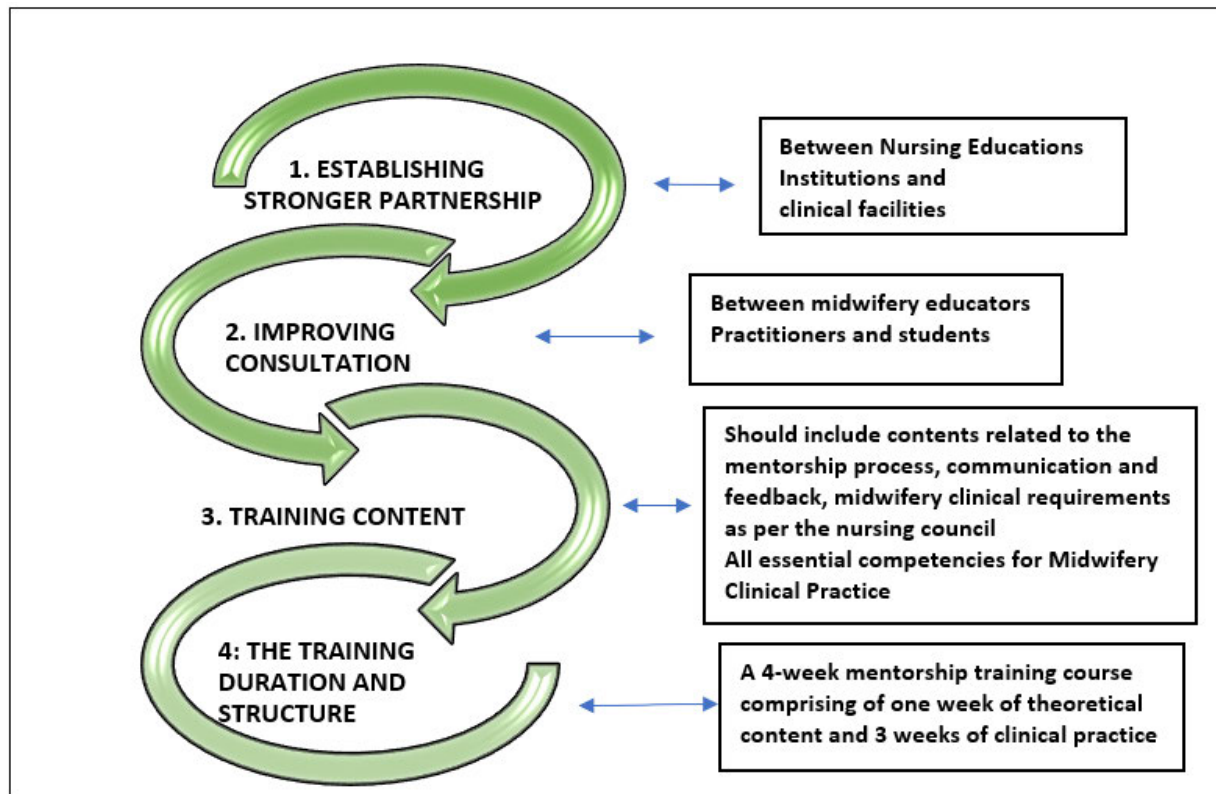


Figure 2: A framework for mentorship training

DISCUSSIONS

Principal results: This review identified interventions to support midwifery students during clinical practice. Findings showed that globally mentorship was the most practiced intervention in supporting students showing benefits to both students and mentors. Additionally, the benefits of mentorship extended to improved patient care outcomes and collaborations between NEI and clinical facilities. However, mentorship training and support for midwifery practitioners who undertake the mentor role are not well established, and concerns over graduates' competence are worrisome. Therefore, it is necessary to have and follow clear guidance in developing successful mentorship training programs. The analysis of included articles identified in this review highlighted essential aspects to consider when developing mentorship training programs—strengthening partnership and consultation by establishing more robust relationships between NEI and clinical facilities and thus improving consultations between midwifery educators,

practitioners, and students. Providing mentor support through training is essential. More important is to ensure that the training content, structure, and duration of the mentorship training suits clinical expectations.

Comparison of prior work: The quality of clinical support for midwifery students is a concern despite efforts toward improvements. This review showed that mentorship is the blueprint for supporting midwifery students to achieve the expected competence needed to become safe and independent practitioners. Mentorship benefits are seen globally, especially in many developed countries, and are effective in clinically preparing students for role-taking [12]. Similarly, this review presented that the benefits of mentorship extend from midwifery students, to practitioners, to academics, and patients/clients. Therefore, nurse managers and heads of nursing education institutions should support midwifery practitioners and educators respectively in this shared mentorship responsibility. Hence, partnerships and collaborations between nursing education institutions and clinical placements, is necessary.

Continued consultation opportunities contribute to a better understanding of students' clinical expectations [22,23]. In 2011, trained Sign off Mentors (SOMs) assisted midwifery students in achieving the requirements for clinical practice. However, these mentors experienced numerous challenges and felt inadequately prepared and supported in the role [23]. Subsequently, practice-education facilitators were employed to support SOMs in their roles [23].

In South Africa, midwifery educators and practitioners share the responsibilities of mentoring midwifery students during clinical placement. Improving consultation between midwifery educators (from NEIs) and midwifery practitioners (from clinical facilities) is needed to improve students' support. Student-centered learning approached in higher education institutions promote student responsibility and accountability for own learning outcomes. As a result, midwifery students understand that establishing good mentorship relationships with midwifery educators and practitioners, is crucial in achieving clinical learning outcomes. In an attempt to review the current midwifery pre-registration programs, the NMC supports and empowers students to become active/self-directed learners [30] as does the SANC [2,30].

The findings from this review highlighted the importance of conducting a well-structured mentorship training program. These programs should align with the learning objectives stipulated by nursing councils and nursing education institutions. Hence, the importance of partnerships and consultations between relevant stakeholders. Furthermore, the training program's content should contain the students' learning objectives, the process of mentorship, essential midwifery competencies, assessment and support materials, contact details of midwifery educators, and guidelines to follow during the mentorship process. Through content-specific and contextualized mentorship training programs and support, midwifery practitioners should be able to carry out mentorship roles and responsibilities with ease.

Empowering midwifery practitioners through mentorship training and support is advantageous to the quality of service provided at clinical facility. Yet, clinical challenges remain a barrier to attend training workshops conducted off-site. Besides, too lengthy training programs is also an inconvenience in fragmented working schedules. Therefore onsite, short-term, on-the-job mentorship training approaches that integrates theory-related instruction is likely to complement a 'hands-on approach in clinical mentorship.

Strengths:

Conducting systematic scoping reviews is a major strength in research as it ensures that only high-quality articles are included for data extraction. The review applied a mixed methodology which provided a more detailed analysis of the findings. This review aims to identify the various interventions to strengthen midwifery clinical support and proposes a framework to guide mentorship training. The outcomes which is a framework to guide mentorship training is an investment into midwifery education and practice.

Limitations: This review was restricted to clinical support interventions available to midwifery students from 2010 to 2020 and may have limited the research findings. The review excluded the implications of mentorship to other categories of nurses and hence should be explored in future studies.

CONCLUSION

The results of this review identified various clinical support interventions offered to midwifery students during clinical practice. Clinical support interventions included: training and coaching models, workshops, and assistance programs (developmental, support, and peer mentoring).

Across the globe, mentorship training programs were the most common clinical support available to midwifery students. Mentorship in maternity departments benefits midwifery practitioners, students, and educators. The success of mentorship is in patient care outcomes. The findings of this review also highlight the importance of conducting mentorship training programs which comprise a structured program with relevant and adequate training content as a crucial element in strengthening the clinical support of midwifery students. However, mentorship training programs alone are insufficient to meet role-players' needs. Mentors require the support of colleagues, senior managers, and midwifery educators to ensure mentorship success.

Mentorship training and support for midwifery students should not be side-lined because the safety of our patients is in the hands of the students prepared for the near future. Strengthening partnerships between nursing education institutions and clinical facilities allows for opportunities for training and support and continued consultations with role-players. Mentorship is a shared responsibility that is three-fold and equally important to midwifery practitioners, educators, and students. The importance of mentorship training in health care is known, but clinical challenges have shifted the focus on mentorship.

Attempts to re-focus on mentorship and revive mentorship training opportunities are necessary. Despite global attempts to strengthen mentorship, the quality of midwifery students remains a significant concern. More guidance on developing successful mentorship training programs is needed. The results of this review highlighted the importance of designing a well-structured mentorship program with relevant training content and a convenient duration.

These sub-themes are core mentorship components and should be integrated into a framework to guide mentorship training. The developed framework to guide mentorship training is likely to encourage midwifery educators to pursue more mentorship training opportunities and hence improve the quality of midwifery clinical education.

Designing a structured mentorship training program to support midwifery practitioners in their mentorship roles and responsibilities is necessary to improve clinical support and practice in maternity departments globally and South Africa. Given the limited articles retrieved from African countries in this review, there is a need for more research studies and publications on midwifery clinical education in African countries.

Abbreviations Used

1. MMAT- Mixed methods quality appraisal tool
2. n – number of articles
3. NMC- Nursing and Midwifery Council
4. PCC – Population, Concept and Context
5. PRISMA- Preferred Reporting Items for Systematic reviews and Meta-analyses
6. SA – South African
7. SANC – South African Nursing Council
8. WHO - World Health Organization

DECLARATIONS

Ethics approval and consent to participate

Ethical approval was obtained from the Human and Social Science Research Ethics Committee of the University of KwaZulu-Natal. Ethics approval number: HSS/1509/018M.

Consent for publication

Not applicable

Availability of Data and Materials

All data generated and analyzed from this study will be available on request.

Competing interest

There is no competing interest to be declared.

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Author's contribution:

HBA conceptualized and prepared the review under the guidance of SWM. Both authors contributed to reviewing of the draft manuscript and approved the final version of this results paper.

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REFERENCE

- Amod, H., Mkhize, S. W., & Muraraneza, C. (2021). Analyzing Evidence on Interventions to Strengthen the Clinical Support for Midwifery Students in Clinical Placements: Protocol for a Systematic Scoping Review. *JMIR research protocols*, 10(9), e29707. <https://doi.org/10.2196/29707>.
- Barker, M., Blascow, L., Cosgrove, S., Howorth, N., Jackson, G., McMahon, J. (2011). Implementation of 'sign-off' mentorship: different perspectives. *British Journal of Nursing*, 20(19) pp.1252-1255.
- Bradshaw, C., Noonan, M., Barry, M. and Atkinson, S., (2013). Working and learning: Post-registration student midwives' experience of the competency assessment process. *Midwifery*, 29(5), pp.519-525.
- Broad, P., Walker, J., Boden, R., Barnes, A. (2011). Developing a 'model of transition' prior to preceptorship. *British Journal of Nursing* 20(20) pp. 1298-1301.
- Clark, L. and D. Casey (2016). Support for mentors-an exploration of the issues. *British Journal of Nursing* 25(20) pp.1095-1100.
- Clements, V., Fenwick, J. and Davis, D. (2012). Core elements of transition support programs: the experiences of newly qualified Australian midwives. *Sexual Reproductive Healthcare* 3(4) pp.155-162.
- Dixon, L., Calvert, S., Tumilty, E., Kensington, M., Gray, E., Lennox, S., Campbell, N., and Pairman, S. (2015). Supporting New Zealand graduate midwives to stay in the profession: An evaluation of the Midwifery First Year of Practice programme. *Midwifery* 31(6), pp. 633-639.
- Durham, W. J., Kingston, P. and Sykes, C. (2012). Implementing a sign off mentor preparation workshop--a tripartite approach. *Nurse Education Today* 32(3), pp.273-277.
- Government Gazette: Republic of South Africa, (2017). Higher Education Amendment Act No.9 of 2016. *Government Gazette No 40548*, Volume 619, Cape Town, pp. 6
- Gray, M. (2018). Midwifery mentorship: What do we know about the mentors' perspective of the role? *Australian Midwifery News*. Cambridge Publishing, 18(1), pp. 50-51.

- Gray, O. and D. Brown (2016). Evaluating a nurse mentor preparation programme. *British Journal of Nursing* 25(4), pp.212-217.
- Hogan, R., Fox, D. and Barratt-See, G. (2017). Peer to peer mentoring: Outcomes of third-year midwifery students mentoring first-year students. *Women Birth* 30(3), pp.206-213.
<http://www.che.ac.za/>
http://www.sanc.co.za/education_and_training.htm
http://www.sanc.co.za/position_public_nursing_colleges_transition_to_HE.htm
<http://www.who.int/mediacentre/events/2012/wha65/en/>
<https://www.nmc.org.uk/globalassets/sitedocuments/education-standards/student-supervision-assessment.pdf>
<https://www.rcn.org.uk/-/media/royal-college-of-nursing/documents/.../005455.pdf>
- Jones, P. and Marshall, J. (2015). Midwifery Basics: Mentorship. 5. Relationships between university and practice, and the role of the link lecturer. *Practice Midwife* 18(2), pp. 38-41.
- Kemp J, Shaw E, Musoke, M.G. (2018). Developing a model of midwifery mentorship for Uganda: The MOMENTUM project 2015-2017. *Midwifery*, 59, pp. 127-129.
- Moran, M. and D. Banks (2016). An exploration of the value of the role of the mentor and mentoring in midwifery. *Nurse Education Today* 40, pp.52-56.
- Phuma-Ngaiyaye E., Bvumbwe T. and Chipeta M.C., (2017). Using preceptors to improve nursing students' clinical learning outcomes: A Malawian students' perspective. *International Journal of Nursing Science*, 4(2), p164-168. DOI: 10.1016/j.ijnss.2017.03.001. PMID: 31406737; PMCID: PMC6626121.
- Simane-Netshisaulu, K.G., (2018). Transition Support Programme for Newly Graduated Midwives in Limpopo Province, South Africa (Doctoral dissertation).
- Thunes, S. and R. J. Sekse (2015). Midwifery students first encounter with the maternity ward. *Nurse Education Practice* 15(3) pp. 243-248.
- Tweedie, K., Yerrell, J. and Crozier, K. (2019). Collaborative coaching and learning in midwifery clinical placements. *British Journal of Midwifery*, 27(5), pp.324-329.
- Vaismoradi, M., Jones, J., Turunen, H. and Snelgrove, S. (2016). Theme development in qualitative content analysis and thematic analysis. *Journal of nursing Education and Practice* 6 (5) pp.100-110. 15.

CHAPTER 4: MANUSCRIPT 2

4.1. FIRST AUTHOR CONTRIBUTIONS

PUBLICATION 3: Clinical support and perceived competency levels of midwifery students: A descriptive analysis. The article was submitted to Health SA Gesondheid in August 2021 and is currently in press. The journal guidelines can be accessed at

https://hsag.co.za/index.php/hsag/pages/view/submission-guidelines#part_1

The first author (HBA) conceptualized and prepared the manuscript under the guidance of the research supervisor (Dr. SWM). Both authors contributed to reviewing of the draft manuscript and approved the final version of this article.

4.2 SYNOPSIS TO ARTICLE 2

Article Title: Clinical support and perceived competency levels of midwifery students: A descriptive analysis

This article aligned with the second step of cycle 1 and aimed to analyze the clinical support of undergraduate midwifery students from a higher education institution in KwaZulu-Natal, South Africa (research objective 2 of this study). The article answered research question 2 of this study which is: How are midwifery students supported in the local clinical settings?

The article is quantitative in approach and used a descriptive research design to report on the clinical experience and the perceived competency levels of midwifery students, post-clinical placement at public hospitals in KwaZulu-Natal.

The researcher used a self-evaluation questionnaire and deliberately aligned the questionnaire items to the expected competencies for midwifery clinical practice, as guided by the International Confederation of Midwives (ICM, 2019) and the South African Nursing Council (SANC, 2013). The initial data collection process for this phase was in November 2020 however, this action of the cycle was delayed due to the unexpected arrival of the Coronavirus pandemic into South Africa, in March 2020. This unprecedented experience impacted greatly on the clinical placement of midwifery students as associated with the country's lockdown rules and restrictions. As the

lockdown regulation were eased, the department of nursing at the selected university worked tirelessly to ensure the strategic return of all nursing students to clinical sites. Hence, the clinical schedules for this midwifery module and other modules within the baccalaureate of nursing programmes were extended until the end of March 2021. Scheduled clinical placements were completed in mid-February 2021 and as a result, data collection took place in the third week of February 2021. Data were inserted into the IBM-SPSS software package and analyzed using descriptive statistics. Descriptive statistics were presented in frequencies, variable means, medians and standard deviations.

The outcomes of this article highlighted that midwifery practitioners working in clinical placements offer a supportive role in the clinical teaching of midwifery students; and the competence of midwifery students is dependent on the quality of support they receive during clinical placement.

This article was submitted to Health SA Gesondheid on the 24 August 2021 and is presently in press.

4.3. THIRD PUBLICATION: A MIXED RESULTS ARTICLE IN-PRESS

Article: Clinical support and perceived competency levels of midwifery students: A descriptive analysis

Abstract:

Background: Midwifery students in South Africa, place great value on the clinical support they receive from midwifery practitioners. Adequate clinical support should help midwifery students to practice procedures safely and independently, allowing them to be competent upon degree completion.

Aim: The aim of this article is to describe the clinical support and perceived competency levels of midwifery students at public hospitals in KwaZulu-Natal.

Methods: The researcher chose a quantitative research method using a descriptive design. An all-inclusive purposive and convenience sampling method was undertaken to recruit midwifery students from an undergraduate nursing programme at a university in KwaZulu-Natal. Gatekeepers permission and ethics approval was obtained from the university's registrar and research ethics committee. A self-evaluation questionnaire describing the clinical support and perceived competency levels was completed by 60 respondents. Data were analyzed using IBM-SPSS Version 27.

Results: The results highlighted that the clinical support midwifery students received, was beneficial to their clinical learning outcomes. Eighty percent of clinical support offered to midwifery students was obtained through clinical supervision. Ninety-three percent of respondents revealed that the clinical support they received were from midwifery practitioners (without a speciality qualification). Although students rated themselves as competent in 88.6% of midwifery procedures, poor outcomes were identified in 11.4% procedures.

Conclusion: Midwifery practitioners play a significant role in supporting midwifery students during clinical placement. Advancing the roles of midwifery practitioners through mentorship training is likely to strengthen the quality of clinical support provided and thus improve the competence levels of midwifery students.

Contributions: The findings in this paper are valuable in developing clinical support training guidelines for midwifery practitioners.

Keywords: clinical support, clinical supervision, perceived competency levels, mentorship, and midwifery students

Background

In South Africa, the quality of maternity care and its contribution to maternal mortality remains a significant challenge. According to the most recent Saving Mothers report (2016-2018), the general lack of knowledge and skills of maternity care providers, accounted for 25% of all avoidable maternal deaths. In response, the Department of Health-South Africa (DoH-SA) recommended that undergraduate training levels of healthcare practitioners' knowledge and skills should be improved (Saving Mother Report 2016-2018).

Students in the midwifery module of the R425 programme are required to complete a minimum of 1000 clinical hours (SANC, R425 of 22 February 1985). As a result, midwifery students spend the majority of their module time in clinical placements working in antenatal, labor, postnatal, and newborn units on a rotational basis to meet these high expectations. Clinical placement in maternity wards can be intensely challenging for midwifery students in terms of the labour ward demands and organizational tensions (Coldridge and Davies, 2017); the effecting nurse teacher, and the educational atmosphere (Arkan, Ordin, and Yilmaz, 2018); and high student intakes and disorganized learning opportunities (McKellar and Graham, 2017; Rahimi, Haghani, Kohan, and Shirani, 2019). In South African public hospitals, high patient turnover and staff shortages, offers midwifery students many opportunities to manage maternity cases with diverse health care needs (Thopola and Lekhuleni, 2015; Matlala and Lumadi, 2019).

Students place great value on the support and experience they receive from midwifery practitioners during clinical placement (Power and Grzelak, 2016). According to Thunes and Sekse (2015) the clinical support received during maternity placement is profoundly fundamental to the development of midwifery students. In South Africa, midwifery practitioners who support students in these clinical placements do not receive any formal training or support, and therefore, their supportive role is primarily, voluntary. More so, midwifery practitioners often find themselves juggling between patient care priorities and student supervision (Maputle, Malwela, and Lebesse, (2016). When midwifery students are competent in all clinical requirements then midwifery lecturers have reason to believe that the clinical learning and support that students received, was adequate (Russell, Allieux and Gluyas, 2016). On the contrary, when students remain incompetent,

then lecturers need to reassess the clinical support that students received during clinical placements.

Poor clinical outcomes were evident in a study done by Yigsaw et.al (2015), which revealed that the overall average competence score for midwifery students on point of graduation was 51.8 %. In another study, poor clinical supervision of midwifery students, revealed competency scores less than 50% in all clinical skills (Malakooti, Bahadoran and Ehsanpoor, 2020). Hence, the effects of poor clinical support may have negative connotations on the clinical competence of midwifery students. It is therefore important that midwifery educators and managers constantly monitor and improve the current clinical support offered to midwifery students during their clinical placement.

Aim:

The aim of this article is to describe the clinical support provided to midwifery students and their perceived competency levels in midwifery requirements post clinical placement at public hospitals in KwaZulu-Natal (KZN).

Research objective:

To analyze the current clinical support and the perceived competency levels of undergraduate midwifery students from a selected higher education institution, in South Africa.

Research Method

This study is part of a larger study on analyzing and strengthening the clinical support of undergraduate midwifery students and developing a mentorship training programme at a higher education institution in KwaZulu-Natal: A mixed method and action research design. This article is step 2 of cycle 1 which employed a quantitative approach with a descriptive research design to describe the clinical support and the perceived competency levels of midwifery students, following clinical placement at five public hospitals.

Research approach and design:

Descriptive research is quantitative in nature as it attempts to collect numerical data and statistically analyze it to describe and explain the variables, situation or a phenomenon (Bloomfield and Fisher, 2019). The researcher used a descriptive research design to analyze the clinical

experience and the perceived competency levels of midwifery students from the findings of a self-evaluation questionnaire.

Research setting:

This study was conducted at a higher education institution in South Africa. Students enrolled into the baccalaureate of nursing programme, are expected to complete a module in midwifery practice in the fourth year of training. The university is centrally located within the same local district as the five public hospitals where undergraduate midwifery students are placed for clinical learning.

Population:

All 4th year students enrolled for the midwifery module in an undergraduate nursing programme offered at the university.

Sample and sampling:

The sampling technique was aligned to the aim of the study which was to describe the clinical support and perceived competency levels of midwifery students. An all-inclusive purposive and convenient sampling method was undertaken to recruit midwifery students from an undergraduate nursing programme, at a university in KZN. The method was purposive as the study used a specific cohort from the midwifery class to analyze the clinical support of midwifery students from a higher education institution. The method was also convenient as data was collected from students when they returned to campus post-clinical placement in five public hospitals. A sample size of all sixty-eight students were selected for this survey.

Research tool:

A self-evaluation questionnaire was used to collect data. The questionnaire was developed by the researcher and the research supervisor to describe the clinical support of students and assess their competency levels. The researcher adapted the tool from the works of Hogan, Fox, and Barratt-See (2017). The design of the research questionnaire was aligned to the International Confederation of Midwives (ICM, 2019) and the South African Nursing Council (SANC, 2013) competencies for midwifery clinical practice. The questionnaire comprised three sections which included the demographic profiles; the clinical support and students' perceived levels of

competencies. Questionnaire items were close-ended and hence restricted respondents to select only specific choices. The results were therefore contained within expected choices.

Data collection process:

For this study, data was collected on campus from midwifery students who completed their clinical placements in maternity departments at five public hospitals in KwaZulu-Natal. Prior to data collection, the researcher briefed students on the purpose and expectations of the study. Each recruited student received an information sheet and then signed the informed consent form. Data collection took place during the month of February 2021. All completed questionnaires were hand-collected, captured electronically and safely stored by the researchers. Out of 68 students in the cohort, only 60 students participated in this study. A response rate of 88% was achieved.

Data analysis:

Data were saved in an excel spreadsheet and analyzed in a computer-based software package for social sciences called International Business Machines Corporation (IBM) Statistical Package for Social Science (SPSS) Version 27 (2020). All data were imported to SPSS and analyzed using descriptive statistics.

Reliability and Validity:

The reliability of the questionnaire was established in a previous study by Hogan, Fox and Barratt-See (2017) however, the researcher adapted the tool and developed questionnaire items to suit the objectives of this study. The validity of the questionnaire was pre-tested with a small group of 8 students from the previous cohort of midwives. The Cronbach's Alpha score of >0.7 is considered to be a good reliability score and a score of 0.9 was obtained for this questionnaire items.

Ethical consideration:

The University Ethics Committee granted ethical approval for the study and gatekeeper permission from the registrar of the university was obtained. The confidentiality, anonymity and respect for respondents were maintained throughout the study.

Findings

The results of this study are presented according to the design of the research questionnaire and is presented in sections A, B and C respectively. Section A describes the demographic profiles of respondents, Section B describes the clinical support that midwifery students received during their clinical placement, and Section C describes how midwifery students perceived their competency levels post clinical placement. The data captured in Section C was aligned to the ICM competencies for midwifery practice and included 4 areas of care namely the general care, the pre- and antenatal care, the labour care and the postnatal care. The midwifery requirements are the expected minimum requirements for undergraduate midwifery students prescribed by the SANC (SANC, Regulation 425 of 22 February 1985) and the university college handbook, (2021).

Section A: Demographic profiles

The results of this section measured categorical data and are reflected in frequencies and percentages.

1.1. Age and gender profiles: There was a total of 43 females and 17 males in the study. 87% of respondents (n=52) were between the ages of 18-24 years of which 39 were females and 13 males. The remaining 8 respondents accounted for the 13% of the study population which comprised 4 males and 4 females over the age of 25 years.

1.2. Country/Province of origin: At the time of this study, all respondents (N=60) were currently residing in three different provinces within South Africa. 87% of respondents (n=52) live within the KwaZulu-Natal province whilst 10% (n=6) respondents live in the Eastern Cape, and 3% (n=2) from Mpumalanga province.

1.3. Clinical facilities: All respondents (N=60) were allocated at five public hospitals within the eThekweni district, for experiential learning. Two of these hospitals (Institutions A and B) are classified as district hospitals. In Institution A, there were 11 (18.3%) respondents and in Institution B there were 9 (15%) respondents. Three hospitals (Institutions C, D, and E) are regional hospitals. The highest number of respondents, which was 16 (26.6%) were placed at Institution D, followed by 14 (23%) respondents placed at Institution E. The least number of respondents, which was 10 (16.6%) were placed in Institution C.

1.4. Person responsible for clinical support in public hospital: The results relating to the clinical support that students received during clinical placement, indicated that 51.7% (n=31) was received from midwifery practitioners who did not have speciality qualification followed by 28.3% (n=17) of midwifery clinical specialist and lastly 20 % (n=12) by a designated person who is the assigned preceptor for student supervision during clinical placement. The results also highlighted that most clinical support (n=9) were received from midwifery practitioners working in Institution E; and this was closely followed in institutions D (n=8) and A (n=8). These results are seen in Figure 1 below.

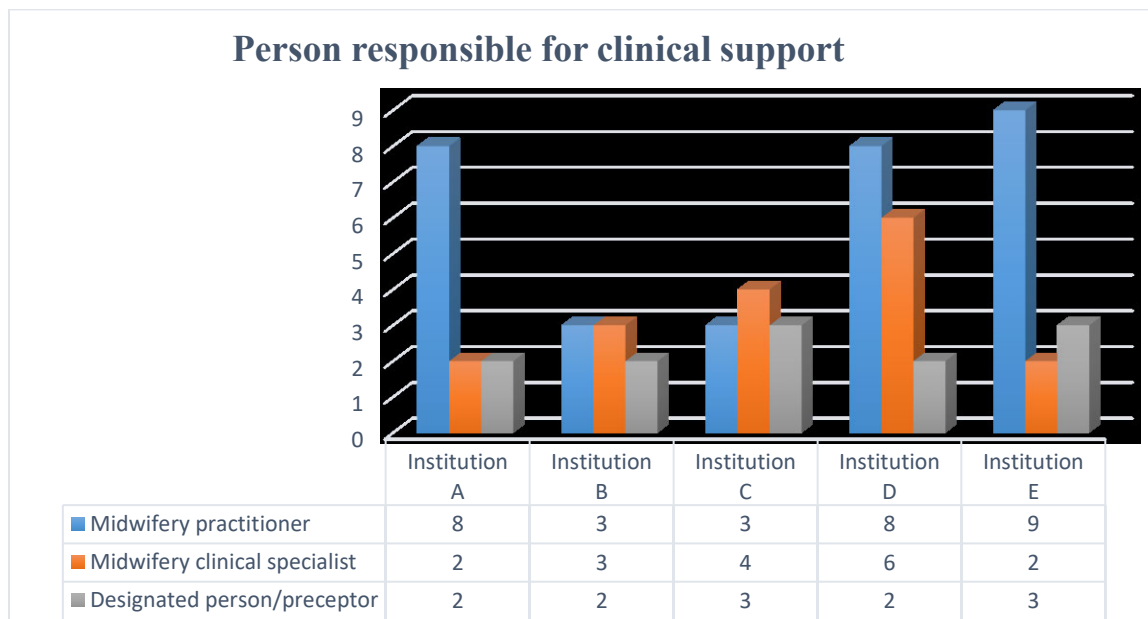


Figure 1: Person responsible for clinical support of students

Section B: Clinical support received at clinical facilities

This section describes the clinical support received by midwifery students during clinical placement for antenatal care; labour care and postnatal care. It also identifies how clinical placement contributed to midwifery students' learning outcomes. The results are presented in frequencies and percentages.

2.1. Type of clinical support

Figure 2 below displays the three frequent types of clinical support offered across the five public hospitals. The findings show that clinical supervision (n=40) was highly practiced across all clinical placements, followed by mentorship (n=26) and then preceptorship (n=24). However, Institution B fared extremely poorly (n=1) in mentorship.

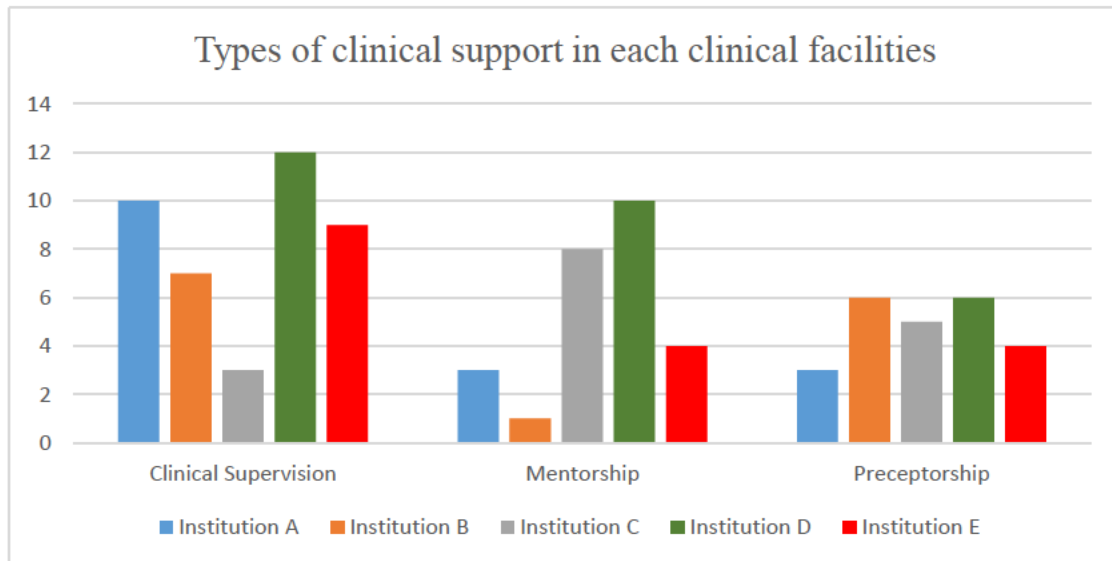


Figure 2: Types of clinical support across the different clinical facilities

All respondents (n=60) confirmed that they received some type of clinical support during their placement, either to a greater or lesser extent. As seen in Table 1 below, 80% (n=48) of the clinical support was through clinical supervision, followed by mentorship (51.6%; n=31) and lastly preceptorship (46.6%; n=28). Eighty percent of clinical supervision (n=48) occurred during labour ward placement, followed by antenatal ward (68.3%; n=41) and then postnatal ward (66.7%; n=40).

Table 1: Type of clinical support received during placement in different maternity care areas

	Antenatal care	Labour care	Postnatal care
Clinical supervision			
Greater extent	41	48	40
Lesser extent	19	12	20
Total	60	60	60
Preceptorship			
Greater extent	26	28	24
Lesser extent	34	32	36
Total	60	60	60
Mentorship			
Greater extent	24	27	31
Lesser extent	36	33	29
Total	60	60	60

2.2. The benefit of clinical support to learning

Clinical placement aims to ensure that students integrate theoretical knowledge with practical experiences. Fifty-six respondents (93%) reported that the overall clinical support they received was beneficial to their clinical learning as they had achieved the minimum set of midwifery requirements whilst 4 respondents (7%) had disagreed with the statement. Figures 3 below presents these results.

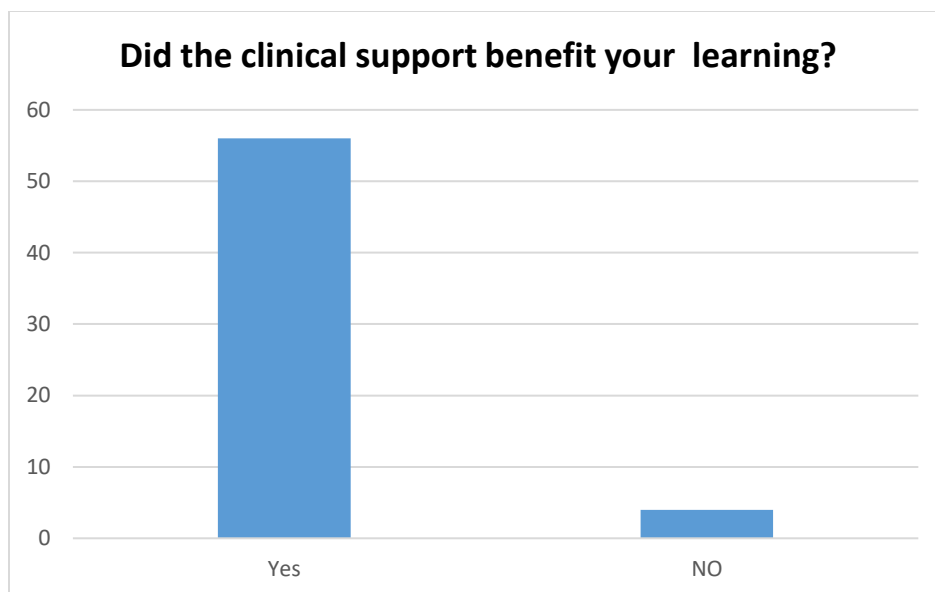


Figure 3: The benefit of clinical learning

Section C: Results of students' perceived levels of competence at the end of the module

Section C describes how midwifery students perceived their levels of competence in clinical requirements for the undergraduate nursing degree. This section has 4 categories aligned to the ICM essential competencies for midwifery clinical practice namely the (1) General care; (2) Pre-antenatal care, (3) Labour care and (4) Postnatal care (including newborn). The general care category includes general requirements that students are expected to acquire throughout their degree programme and these general requirements are used across categories 2,3 and 4. A Likert scale measured the levels of competence in a total of 70 midwifery requirements as follows: The results highlighted that respondents were competent in 88.6% of the total requirements for midwifery clinical practice and were incompetent in 11.4 % of the requirements. Table 2 to 5 highlights the results of perceived competency levels in each category. All columns reflected in green denotes the antenatal care requirements that students perceived themselves as incompetent in, at the end of the midwifery module

1. Competence in General care:

Table 2: General care requirements

General care requirements	0= Incompetent	1= Competent	Mean	Median	Standard Deviation	Valid
Communicate using effective interpersonal skills	16	44	2.73	3.00	.446	60
Demonstrate good clinical judgement and reasoning	18	42	2.70	3.00	.462	60
Work effectively in a team	11	49	2.82	3.00	.390	60
Practice professional conduct	12	48	2.80	3.00	.403	60
Accept responsibility for acts and omissions	14	46	2.77	3.00	.427	60
Maintain effective writing skills and complete documentation	20	40	2.67	3.00	.475	60
Demonstrates cultural awareness and sensitivity	17	43	2.70	3.00	.497	60

In the general care category, the results expressed that 81.66% (n=49) of respondents work effectively in team and 33.3% (n=20) were not competent in effective writing skills and completion of documentation. Across all clinical requirements, 66.7% (n=40) respondents perceived themselves as competent whilst 33% (n=20) of respondents perceived themselves as incompetent. These results are captured in Table 2 above. The average mean score in this category was 2.74 which was a score close to the expected average median score of 3.0. A low SD score of < .5 was achieved across all requirements.

2. Competence in Pre-Antenatal care

In the pre-antenatal care category, there were 86.7% (n=52) respondents competent in calculating the expected date of delivery (EDD) using Naegele's rule. Forty-nine respondents (81.6%) were competent in conducting an abdominal examination of a pregnant woman and 78.3% (n=47) respondents could identify the signs and symptoms of pregnancy, teach antenatal exercise and monitor and record fetal kick counts (FKC).

High incompetent scores among respondents were evident in obtaining a Pap smear (n=47), performing a pelvic assessment (n=45) and screening high risk pregnancies (n=33). The average mean score across competencies was 2.54 and the average median score was 3.0. Low median score < 3.0 were evident in the three poorly perceived midwifery requirements mentioned above. Table 3 reflects these results. All columns reflected in green denotes the antenatal care requirements that students perceived themselves as incompetent, at the end of the midwifery module.

Table 3: Pre-Antenatal care requirements

Pre-Antenatal requirements	0= Incompetent	1= Competent	Mean	Median	Standard Deviation	Valid
Identify the signs and symptoms of pregnancy	13	47	2.75	3.00	.508	60
Conduct prenatal and antenatal history taking	20	40	2.63	3.00	.551	60
Conduct a full physical examination of a pregnant woman	16	44	2.72	3.00	.490	60
Conduct an abdominal examination of a pregnant woman	11	49	2.82	3.00	.390	60
Calculate the EDD using Naegele's rule	8	52	2.83	3.00	.457	60

Perform a Pap smear	47	13	1.68	1.00	.813	60
Recognize the minor and common disorders in pregnancy	22	42	2.55	3.00	.649	60
Give advice on the common disorders in pregnancy	18	38	2.68	3.00	.504	60
Teach antenatal exercises	13	47	2.73	3.00	.548	60
Monitor and record FKC	13	47	2.78	3.00	.415	60
Perform a pelvic assessment to detect abnormalities	45	15	2.03	2.00	.688	60
Give appropriate health education	15	45	2.75	3.00	.437	60
Screen high-risk pregnancies	33	26	2.38	2.00	.585	60
Identifies abnormal changes during pregnancy	27	33	2.50	3.00	.597	60
Formulates a nursing care plan for identified needs	20	40	2.62	3.00	.585	60

3. Competence in Labour care

Results in labour care revealed that 90% (n=54) of respondents were competent in managing the 4th stage of labour, 88.7% (n=52) were competent in examining the placenta and 85% (n=51) were competent in delivering the baby safely and checking the uterus post-delivery. Thirty-five (58.3%) of respondents were incompetent in infiltrating, performing and suturing of an episiotomy, followed by 42% (n=25) who were incompetent in performing an artificial rupture on membranes and assessing blood loss. The average mean score achieved was 2,71 and the average median score was 3.0 across all requirements as seen in Table 4. All columns reflected in green denotes the labour care requirements that students perceived themselves incompetent in, at the end of the midwifery module.

Table 4: Labour care requirements

Labour care requirements	0= Incompetent	1= Competent	Mean	Median	Standard Deviation	Valid
Assess for signs and symptoms of labour	11	49	2.82	3.00	.390	60
Monitor for contractions- intensity, duration and frequency	19	41	2.68	3.00	.469	60
Perform a vaginal examination	23	37	2.62	3.00	.490	60
Confirm the diagnosis of labour	22	38	2.63	3.00	.486	60
Record data accurately using the partograph	18	42	2.67	3.00	.542	60
Interpret data accurately using the partograph	19	41	2.68	3.00	.469	60
Monitor and interpret maternal and fetal condition	16	44	2.72	3.00	.490	60
Perform artificial rupture of membranes	25	35	2.53	3.00	.596	60
Monitor a woman on oxytocin infusion	17	43	2.72	3.00	.454	60
Monitor a woman undergoing an induction of labour	15	45	2.73	3.00	.482	60
Infiltrate, Perform and suture an episiotomy if necessary	35	25	2.35	2.00	.606	60

Deliver the baby safely following the mechanism of normal labour	9	51	2.85	3.00	.360	60
Perform passive management of the 3rd stage of labour	14	46	2.70	3.00	.591	60
Perform active management of the 3rd stage of labour	11	49	2.82	3.00	.390	60
Examine the perineum and vulva for lacerations	11	49	2.82	3.00	.390	60
Manage the 4th stage of labour	6	54	2.90	3.00	.303	60
Check the uterus post delivery	9	51	2.85	3.00	.360	60
Examine the placenta and membrane	8	52	2.87	3.00	.343	60
Assess the blood loss	25	35	2.57	3.00	.533	60

4. Competence in Postnatal care

The postnatal care category comprises the care of the postnatal mother and the newborn. In the postnatal mother sub-category, 55% (n=33) respondents scored themselves as incompetent in recognizing the physiological changes to the reproductive system. Ninety-three percent (n=56) of respondents perceived themselves competent examining the perineum, 90% (n=54) in monitoring the symphysis fundal height and 87% (n=52) in monitoring the vaginal discharge/ lochia, post-delivery.

In the newborn care sub-category, 76.7% (n=46) respondents perceived themselves incompetent in performing basic resuscitation on a newborn. respondents were also found to be incompetent in performing a stomach washout (71.6%; n=43) and to perform the first baby bath (55%, n=33). These results are visible in Table 5 below. Lower means scores and corresponding low median

scores of 2.0 suggest that respondents needed more opportunities to learn and practice before assessing themselves as competent in all requirements. All columns reflected in green denotes the postnatal care requirements that students perceived themselves incompetent in, at the end of the midwifery module.

Table 5: Postnatal care requirements

Postnatal Care-Mother	0= Incompetent	1= Competent	Means	Median	Standard Deviation	Valid
Recognize the physiological changes to the reproductive system	33	27	2.42	2.00	.403	60
Conduct a thorough physical examination - post-normal delivery	15	45	2.75	3.00	.390	60
Conduct a thorough physical examination - post caesarean section	12	48	2.80	3.00	.303	60
Perform post-delivery breast examination	11	49	2.82	3.00	.343	60
Monitor symphysis fundal height	6	54	2.90	3.00	.581	60
Monitor the vaginal discharge/lochia	8	52	2.87	3.00	.252	60
Perform vulva swabbing	19	41	2.63	3.00	.415	60
Examine the perineum	4	56	2.93	3.00	.360	60
Teach the mother the technique of breast feeding	13	47	2.78	3.00	.533	60
Give relevant health education	9	51	2.85	3.00	.650	60

Identify problems and potential problems in the care of the mother and baby in the puerperium	25	35	2.57	3.00	.533	60
Demonstrate post-natal exercise to the women	23	37	2.53	3.00	.650	60
Counsel on and administer family planning method	9	51	2.85	3.00	.360	60
Conduct a discharge procedure of a postnatal mother and baby	13	47	2.77	3.00	.465	60
Postnatal care-Newborn	0	1	Means	Median	Std. Deviation	Valid
Assess the Apgar score	5	55	2.90	3.00	.354	60
Complete the immediate care of the newborn	3	57	2.95	3.00	.220	60
Perform a physical assessment of the neonate	8	52	2.87	3.00	.343	60
Perform a neurological assessment of the neonate	29	31	2.47	3.00	.596	60
Perform basic resuscitation on a newborn	46	14	2.02	2.00	.676	60
Complete birth notification	5	55	2.92	3.00	.279	60
Transfer a sick neonate to the nursery	25	35	2.53	3.00	.596	60

Perform first baby bath and teach the mother	33	27	2.18	2.00	.833	60
Perform cord care and teach the mother	8	52	2.85	3.00	.404	60
Plan, implement, evaluate the care of the neonate	31	29	2.47	2.00	.536	60
Administer B.C.G and polio drops	8	52	2.87	3.00	.343	60
Care for a baby receiving phototherapy	29	31	2.45	3.00	.622	60
Perform a stomach washout	43	17	1.88	2.00	.825	60
Administer a nasogastric feed	27	33	2.42	3.00	.724	60
Perform dextrose sticks monitoring	25	35	2.42	3.00	.766	60

Figure 4 below displays a summary of the requirements that respondents perceived themselves as incompetent in, at the end of their clinical placement. It is noted from these results that a minimum of 55% (n=33) of this cohort were incompetent in these eight midwifery clinical requirements.

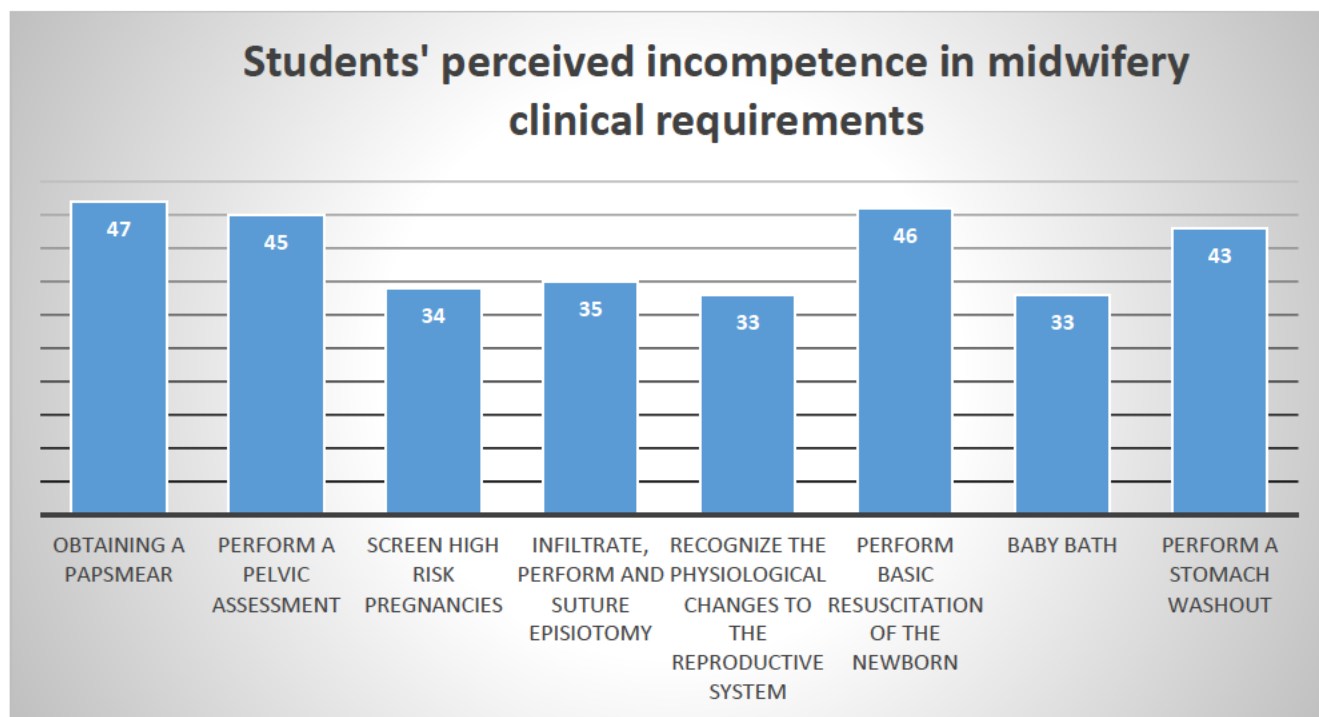


Figure 4: Perceived incompetence in performing clinical requirements

Discussion:

Pre-registration midwifery modules require midwifery students to complete a minimum of 50 % of curriculum hours in clinical practice. The goal is to ensure that midwifery students receive sufficient clinical experience to become clinically competent for role-taking upon degree completion. Students consider the quality of support they receive to be the most critical aspect of their clinical experience (Walker, Dwyer, Moxham, Broadbent and Sander, 2013) and this article describes the clinical support and the perceived competency levels of student's post-clinical placement.

Despite the challenges of clinical placements, students attribute their clinical success to the registered midwives they work with daily (Gilmour, McIntyre, McLelland, and Miles, 2013; Thunes and Sekse, 2015). In South Africa, registered midwives who support students in these clinical placements do not receive any formal training or support, and therefore, the supportive

role is primarily voluntary. More so, registered midwives often find themselves juggling between patient care priorities and student supervision (Maputle, Malwela, and Lebeso, (2016). In this study, respondents were placed in five public hospitals within the eThekweni district. Across the five public hospitals, respondents received the most clinical support from registered midwives against a designated person or advanced midwives. These results insinuated that registered midwives showed greater responsibility towards the clinical support of midwifery students than did advanced midwives. Likewise, a study by Simane-Netshisaula and Maputle (2021) concluded that many senior midwives such as midwifery clinical specialist, were unsupportive and excluded themselves from supervisory roles once they assume roles in clinical leadership. The low uptake of clinical support displayed by advanced midwives, who are the clinical specialist in the field, is worrisome. A study by Casey, McNamara, Fealy and Geraghty (2011) suggests that clinical specialist, such as advanced midwives, may exclude themselves from student supervision roles once they assume clinical leadership. A more recent study by Steege, Pinekenstein, Knudson and Rainbow (2017) showed similar outcomes for clinical specialist who become nurse managers. More investigation into the roles of advanced midwives in supporting students in clinical practice, should be considered.

Clinical supervision, mentorship, and preceptorship are frequent types of clinical support offered to undergraduate midwifery students in clinical facilities. According to Dilworth, Higgins, Parker, Brian, Turner (2013), Staykova, Huson, and Pennington (2013), and Hale (2018), the definitions and processes of clinical supervision, preceptorship, and mentorship are not well established in healthcare organizations, and this may create uncertainties in role expectations. This may also be the case for midwifery practitioners who supervise students in undergraduate programmes. In this study, respondents indicated that they received all types of clinical support, either to a greater or lesser extent. Although clinical supervision was the most frequent type of clinical support, all three types of clinical support was evident throughout all maternity care units especially in labour ward. Overall, respondents reported that the clinical support was beneficial as they achieved the minimum clinical requirements for midwifery practice. Though, merely achieving the minimum requirements does not guarantee clinical competency in the same requirements. Section C of this study evaluated students' perceived competence levels in

midwifery requirements across maternity care areas and found that respondents had perceived themselves as competent in most midwifery requirements. Perceived incompetence was reported in eight requirements namely: performing procedures such as pap smears; pelvic assessments; screening high-risk patients, performing and suturing an episiotomy; recognizing physiological changes in the reproductive system; performing basic neonatal resuscitation; planning, implementing, and evaluating a nursing care plan; and performing a stomach washout. These findings reveal that midwifery students in the undergraduate programme are not ready for role-taking. For midwifery students, achieving competence in all minimum requirements is critical for the transition into an independent and safe midwife practitioner. The clinical support that students receive during their training should guarantee the competence levels of newly qualified nurses (Skirton, Stephen, Doris, Cooper, Avis, and Fraser, 2012; Hussein, Salamonson, Everett, Hu and Ramjan, 2019). Similar findings in a study by Malakooti, Bahadoran and Ehsanpoor (2018) revealed that midwifery students were incompetent in performing a pelvic assessment and neonatal resuscitation among other competencies. Mechanisms to bridge these competency gaps through clinical training and support programmes is needed and widely recommended by Yigzaw, Ayalew, Kim, Gelagay, Dajene, Gibson, Teshome, Broerse and Stekeleburg (2015), Kaphagawani and Useh (2018), Bradshaw, Tighe and Doody (2018), Feyissa, Balabanova and Woldie (2019), Sharifipour, Heydarpour, and Salari (2020) and Stefaniak and Dmoch-Gajzlerska (2020).

Conclusion

The clinical competence of midwifery students is highly reliant on the quality of clinical support they receive during clinical placement. Midwifery practitioners working in clinical placements have already adopted a supportive role in clinical teaching. Initiatives to strengthen this supportive role, is necessary.

Recommendations

In order to strengthen the clinical support of midwifery students, midwifery practitioners who voluntarily supervise midwifery students in practice, should be empowered through formal training and support programmes. Measures to bridge the gaps identified in the competency levels

of midwifery student post clinical placements, should be carefully integrated into mentorship programmes during community service placements.

Strengths and Limitations:

The outcomes of this study affirm the need to strengthen the clinical support and competency levels of midwifery students during clinical placement. This article contributes to the limited literature available on the clinical support of midwifery students in African countries. The recommendation from this article sets the ground for further research into related midwifery clinical support concerns.

The study findings should not be generalized as the study was restricted to one district within the province. The study did not evaluate the perceptions of midwifery practitioners regarding the clinical support they offered to the cohort of students in the same setting.

In this phase of the study, a quantitative research design was adopted. The researcher used two non-probability sampling techniques (purposive and convenient) to collect data from undergraduate midwifery students.

DECLARATIONS

Ethics approval and consent to participate: Ethical approval was obtained from the university Research Ethics Committee. All participants signed an informed consent form.

Consent for publication

[information redacted to maintain the integrity of the review process]

Availability of Data and Materials

[information redacted to maintain the integrity of the review process]

Competing interest

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References

1. Amod, H., Mkhize, S.W. and Muraraneza, C. (2021). Analyzing Evidence on Interventions to Strengthen the Clinical Support for Midwifery Students in Clinical Placements: Protocol for a Systematic Scoping Review. *JMIR Research Protocols*, 10(9), p.e29707.
2. Arkan, B., Ordin, Y., and Yılmaz, D. (2018). Undergraduate nursing students' experience related to their clinical learning environment and factors affecting to their clinical learning process. *Nurse Education in Practice*, Volume 29, pp. 127-132,
3. Bloomfield, J. and Fisher, M. (2019). Quantitative research design. *Journal of the Australasian Rehabilitation Nurses' Association*. 22. 27-30. 10.33235/jarna.22.2.27-30.
4. Bradshaw, C., Tighe, S.M., and Doody, O. (2018). Midwifery students' experiences of their clinical internship: A qualitative descriptive study. *Nurse Education Today*, (68), pp. 213-217, ISSN 0260-6917. <https://doi.org/10.1016/j.nedt.2018.06.019>.
5. Coldridge, L., and Davies, S. (2017). “Am I too emotional for this job?” An exploration of student midwives' experiences of coping with traumatic events in the labour ward. *Midwifery*, Volume 45, pp. 1-6
6. Feyissa, G.T., Balabanova, D. and Woldie, M. (2019). How effective are mentoring programs for improving health worker competence and institutional performance in Africa? A systematic review of quantitative evidence. *Journal of multidisciplinary healthcare*, 12, p.989.
7. Demirel, G. and Kocatas, S. (2021). The Attitudes of Midwives and Students in the Midwifery Department Towards Mentoring: A Qualitative Study. *International Journal of Caring Sciences*, 14(3), pp.1984-1992.
8. Hogan, R., Fox, D., and Barratt-See, G. (2017). Peer to peer mentoring: Outcomes of third-year midwifery students mentoring first-year students. *Women and birth: Journal of the Australian College of Midwives*, 30(3), 206–213. <https://doi.org/10.1016/j.wombi.2017.03.004>
9. Hussein, R., Salamonson, Y., Everett, B., Hu, W. and Ramjan, L.M. (2019). Good clinical support transforms the experience of new graduates and promotes quality care: A qualitative study. *Journal of Nursing Management*, 27 (8), pp. 1809-1817. <https://doi.org/10.1111/jonm.12880>

10. International confederation of Midwives: Essential competencies for midwifery practice-2019 accessed on 20/08/2021 from <https://www.internationalmidwives.org/our-work/policy-and-practice/essential-competencies-for-midwifery-practice.html>
11. John, N., Rai, R.P., Amidi, A. and Poddar, S. (2020). Perceived benefits and attitude of undergraduate nursing students towards the mentoring programme. *Enfermeria clinica*, 30, pp.188-191.
12. Kaphagawani, N. C., and Useh, U. (2018). Clinical Supervision and Support: Exploring Pre-registration Nursing Students' Clinical Practice in Malawi. *Annals of global health*, 84(1), 100–109. <https://doi.org/10.29024/aogh.16>
13. Lethale, S.M., Makhado, L. and Koen, M.P. (2019). Factors influencing preceptorship in clinical learning for an undergraduate nursing programme in the North West Province of South Africa, *International Journal of Africa Nursing Sciences*, 10, pp 19-25. ISSN 2214-1391. <https://doi.org/10.1016/j.ijans.2018.11.006>.
14. Malakooti, N., Bahadoran, P., and Ehsanpoor, S. (2018). Assessment of the Midwifery Students' Clinical Competency Before Internship Program in the Field Based on the Objective Structured Clinical Examination. *Iranian journal of nursing and midwifery research*, 23(1), 31–35. https://doi.org/10.4103/ijnmr.IJNMR_181_16
15. Maputle, S. M., Malwela, T. and Lebeso, R. T. (2016). “Factors Affecting Integration of Midwifery Nursing Science Theory with Clinical Practice in Vhembe District, Limpopo Province As Perceived by Professional Midwives: Original Research.” *African Journal of Primary Health Care and Family Medicine*, 8(2), pp. 1–6. doi: 10.4102/phcfm.v8i2.997.
16. Matlala, M. S., and Lumadi, T. G. (2019). Perceptions of midwives on shortage and retention of staff at a public hospital in Tshwane District. *Curationis*, 42(1), e1–e10. <https://doi.org/10.4102/curationis.v42i1.1952>
17. McKellar, L. and Graham, K. (2017). A review of the literature to inform a best-practice clinical supervision model for midwifery students in Australia. *Nurse education in practice*, 24, pp 92–98. <https://doi.org/10.1016/j.nepr.2016.05.002>
18. McSharry, E. and Lathlean, J., (2017). Clinical teaching and learning within a preceptorship model in an acute care hospital in Ireland; a qualitative study. *Nurse Education Today*, 51, pp.73-80.

19. Moran, M.C., & Banks, D., (2016). 'An exploration of the value of the role of the mentor and mentoring in midwifery,' *Nurse education today*, 40, 52-56.
<https://doi.org/10.1016/j.nedt.2016.02.010>
20. Musabwasoni, M.G.S., Kerr, M., Babenko-Mould, Y., Nzayirambaho, M. and Ngabonzima, A. (2020). Assessing the impact of mentorship on nurses' and midwives' knowledge and self-efficacy in managing postpartum hemorrhage. *International Journal of Nursing Education Scholarship*, 17(1).
21. Mwiinga, B.M., Maimbolwa, M.C. and Muleya, M.C. (2017). Certified midwives' experiences of mentorship and supervision during internship in Lusaka, Zambia. *African Journal of Midwifery and Women's Health*, 11(1), pp.33-45.
22. National Committee on Confidential Enquiries into Maternal Deaths. Saving Mothers 2014 - 2016: Seventh Triennial Report on Confidential Enquiries into Maternal Deaths in South Africa: Executive Summary. Pretoria: National Department of Health, 2018.
23. Nursing- Education- and -Training-standards. Pdf-SANC accessed 28/11/2021 from <https://www.sanc.co.za/wp-content/uploads/2020/08/Nursing-Education-and-Training-Standards.pdf>
24. Power, A. and Grzelak, I. (2016). University midwifery societies: Support for student midwives, by student midwives. *British Journal of Midwifery*, 24(11), pp.787-789.
25. Powers, K., Herron, E. K. and Pagel, J. (2019). Nurse Preceptor Role in New Graduate Nurses' Transition to Practice, *Dimensions of Critical Care Nursing*, 38 (3) - pp 131-136. doi: 10.1097/DCC.0000000000000354.
26. R425-SANC South African Nursing Council Regulations relating to the Approval of and the minimum requirements for the training of a nurse (General, Community, Psychiatry) and midwifery viewed on the 27/11/2021 from <https://www.sanc.co.za/r425/>
27. Rahimi, M., Haghani, F., Kohan, S., and Shirani, M. (2019). The clinical learning environment of a maternity ward: A qualitative study. *Women and Birth*, Volume 32, (6) pp. e523-e529.
28. Rambod, M., Sharif, F. and Khademian, Z. (2018). The impact of the preceptorship program on self-efficacy and learning outcomes in nursing students. *Iranian journal of nursing and midwifery research*, 23(6), p.444.

29. Russell, K., Allieux, S. and Gluyas, H. (2016). The art of clinical supervision: Its development and descriptive mixed method review. *Australian Journal of Advanced Nursing, The*, 33(4), p.6.
30. Sharifipour, F., Heydarpour, S., and Salari, N. (2020). "Nursing and Midwifery Students' Viewpoints of Clinical Learning Environment: A Cross-Sectional Study." *Advances in Medical Education and Practice*, Volume 11, pp. 447–454.
31. Shikuku, D.N., Mukosa, R., Peru, T., Yaite, A., Ambuchi, J. and Sisimwo, K, (2019). Reducing intrapartum fetal deaths through low-dose high frequency clinical mentorship in a rural hospital in Western Kenya: a quasi-experimental study. *BMC Pregnancy and Childbirth*, 19(1), pp.1-12.
32. Sidebotham, M. and Fenwick, J. (2019). Midwifery students' experiences of working within a midwifery caseload model. *Midwifery*, 74, pp 21-28, ISSN 0266-6138. <https://doi.org/10.1016/j.midw.2019.03.008>.
33. Simane-Netshisaulu, K.G. and Maputle, M.S. (2021). Exploring supportive relationship provided to newly qualified midwives during transition period in Limpopo province, South Africa. *African Journal of Reproductive Health*, 25(5), pp105-112.
34. Smith, J.H. and Sweet, L. (2019). Becoming a nurse preceptor, the challenges and rewards of novice registered nurses in high acuity hospital environments. *Nurse education in practice*, 36, pp.101-107.
35. Stefaniak, M., and Dmoch-Gajzlerska, E. (2020). Mentoring in the clinical training of midwifery students - a focus study of the experiences and opinions of midwifery students at the Medical University of Warsaw participating in a mentoring program. *BMC Medical Education*, Volume 20, 394 <https://doi.org/10.1186/s12909-020-02324-w>
36. Thopola, M.K. and Lekhuleni, M.E. (2015). Challenges experienced by midwifery practitioners in the midwifery practice environment of Limpopo Province, South Africa. *African Journal for Physical, Health Education, Recreation and Dance, Supplement 1:4* (October), pp. 956-971.
37. Thunes, S. and Sekse, R.J.T. (2015). Midwifery students first encounter with the maternity ward. *Nurse education in practice*, 15(3), pp.243-248.

38. Tuomikoski, A.M., Ruotsalainen, H., Mikkonen, K., Miettunen, J., Juvonen, S., Sivonen, P. and Kaariainen, M. (2020). How mentoring education affects nurse mentors' competence in mentoring students during clinical practice—A quasi-experimental study'. *Scandinavian Journal of Caring Sciences*, 34(1), pp.230-238.
39. University of KwaZulu-Natal-College of Health Science-Handbook- 2022 accessed on 22/03/2022 from http://saa.ukzn.ac.za/Libraries/Hand_Books_2018/College_of_Health_Sciences.sflb.ashx
40. Yigzaw, T., Ayalew, F., Kim, Y.M., Gelagay, M., Dajene, D., Gibson, H., Teshome, A., Broerse, J., and Stekeleburg, J. (2015). How well does pre-service education prepare midwives for practice: competence assessment of midwifery students at the point of graduation in Ethiopia. *BMC Medical Education*, Volume 15, pp. 30 <https://doi.org/10.1186/s12909-015-0410-6>

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CHAPTER 5: DEVELOPING AND CONDUCTING THE MENTORSHIP TRAINING PROGRAM

This chapter discusses the stages in developing the mentorship training program for midwifery practitioners. The chapter answers research question 3: What are the essential components to consider when developing a mentorship training program to support midwifery students in clinical placement. The research question aligns with objective 3 of the study which is: To develop and conduct a mentorship training program for midwifery practitioners who support undergraduate midwifery students during clinical placement.

This chapter also answers research question 4 of this study: How effective is the developed mentorship training program in strengthening clinical support of midwifery students at a university in KwaZulu-Natal?

Introduction:

In developing countries such as South Africa, poor maternal and neonatal outcomes remain a challenge. In the recent Saving Mother Report (2021), with less than 10 years remaining, much needs doing towards achieving the Sustainable Development Goal of <70/100 000 death by the year 2030. As proposed in the same report, there is a need to develop competency through structured and mandatory mentorship, support and continued professional development for all health practitioners (Saving Mother's Report, 2021).

In South Africa, there is no formal mentorship or preceptorship training for midwifery practitioners or midwifery students. Midwifery practitioners working in clinical facilities assume the role of a clinical facilitator and share the responsibility of preparing midwifery towards clinical competence. The relationship is usually informal, unplanned, and voluntary in nature (Simane-Netshisaulu, Maputle, Netshikweta, and Shilubane, 2022; Amod and Mkhize, 2022 in press), hence, both students and midwifery practitioners have uncertainties regarding their roles and responsibilities in the relationship. The challenges of clinical placements and the urgency in patient care activities, especially in maternity units, creates obstacles for students (Simane-Netshisaulu, Maputle, Netshikweta, and Shilubane, 2022) who often see themselves sidelined. In spite of this, students appear satisfied with the minimal support they receive during clinical placement, and midwifery practitioners and educators are highly concerned about the quality of new midwives and the effects on clinical patient care outcomes.

The concept of mentorship, which gained its popularity at the beginning of the millennium, is an effective method for clinical training (Stefaniek and Dmoch-Gajzlerska, 2020). Studies show that the reciprocal benefits of mentorship for both mentors and mentees contribute towards improved knowledge, skills, attitudes, confidence, competence, and better patient care outcomes (Hogan, Fox, Barratt-See, 2017; Kemp, Bannon, Mwanja, Tebuseeke, 2018, Sheehan, Elmir, Hammond, Schmied, Coultan, Soreneson, Arundell, Keedle, Dahlen, and Burns, 2021). Mentorship training is therefore essential for the professional development and support of all midwives and may be the missing piece of the puzzle for improving perinatal healthcare in South Africa.

Supporting students in clinical modules such as midwifery can be extremely difficult, especially in maternity departments where high maternal and neonatal morbidity and mortality rates remain a burden in South Africa. The challenges of clinical placements, such as shortage of staff, high patient turnovers, lack of role models, limited support from academics and lack of communication from HEIs, negatively affect the clinical learning of students who have to complete 50% of module time in clinical practice.

According to Sayani, Jan, Lennox and Mohammad (2017), students who receive clinical support from trained mentors have shown improved learning outcomes, and clinical mentors who are well-supported by midwifery educators have shown greater enthusiasm to teach and support other midwives in clinical practice (Bennet and McGowan, 2014). The value of mentorship to nursing education and practice is well recognized (Nowell, Norris, Mrklas and White, 2017; Kemp, Shaw and Musoke, 2018; Stefaniak and Dmoch-Gajzlerska, 2020; Bradshaw, McAllister, Mulvogue, Ryan and Happell, 2021; Stefaniak and Dmoch-Gajzlerska, 2021); however, mentorship training and support for midwifery practitioners in South Africa is still to be developed.

In Cycle 1 of this study, the researcher identified that poor clinical support is a problem for midwifery students from a selected higher education institution in South Africa. Upon completion of clinical placement over a semester, midwifery students perceived themselves incompetent in many midwifery competencies (Amod and Mkhize, 2022 unpublished).

The objective of this study was to develop a mentorship training program for midwifery practitioners who support undergraduate midwifery students during clinical placement. The

aim is to train, support and empower midwifery practitioners in their mentorship roles and responsibilities to strengthen the clinical support of midwifery students in training.

Method

The purpose of developing a mentorship training program was to train registered midwives on the knowledge and skills to mentor undergraduate midwifery students and thus strengthen clinical support through mentorship. Developing the mentorship training program occurred in seven stages. Stages 1 and 2 addressed cycle 1, while stages 3 to 7 addressed cycle 2 of this study.

Stage 1: Analyzing clinical support interventions available for midwifery students in practice from a global perspective

The purpose of Stage 1 was to identify and review strategies to improve midwifery clinical support on a global capacity and identify a suitable intervention to strengthen midwifery clinical support within a South African context.

The researcher undertook an extensive literature search on clinical support interventions available for midwifery students in an SSR. The SSR results highlighted some important considerations to guide mentorship training, which included:

1. Establishing strong partnerships and collaborations between HEI and hospital placements ensures buy-in and support for the training
2. Continued consultations between crucial role players develop a better understanding of role expectations
3. The program duration and structure should factor in the core responsibilities of clinical practice
4. The program content is central to the quality of training offered

The considerations identified in the SSR are valuable to midwifery educators and researchers who are interested in developing mentorship training programs. In publication 2, found in Chapter 2, the researcher collated these considerations into a framework for mentorship training. Results from the systematic scoping review concluded that training and support for midwifery practitioners on mentorship would likely improve the quality of clinical support that midwifery students receive during clinical placement.

Stage 2: Identifying the clinical support of midwifery students from a higher education institution in South Africa.

The purpose of Stage 2 was to analyze the current midwifery clinical support in a local district in KwaZulu-Natal, South Africa. By identifying the current situation, the researcher planned to implement improvements that would benefit the key role-players in midwifery clinical support, such as midwifery students and midwifery practitioners.

The researcher analyzed the current clinical support of undergraduate midwifery students from a local higher education institution. Midwifery students reported receiving clinical supervision, preceptorship, and mentorship support from midwifery practitioners who supervised them during their clinical placement. Although midwifery students found the clinical placement to be beneficial to their clinical learning, they perceived themselves incompetent in eight (8) midwifery competencies.

In Stage 2, the researcher established that the clinical support of midwifery students was inadequate, informal, unstructured and without accountability. Midwifery practitioners voluntarily support midwifery students during clinical placement. There is no formal mentorship training to support midwifery practitioners in mentoring roles. Therefore, a formal, structured mentorship training program for midwifery practitioners is a much-needed intervention to improve midwifery clinical support of midwifery students, empower midwifery practitioners in their mentoring roles and improve midwifery clinical outcomes.

Stage 2 helped the researcher to highlight the current midwifery clinical support and use the information in the background and the purpose of developing and conducting a mentorship training program.

In Stage 3: Drafting a guide for a mentorship training program

The purpose of Stage 3 was to undertake a step-by-step process of developing a mentorship training program. By undertaking a guided methodology, the researcher could plan, act, reflect and review her work before proceeding to the next step/cycle.

The researcher, taking cognizance of the questionnaire results and the systematic scoping review, read extensively on how to develop a mentorship training program. The researcher used her previous knowledge of developing learning tools and her engagements in module and program development, together with the new knowledge derived from literature findings, to

develop a draft mentorship training program. This stage commenced in September 2019 and continued with unexpected disruptions throughout 2020 due to the challenges of the Coronavirus pandemic.

The guide incorporated content such as background information on mentorship, operational definitions, South African Nursing Council (SANC) requirements and scope of practice for registered midwives, mentorship training objectives, and a generic framework for mentorship training (the outcomes of the Systematic Scoping Review). The researcher then analyzed the minimum midwifery requirements for undergraduate midwifery students, as stipulated by the SANC in conjunction with the ICMs essential competencies for midwifery practice. The researcher aligned the SANC minimum requirements into the four ICM competency categories: general care, pre-antenatal care, labor care, and postnatal care (ICM,2019). The researcher similarly grouped the SANC midwifery requirements under the four ICM categories and outlined the core contents of the mentorship training program.

By developing a guide, the researcher was able to integrate the contained information to develop the content needed for the mentorship training program in Stage 4.

In Stage 4: Developing content material for the mentorship training program

The purpose of Stage 4 was to develop the contents of the mentorship training program. The plan was to focus on mentorship, midwifery competencies and related aspects.

In this stage, the researcher returned to desktop and textbook sources to develop midwifery competencies using various contemporary best practice clinical guidelines. The researcher developed six antenatal, five labor, and four postnatal care competencies. She then added the scope of practice and the role of the mentor under the general care competency. Given the high maternal and neonatal morbidity and mortality rates in South Africa and the frequency of attending to obstetric and neonatal emergencies, the researcher added the Essential Steps in Managing Obstetric Emergencies into the guide. The hope was that midwifery practitioners would utilize the information provided to manage obstetric and neonatal emergencies confidently and competently. The guide contained additional information such as assessments to be completed, clinical support materials (students' clinical attendance forms, clinical mentorship record forms, and student report cards), a program evaluation form, and a reference list. In March 2021, the researcher, in consultation with the research supervisor, agreed that the

guide for the mentorship training program was ready for the first round of evaluation by experts in midwifery education.

In Stage 5: Evaluating the guide for a mentorship training program- Round 1

The purpose of Stage 5 was to evaluate the quality of the guide for developing a mentorship training program, which is vital in ensuring that the program meets high quality standards.

The researcher adopted a two-round Delphi approach in Cycle 2 of the study. According to Barratt and Heale (2020), the Delphi approach seeks to combine the opinions of experts to reach a group consensus related to a new phenomenon. This method can be anonymous and without the physical meeting of participants. Expert opinions are important when developing tools and competencies that support clinical practice and in this study the Delphi approach was convenient as the study occurred during the peak of the COVID-19 pandemic.

A panel of selected experts was to conduct a document review of a guide for developing a mentorship training program. A non-randomized sampling method adopted a convenient and purposive sampling technique to recruit midwifery education experts from a national contact database. The researcher contacted 10 midwifery education experts from various higher education institutions in South Africa via email. Only six (6) midwifery educators responded positively and selected as the panel of experts to conduct a document review of the guide for mentorship training. Each expert received electronic copies of an information sheet and an informed consent form by email, and returned the informed consent form within five working days. On 24 March 2021, the researcher emailed the six experts who voluntarily partook in the study an electronic copy of the guide and an evaluation checklist. Reviewers had three weeks to review the guide; however, not all experts returned the guide timeously, which demanded a further three-week extension. There were feedback comments inserted into the reviewed document using the track changes option available in the review tab of the Word document. Between April and May 2021, experts returned all evaluation forms and the reviewed documents to the researcher.

Table 1: Demographic profiles of reviewers

DEMOGRAPHIC PROFILES OF REVIEWERS				
Participant code	Qualification	Affiliation	Years of experience	Area of Expertise
1.	Post doctorate	Durban University of Technology	➤ 10 years	Primary Healthcare, Maternal and Child Health and Nursing Education
2.	PhD. Nursing	Nelson Mandela Metropolitan University	➤ 5 years	Maternal and Child Health, Midwifery education
3.	PhD. Nursing	University of Free State	➤ 10 years	Midwifery competencies, Appreciative Inquiry
4.	PhD. Nursing	North West University	➤ 5 years	Midwifery, Quality of Care
5.	Post doctorate	University of South Africa	➤ 10 years	Midwifery, Women's Health, Ethics and Health law
6.	Post doctorate	University of Witwatersrand (retired)	➤ 10 years	Evidence-based Nursing and Midwifery, Development and implementation of best practice guidelines

Evaluation of the guide for a mentorship training program: Delphi Round 1

Six midwifery education experts who are senior lecturers in midwifery education reviewed the guide for developing an MTP. All experts had more than five years' experience in midwifery education; three experts had doctoral qualifications, and three were professors in nursing. Table 1 shows the demographic profiles of the reviewers.

In Delphi methods, a 75% consensus is an acceptable measure of the quality of a tool or intervention. Three quality-related categories, namely (1) the quality of contents, (2) the effectiveness of the training program, and (3) the ease of use, evaluated the mentorship guide.

Results showed that 78.6% of the reviewers agreed, while the remaining 21.4% were unsure regarding the quality of the contents of the guide for mentorship training. Further analysis into the uncertainties about the quality of the contents showed that two reviewers (33%) were unsure whether the content of the guide aligned with the scope of practice for registered midwives in the South African context, or was relevant to the needs of participants, or if the program materials were appropriate, accurate, and updated. One reviewer (17%) was unsure whether the content of the mentorship training program was appropriate for the training of registered midwives, if the program framework was appropriate to support clinical mentorship, or if the training program included theoretical knowledge and practical skills required to

perform mentorship successfully. However, all reviewers (100%) agreed that the program objectives were clear and specific to the training.

In the category related to the effectiveness of the mentorship training program, 83.3% of reviewers agreed that the mentorship training program was effective. One reviewer found that the training program did not include active learning of essential midwifery competencies and did not allow for individual and group participation. The same reviewer was unsure if the training program allowed for collaboration with peers and the facilitators, or if the training program reflected the high expectations of the participants.

In the ease-of-use category, 83% of reviewers agreed that the mentorship training program presented information appealingly, ensured effective and respectful communication, and allowed for questions and feedback. One reviewer was unsure if the mentorship training program would be easy to use.

A total score of 68/84 translated into the overall quality of the guide for mentorship training achieved 81%, which is a high-quality consensus in a Delphi method. Thus, the outcomes showed that the overall quality of the mentorship training was within high-quality standards. An in-depth document review analysis confirmed the reliability of these scores. Table 2 presents the Delphi Round 1 results

TABLE 2: DELPHI ROUND 1: A CHECKLIST TO EVALUATE THE QUALITY OF A MENTORSHIP TRAINING PROGRAM			
	Agree	Unsure	Disagree
Quality of the Content			
The content of the mentorship training program is appropriate for the training of registered midwives	5 (83%)	1 (17%)	0
The program objectives are clear and specific to the training	6 (100%)	0	0
The program content aligns with the scope of practice for registered midwives in a South African context	4 (67%)	2 (33%)	0
The program framework is appropriate to support clinical mentorship	5 (83%)	1 (17%)	0
The training program includes theoretical knowledge and practical skills required to perform mentorship successfully	5 (83%)	1 (17%)	0
The program content is relevant to the needs of participants	4 (67%)	2 (33%)	0
The program materials are appropriate, accurate and updated	4 (67%)	2 (33%)	0
Category Score	33/42 (78.6%)	9/42 (21.4%)	0/42 (0%)
Effectiveness of the training program			
The training program includes active learning of essential midwifery competencies	5 (83%)	0	1 (17%)
The training program allows for individual and group participation	5 (83%)	0	1 (17%)
The training program allows for collaboration with peers and the facilitators	5 (83%)	1 (17%)	0
The training program reflects high expectations of the participants	5 (83%)	1 (17%)	0
Category score	20/24 (83.33%)	2/24 (8.33%)	2/24 (8.33%)
Ease of Use			
The training program presents information in an appealing way	5 (83%)	1 (17%)	0
The training program ensures effective and respectful communication	5 (83%)	1 (17%)	0
The training program allows for questions and feedback opportunities	5 (83%)	1 (17%)	0
Category score	15/18 (83%)	3/18 (17%)	0/18 (0%)
Overall quality score (n /84)	68/84	14/84	2/84 (2.4%)
Percentage scores	(81%)	(16.6%)	

Feedback from the document review

There were direct comments relating to the guide's contents made in the document using the track changes option. The researcher found valuable comments and recommendations to improve the quality of the content for the mentorship training. In deliberations with the research supervisor, the researcher carefully addressed the comments and recommendations received from the evaluation before effecting any changes and collated the reviewers' comments into a

table of results. Table 3 shows the reviewers' comments and changes to the mentorship training program following the evaluation in round 1.

Table 3: Collated reviewers' comments and effected changes to the mentorship training program		
Reviewers' comments	Effected changes	Reviewer
This mentorship training program aims to train, empower and support registered midwives to successfully mentor students in clinical practice. If the focus is on midwifery, keep it as such. As I was reading it first seemed to be generic for nursing and midwifery.	Same done throughout document. The word nurse was either removed or replaced with midwife or midwifery student to maintain the focus on midwifery.	1,2, 3 and 5
Lecturer- is a registered nurse with a post-basic qualification in nursing education and a specialist in the field of nursing. Would midwifery educator not be more specific?	The definition changed to a 'midwifery educator'	1,2,3, and 5
The World Health Assembly Resolution 64.7 (WHA, 2011) recognized the need to strengthen nursing and midwifery education. 2019 WHO framework on midwifery education	The comment was not taken, as the framework on nursing education came about much later as a resolution to the concern. The framework is mentioned later in the text	2 and 3
As a result, and after global consultation, midwifery competencies were developed and validated in Geneva in 2012. The ICM competencies was done in 2002, 2011 and again 2019	The year was corrected in text and a sentence added. 'However, in April 2019, the WHA resolution confirmed that serious gaps in competencies and service delivery, continued.'	3
State of the World's Midwifery report, 2011. Latest one published May 5 2021	The updated report was added in text.	2 and 3
<u>Liaison between University and Clinical Placements</u> Accreditation process? Rather bullet the steps here a problem based- change to outcome- based	The accreditation process is discussed on page 11, line 10-13 The steps of the framework were bulleted Problem-based was removed from the sentence.	1
The letter of approval from the SANC and an application for accreditation will be sent from the HEI to the CHE. Both approvals should be successfully obtained prior to commencement of the training. Is the collaboration only this? I would expect components of aligning the curriculum with current needs of population and service platform. And on lower levels, regular interaction and building of rapport between NEI and healthcare facilities to collaborate as partnerships in education.	This information was incorporated into the text. The lower level partnership was already in text.	3
Trained mentors will develop a better understanding of the students' clinical learning expectations and tighten the monitoring of students' attendance, professional conduct, participation in patient care activities and improvements in clinical skills. There is a large focus on skills which is only one component of competence.	Student changed to midwifery student Patient care changed to healthcare Added in knowledge, skills and attributes which relates to the competence component	1,2,3,4 and 5
Week 1 of the training includes an overview of the training and the teaching of basic competencies for undergraduate nursing students as per the SANC stipulations for student nurse training. Registered midwives will have an opportunity to practice their skills and approaches in a clinical skills laboratory at the university. I miss the art and science of midwifery. How to be an expert in normal labor and birth and empowerment of the family. Respectful care. Accountability Partnerships between midwife and childbearing family and other skilled birth attendants.	Additional information for Week 1 was added: Week 1 of the training includes an overview of the functions, roles and responsibilities of a mentor; and includes the teaching of basic midwifery competencies for undergraduate midwifery students. These competencies are distinguished into four categories, namely general, pre-and antenatal, labor, postnatal and newborn care. Opportunity to learn and practice mentoring skills and approaches will be encouraged through role-play and group activities. On closing of this week of training, each registered midwife will receive with a booklet containing all the "Essential competencies for midwifery clinical practice." The recommendations for intrapartum care, which highlights these factors, were added to this guide which will be used as a training booklet.	3
Antenatal competencies. Add Antenatal exercises?	Antenatal exercises were added to the list of competencies	1
*Footnotes: All information written in red font are the direct comments and suggestions of reviewers		

Reference list- Add Fraser, Cooper & Nolte. Myles textbook for midwives. African edition. 2016. Churchill Livingstone.	The same was completed	1
Essential Competencies and Managing Emergencies- Keep as an addendum	The suggestion was noted. The researcher planned to use the developed guide as a handbook for midwifery practitioners trained in mentorship	2
Week 2 of the training includes teaching registered midwives on the knowledge and skills required to manage obstetric and neonatal emergencies. Midwives will then have an opportunity to practice their skills and approaches in a clinical skills laboratory at the university. Each midwife will be issued with a booklet containing all the essential competencies (basic and emergency competencies). Such skills cannot be trained to basic registered midwives as it is against the scope of practice – they can do resuscitation and management of bleeding and diagnosis of the high-risk conditions but not the actual management skills part of these skills (forceps, vacuum, shoulder, breech etc.), especially not in a one-week training program. The relevance of the actual performing of the emergency skills can always be covered in theory but not practiced with mentors. The mentors for this program will not supervise and advise students in conducting of these procedures as themselves are not specialists in this field and one-week training will not be sufficient for them to perform such competently.	Week 2 of the training was removed as the skills were not within the scope of basic midwives. However, the management of these emergencies are available in the training booklet for the registered midwives.	1, 3, 4 and 5
<u>CATEGORY 1: GENERAL COMPETENCIES</u> Describe them a little bit more	More topics were added in this section, which included the mentorship process, communication, feedback	3
The scope of practice of a registered midwife. Enhance with ICM scope as in the definition of the midwife and the midwifery philosophy and model of care	The ICM definition of a midwife Philosophy and Model of care added into the training program	3
The facilitation of communication by and with the mother and father or family in the execution of the midwifery regimen. Childbearing family is safer. What if the two individuals do not comply with the classic mother and father roles...	The comment was accepted and the phrase mother and father or family was replaced with childbearing family	3
These competencies were first developed in 2002 and updated in 2010 and 2013. 2011, Launched at the 29th triennial congress' preceding council meeting (I was there- in Durban) 2017, Toronto Council meeting (I was there too) It was reverted and finalized in 2019 with additions n TOP in early 2020	The sentence was updated as per comments	3
Add in the mentorship process	The mentorship process was incorporated into the booklet under the general care category	2 and 3
<u>CATEGORY 2: PRE- ANTENATAL CARE CATEGORY</u> Page 25- Banc +Checklists and protocols?	This was added into the booklet	3
<u>Under History taking</u> Medical history. TB Screening now in MCR	Already in text	3
Social history. Rather psychosocial to also assess the mental wellbeing of the pregnant woman Ensure you emphasize the importance of mental health screening as well	Mental health screening added into the procedure	1 and 3
Present history. I miss the midwifery model, what are her hopes and fears ...	Hopes and fears added into the history taking procedure	3
<u>Under Full Physical examination:</u> Pulse rate (normal values between 60-90bpm) Early warning charts.	Added to the procedure	3
Patients weight, height and urinalysis Add MUAC?	Added	1 and 3
<u>Under Abdominal examination</u> Add the lie of the fetus Pawlick's manoeuvre Rationale for every grip finding - add normal values	The lie of the fetus was added; the rationale and the explanation of findings were added for each manoeuvre.	1
*Footnotes: All information written in red font are the direct comments and suggestions of reviewers		

Regularity or Rhythm- Confirming maternal pulse	Accepted and added in	1 and 3
Thank the patient and give her a date for follow up BANC = Priorities for each visit	Added	3
CATEGORY 3: LABOUR CARE Under Delivery procedure- Birth- babies born. Please consult the latest version of the Intrapartum care guidelines for SA AND who POSITIVE INTRAPARTUM EXPERIENCE GUIDELINES. This has directive pushing, mother in recumbent position and much more. I miss as said previously the midwifery model of care Also, I do not see any maternal empowerment or the art of protecting the normality of childbirth. Respectful care? Non-pharmacological pain relief and other pain relief? Positions for labor and birth? Companionship?	The heading changed to birthing process The competency was removed from the training timetable but kept in the guide on page 66 The intrapartum care guidelines were included from pages 57-61 The midwifery model of care was added to the introductory section of this guide	2, 3 and 5
Empty the bladder into a large receiver using a urinary catheter and lubricant jelly. Natural voiding should be encouraged	This was incorporated into the document	3
Midwife to wait for signs of placental separation and then deliver the placenta with its membranes. There is a mismatch between AMTSL and this procedure	This was added to the procedure. "The active management of the third stage of labor is recommended."	3
Under Management of the 3rd stage of labor: Method 1: Passive management It is not SA protocol?	This method was removed from the booklet	3
There are two methods of managing the 3 rd stage of labor, namely the passive method and the active method. - Current guidelines in SA 2016 – indicated active management -? relevance of Method 1 to be removed	Method 1 was removed	5
Immediate care of the newborn: This is done within a minute after the delivery of the newborn. - Additions was made to allow delayed cord clamping	The sentence was changed to: 'This is done as soon after the delivery of the newborn.'	3
Performing and suturing an episiotomy- change to Prevention of perineal trauma.	Added in the prevention of perineal tears as per WHO intrapartum care guidelines	3
Category 4: Postnatal and Newborn Care: Examination of the postnatal mother- Is this inclusive of the protection of the mother-baby dyad and breastfeeding?	Noted and accepted. The procedure was removed from the timetable. However, the competency on the examination of the postnatal mother can be found on page 78	3
Add examination of the placenta	Examination of the placenta was added on page 69. This page for assessments was removed from the booklet	4
Baby bath- Infant skincare would be more appropriate where the bath is delayed.	Noted and accepted. The procedure was removed from the timetable. However, the competency on infant skin care (baby bath) can be found on page 87	3
Immediate care of the newborn-? Evidence-based practices such as delayed cord clamping?	This was incorporated into the procedure	3
Neonatal resuscitation. Helping Babies Breathe??	The action plan for 'helping babies breathe' is found on page 86	3
MIDWIFERY AND NEONATAL EMERGENCIES The ESMOE program is developed and working in DoH, rather include that?	A sentence was added: 'Section B of this training is likely to assist registered midwives with the knowledge needed to management obstetric emergencies following the guidelines provided in the ESMOE training.'	3
*Footnotes: All information written in red font are the direct comments and suggestions of reviewers		

Stage 6: Finalizing the contents of the guide for the mentorship training program

The purpose of stage 6 was to update the reviewed guide in readiness for the mentorship training and round 2 of the Delphi study.

Five of the six midwifery education experts conducted a thorough document review. The researcher applied selected changes and added information related to mentorships, such as the definition, the elements, and the mentorship process, and topics related to the process of communication, feedback, and how to deal with failing students. Their valuable contributions elevated the overall quality of the guide for mentorship training. The updated guide also contained 21 midwifery clinical competencies and 12 competencies in managing obstetric emergencies. The researcher concluded that the guide is an ideal handbook that would be highly valuable to midwifery practitioners who attend the mentorship training program. Hence, the guide's title changed to "A Mentorship guide for midwifery practitioners: Investing and Strengthening midwifery clinical support."

Stage 7: Preparing the mentorship training program

The purpose of this stage was to minimize challenges during the implementation of mentorship training. Careful planning and inclusion of most relevant content related to mentorship and midwifery clinical practice would ensure that training attendees would focus on the content presented.

The researcher inserted the core contents of the updated guide for the mentorship training program into PowerPoint slides. The summarizing of the information into bullet points was to facilitate the training presentation. To enhance the quality of the slides, the researcher added relevant images, videos, and web links to the slides. The coordination of the program content was into three daily sessions, as seen in the timetable below.

DAY	Session 1	Session 2	Session 3
1	Welcome and Introduction Mentorship Training goals Programme objectives Training expectations	Category 1: General Care The functions of the registered midwife What is mentorship? The role of the clinical mentor	The key elements of mentorship Communication The process of Mentorship
2	Feedback/debriefing Supporting failing students Practice session	Introduction to the ICM competencies for midwives SANC minimum requirements for midwifery practice	Category 2: Prenatal and Antenatal Care BANC Plus
3	Obtaining a Pap-smear	Performing a Pelvic Assessment	Screening high-risk pregnancies
4	Category 3: Care during childbirth WHO guidelines for intrapartum care (2019) and its recommendations	Infiltrating, performing and suturing an episiotomy	Category 4: Postnatal and Newborn Care: Recognizing the physiological changes in the puerperium
5	Plan, implement and evaluate the care of the newborn Perform a gastric washout	Neonatal resuscitation Reassess training objectives Summary	Completion of training evaluation Issuing of files and materials for clinical mentorship Questions and Answers
Week 2-4: Return to maternity units for mentorship practice			

Figure 1: Timetable for the Mentorship Training Program

The training program included a welcome introduction of the facilitator and the training attendees and a presentation on the mentorship training goals, the program objectives, and expectations. The four ICM care categories defined the program sessions. In the general care category, the researcher included the function of the midwifery practitioner, topics related to the mentorship process, and topics related to interpersonal relationship skills, such as communication, feedback, and how to support failing students. This category included the ICM essential competencies and the SANC minimum requirements for undergraduate midwifery students.

Alluding to the findings of Cycle 1 of this study, the researcher incorporated the eight midwifery procedures in which students perceived themselves as incompetent. Integrating these competencies into the program was the researcher's intention to provide midwifery practitioners an opportunity to refresh their knowledge and skills in the same procedures and presumably encourage them to undertake these procedures with midwifery students they support in clinical placements. Theoretical information and the inclusion of images and pre-recorded videos enhanced the practical understanding of each procedure.

The training program concluded with a summary of the program, reassessment of training objectives, and the distribution of mentorship support material such as attendance records, mentorship activity forms, and contact details of the program facilitator.

Delays in implementing the training were related to the sudden announcement of the COVID-19 pandemic. In the interim, frequent discussions with the research supervisor and assistance from other relevant resources convinced the researcher to consider using an online method (ZOOM meeting platform) to roll out the mentorship training. The shift to an online training method would conveniently align with the adopted pedagogical remote teaching method amidst the pandemic.

Developing videos for the mentorship training

To facilitate the online delivery of this training, the researcher compiled the prepared training sessions (15 in total) into five training modules. The researcher planned to convert the developed training sessions into videos. Due to the nature of the training, which promoted theoretical information and practical demonstrations, the researcher video-recorded demonstrations of a few midwifery clinical procedures that were included in the program's timetable. Video-recording sessions and images of required equipment took place in the university's clinical skills laboratory. Once the relevant videos and the accompanying audios were recorded, the researcher contacted a professional video editor. Frequent meetings with the video editor assisted the researcher to convert five training modules into five mentorship training videos. Designing and developing videos using the Filmora video application allowed the researcher to familiarize herself with the video-designing process, facilitating her online teaching and learning engagements. However, developing one 30-minute video is time-consuming, costly and demands approximately 30 hours of hard work.

Planning the webinar and designing the invitations

The researcher submitted the final five videos to the research supervisor, who authorized the implementation of the training program. The researcher consulted with the university's information and communications service (ICS) for support to set up a webinar, create a mentorship training advert and distribute invitations for the mentorship training program. The ICS consultant designed two adverts for the training. The researcher chose the boldest, most detailed, and most impactful

advert to promote the recruitment process. Registration for the webinar, using the ZOOM meeting platform, was set up with the help of the ICS consultant. The registration link was available on the electronic invitations emailed to nurse managers and assistant nurse managers from maternity departments within the eThekweni district. The correspondence included a gentle request to release midwifery practitioners to attend the five-day training program. The registration required basic information such as the registrant's name and email address. Upon completion of the registration, each registrant received an automated confirmation email and the link to join the mentorship training program.

Conducting the mentorship training - the reflections of the researcher

The researcher, who was also the training program developer, facilitated the training using the ZOOM meeting platform. The researcher was familiar with the technical aspects of utilizing the ZOOM application as she had used the same application for remote teaching over the last two years. The researcher ensured she had sufficient network coverage and data to conduct the training. On day 1 of the training, the researcher felt less anxious as she had prepared for this training in a systematic and organized method, with support and motivation from the research supervisor.

The first day appeared exciting to the program facilitator and the training attendees, who showed enthusiasm and appreciation for the opportunity. However, not all attendees participated actively in the training. The researcher noticed that some attendees had technical challenges with the audio as they were not responding to questions posed; however, they responded in the chat space. At the end of the first training day, the researcher identified that not all registrants had joined the training. The researcher then emailed the YouTube video link (<https://youtu.be/rC0MPBjAGys>) for module 1 of mentorship training which was uploaded on the university's YouTube page and available only to the attendees.

On day 2 of the training, the attendees were more responsive during the training; some provided comments about the videos used in training. Towards the end of this module, the researcher provided the attendees with a link to download a 'read only' copy of "A mentorship guide for midwifery practitioners." Training attendees used the guide to follow through with the sessions delivered during the training program. At the end of day 2, attendees received from the researcher the YouTube link (<https://youtu.be/DRmKwZJ6PME>) to access the training video for module 2.

From day 3 through day 5, the training continued as planned. The researcher continued to share with the attendees the YouTube links (<https://youtu.be/QTuq8zVXCMw>; https://youtu.be/X93_ZulhFbI; and <https://youtu.be/StF3LBWgGzM>) for modules 3, 4 and 5 respectively. At the end of day 5, the researcher emphasized her support to trained mentors and provided them with her contact details. The researcher asked the attendees to complete the online training evaluation forms, which were accessible using a Google forms hyperlink. Twenty-eight attendees completed the online evaluation of the mentorship training program, which constituted round 2 of the Delphi method.

A comprehensive guide for mentorship training and the careful and thorough planning during the development stages ensured that the delivery of the mentorship training program was smooth and without challenges. Hence, the guide was a suitable protocol used in the process of developing the mentorship training program for this study.

Evaluating the mentorship training program: Delphi Round 2

At the end of the mentorship training, attendees completed an online evaluation using a Google forms link. Twenty-eight midwifery practitioners completed the training evaluation. Table 4 presents the results of the evaluation checklist

TABLE 4: RESULTS OF DELPHI ROUND 2 A CHECKLIST TO EVALUATE THE QUALITY OF A MENTORSHIP TRAINING PROGRAM		
Quality of the Content	Agree	Disagree
The content of the mentorship training program is appropriate for the training of registered midwives	27	1
The program objectives are clear and specific to the training	27	1
The program content aligns with the scope of practice for registered midwives in the South African context	27	1
The program framework is appropriate to support clinical mentorship	27	1
The training program includes theoretical knowledge and practical skills required to perform mentorship successfully	27	1
The program content is relevant to the needs of participants	27	1
The program materials are appropriate, accurate and updated	27	1
Category Score	189/196 (96%)	7/196 (4%)
Effectiveness of the training	Agree	Disagree
The training program includes active learning of essential midwifery competencies	27	1
The training program allows for individual and group participation	27	1
The training program allows for collaboration with peers and the facilitators	27	1
The training program reflects high expectations of the participants	25	3
Category Score	106/112 (95%)	6/112 (5%)
Ease of use	Agree	Disagree
The training program presents information in an appealing way	27	1
The training program ensures effective and respectful communication	27	1
The training program allows for questions and feedback opportunities	27	1
Category Score	81/84 (96%)	3/84 (4%)
Total quality score	376/392 (96%)	16/392 (4%)

The outcomes of the evaluation checklist showed that 96% of respondents agreed that in terms of the quality of content, the mentorship training was appropriate and relevant to the training objectives. With regard to the effectiveness of the training program, 96% of the respondents agreed that the training included active learning of competencies, allowed for individual and group participation, provided collaboration with peers and facilitators, agreed the presentation of program information was appealing, ensured effective and respectful communication, and allowed for questions and feedback opportunities. Eighty-nine percent (n=25) of respondents agreed that the training program reflected high expectations of participants, while 11% (n=3) disagreed with this statement. Ninety-six percent (96%) of respondents agreed that the mentorship training was

easy to use. A total quality score of 96% shows a high Delphi rating and therefore concluded that the mentorship training program was effective.

Discussion

Mentorship training within midwifery programs is fast becoming an acceptable approach to support midwifery students during clinical practice, and midwifery practitioners who support students are well aware of the benefits of mentorship to their personal and professional development (Stefaniek and Dmoch-Gajzlerska, 2021; Ngabonzima, Kenyon, Kpienbaareh, Luginaah, Mukunde, Hategeka and Cechetto, 2021; Simane-Netshisaulu, Maputle, Netshikweta, and Shilubane, 2022). Currently, midwifery practitioners who supervise midwifery students feel unsupported and incompetent in their mentoring roles and responsibilities (Simane-Netshisaulu, Maputle, Netshikweta, and Shilubane, 2022; Gray and Downer, 2021).

In recent years, numerous attempts to develop mentorship training programs were visible in the works of Hogan, Fox, and Barratt-See (2017), who proposed peer mentoring; Catton (2017), who adopted a mentoring approach, Jewell and Power (2018), who used a preceptorship model, Kemp, Shaw, Musoke (2018) who introduced the twinning project, Hallam and Choucri (2019) for co-mentoring, and Stefaniek and Dmoch-Gajzlerska (2020) for a mentor-led clinical training program. These studies, which propose various mentorship approaches, highlight the perceptions of the intervention but offer little to no guidance on how to develop successful mentorship training programs using a step-by-step approach. According to Gray and Brown (2016), Koon, Hoover, Sonthalia, Rosser, Gore, and Rao (2020), Sheehan et al. (2021) and Ngabonzima et al. (2021), developing mentorship training programs is difficult. The findings of this study shared the same notion. The researcher found that developing the mentorship training program was a lengthy process and demanded careful planning and implementation and hence, the planning occurred in distinct stages. This study's findings showed that the intervention was time-consuming, expensive, and required collaboration and support. Similarly, a study conducted in Laos by Catton (2017) described two stages of developing a midwifery mentorship program for health providers. A more recent study by Ngabonzima et al. (2021) briefly described the five stages of developing and implementing a mentorship training program for midwives. In this mentorship training, the

development and implementation of the program occurred in seven stages, as explained in the methods section of this chapter. Contrarily, Koon et al. (2020) proposed mentorship training to be a cost-effective method for capacity development.

Recent studies revealed a limitation in the literature surrounding mentorship training programs in African countries (Nowell, Norris, Mrklas, and White, 2017; Burgess, Diggele, and Mellis, 2018). A review by Feyissa, Balabanova and Woldie (2019) highlighted only one midwifery-related mentorship training from South Africa; a recent study by Simane-Netshisaulu, Maputle, Netshikweta, and Shilubane (2022) reiterated the same finding. This study, therefore, contributes to the literature on midwifery mentorship, and on developing mentorship training programs in South Africa, Sub-Saharan Africa, and Africa.

Summary of findings

Findings from a systematic scoping review done in Stage 1, highlighted the global need to support midwifery practitioners in their mentoring roles (Amod and Mkhize, 2022 unpublished). In Stage 2, the researcher found that at clinical facilities within a local district in South Africa, students were not well prepared and perceived themselves incompetent in eight midwifery procedures (Amod and Mkhize, 2022 in press). In Stage 3, the researcher drafted a guide for developing a mentorship training program and in Stage 4, added a hub of knowledge relating to the professional scope and function of a midwifery practitioner, global standards for midwifery practice, a framework for mentorship training, a set of essential midwifery clinical procedures, a package for managing obstetric emergencies and some clinical support material. In Stage 5, six experts recommended the inclusion of important topics, such as the mentorship process, communication, feedback, guidelines for antenatal and intrapartum care, and clinical procedures (antenatal exercises, examination of the placenta) to enhance the quality of the contents of the guide. In Stage 6, the researcher updated and finalized the contents of the guide for mentorship training. In Stage 7, the researcher used the guide to prepare for the mentorship training program.

This stage of the development process was the most time consuming and expensive, requiring collaboration and support of a video-editor and skills laboratory administrator. Careful and strategic preparation ensured the conducting of the mentorship training program was with ease and

confidence. ‘A guide for mentorship training’ will ensure the conducting of mentorship training programs will be without challenges.

Post training reflections revealed that developing the mentorship training program was an exciting yet time-consuming effort. Careful planning ensured the smooth execution of the mentorship training. Twenty-eight training attendees rated the quality of the training in round two of the Delphi method. The results revealed that the mentorship training was high-quality, effective, and easy to use. A total quality score of 96% highlighted that the mentorship training program was of a high standard.

Conclusion

The benefits of developing mentorship training programs are available in contemporary literature findings. This chapter described how a mentorship training program was developed to empower midwifery practitioners in their mentoring roles and responsibilities. The first attempt at developing a mentorship training program required extensive planning, and was an expensive exercise and a time-consuming intervention. It also demanded collaboration and support from the clinical and technical department. Nevertheless, the importance of capacity and skills development for midwifery practitioners is a grave concern and efforts to improve maternal and neonatal health outcomes, remains a national priority. Consequently, there should be no criticism of the benefits of mentorship training programs to improve healthcare outcomes in South Africa.

REFERENCES

- Amod, H., Mkhize, S.W. and Muraraneza, C. (2021). Analyzing Evidence on Interventions to Strengthen the Clinical Support for Midwifery Students in Clinical Placements: Protocol for a Systematic Scoping Review. *JMIR Research Protocols*, 10(9), p. e29707.
- Bennett, M. and McGowan, B. (2014). Assessment matters—mentors need support in their role. *British Journal of Nursing*, 23(9), pp.454-458.
- Bradshaw, J., McAllister, M., Mulvogue, J., Ryan, R. and Happell, B. (2020). Exploring Online Mentorship as a Potential Strategy to Enhance Postgraduate Mental Health Nursing Education

through Online Delivery: A Review of the Literature. *Issues in mental health nursing*, 42(4), pp.376-380.

Catton, H.N. (2017). Developing a mentorship program in Laos. *Frontiers in Public Health*, 5, p.145.

Feyissa, G.T., Balabanova, D. and Woldie, M. (2019). How effective are mentoring programs for improving health worker competence and institutional performance in Africa? A systematic review of quantitative evidence. *Journal of Multidisciplinary Healthcare*, 12, p.989.

Gray, M. and Downer, T. (2021). Midwives' perspectives of the challenges in mentoring students: a qualitative survey. *Collegian*, 28(1), pp.135-142.

Gray, O. and Brown, D. (2016). Evaluating a nurse mentor preparation programme. *British Journal of Nursing*, 25(4), pp.212-217.

Hallam, E. and Choucri, L. (2019). A literature review exploring student midwives' experiences of continuity of mentorship on the labour ward. *British Journal of Midwifery*, 27(2), pp.115-119.

Hogan, R., Fox, D. and Barratt-See, G. (2017). Peer to peer mentoring: Outcomes of third-year midwifery students mentoring first-year students. *Women and Birth*, 30(3), pp.206-213.

Kemp, J., Bannon, E.M., Mwanja, M.M. and Tebuseeke, D. (2018). Developing a national standard for midwifery mentorship in Uganda. *International Journal of Health Governance*.

Kemp, J., Shaw, E. and Musoke, M.G. (2018). Developing a model of midwifery mentorship for Uganda: the MOMENTUM project 2015–2017. *Midwifery*, 59, pp.127-129.

Koon, A.D., Hoover, J., Sonthalia, S., Rosser, E., Gore, A. and Rao, K.D. (2020). In-service nurse mentoring in 2020, the year of the nurse and the midwife: learning from Bihar, India. *Global health action*, 13(1), p.1823101.

Ngabonzima, A., Kenyon, C., Kpienbaareh, D., Luginaah, I., Mukunde, G., Hategeka, C. and Cechetto, D.F. (2021). Developing and implementing a model of equitable distribution of mentorship in districts with spatial inequities and maldistribution of human resources for maternal and newborn care in Rwanda. *BMC Health Services Research*, 21(1), pp.1-12.

Nowell, L., Norris, J.M., Mrklas, K. and White, D.E. (2017). A literature review of mentorship programs in academic nursing. *Journal of Professional Nursing*, 33(5), pp.334-344.

Power, A. and Jewell, L. (2018). Students in practice: the role of the student support midwife. *British Journal of Midwifery*, 26(7), pp.475-477.

Republic of South Africa-National Department of Health (2021). South African Maternal, Perinatal and Neonatal Health Policy, Government Press, Pretoria, South Africa. Accessed on 30 May 2022 from <https://www.knowledgehub.org.za/system/files/elibdownloads/2021-06/SA%20MPNH%20Policy%202023-6-2021%20signed%20Web%20View%20v2.pdf>

Sayani, A.H., Jan, R., Lennox, S. and Jan Mohammad, Y. (2017). Development of Mentorship Module and its Feasibility for Community Midwives in Sindh, Pakistan: A Pilot Study. *Journal of Asian Midwives (JAM)*, 4(1), pp.51-64.

Sheehan, A., Elmir, R., Hammond, A., Schmied, V., Coulton, S., Sorensen, K., Arundell, F., Keedle, H., Dahlen, H. and Burns, E. (2021). The midwife-student mentor relationship: Creating the virtuous circle. *Women and Birth*.

Simane-Netshisaulu, K., Maputle, M., Netshikweta, L.M. and Shilubane, H. (2022). Mentorship during transition period: a challenge for newly qualified midwives in Limpopo Province of South Africa. *African Health Sciences*, 22(1), pp.191-9.

Stefaniak, M. and Dmoch-Gajzlerska, E. (2020). Mentoring in the clinical training of midwifery students - a focus study of the experiences and opinions of midwifery students at the Medical University of Warsaw participating in a mentoring program. *BMC medical education*, 20(1), pp.1-9.

Stefaniak, M. and Dmoch-Gajzlerska, E. (2021). Evaluation of a Mentor training program for midwives in two hospitals in Warsaw, Poland-a qualitative descriptive study. *BMC medical education*, 21(1), pp.1-11.

CHAPTER 6: MANUSCRIPT 3

6.1. FIRST AUTHOR CONTRIBUTIONS

ARTICLE 3: Evaluating a mentorship training program developed for midwifery practitioners: An investment for midwifery practitioners amid the COVID-19 pandemic. This article was submitted to the International Journal of Nursing and Midwifery in June 2022. The article is currently in review. The author guidelines can be accessed at <https://academicjournals.org/journal/IJNM/authors>

The first author (HBA) conceptualized and prepared the manuscript under the guidance of the research supervisor (Dr. SWM). Both authors contributed to reviewing of the draft manuscript and approved the final version of this article.

6.2 SYNOPSIS TO ARTICLE 3

Article Title: Evaluating a mentorship training program: An investment for midwifery practitioners amid the COVID-19 pandemic.

Article 3 of this study links with Cycle 3 of the study and describes the evaluation of a mentorship training program (research objective 4 of this study).

A qualitative approach with a descriptive design evaluated the views of midwifery practitioners who attended a mentorship training program in March 2022. The outcome of the focus group sessions and semi-structured interviews described the effectiveness of the mentorship training program. The outcome of this evaluation highlighted that the mentorship training program was a new phenomenon, empowered mentorship abilities and was an investment towards midwifery leadership. The results of the interviews revealed the mentorship training program was a new, well-structured and valuable program, was a refresher course for midwifery clinical practitioners and educators, was adequate to support midwifery practitioners in their mentorship roles and responsibilities, and produced recommendations for midwifery practice and education.

6.3. MANUSCRIPT 3: Evaluating a mentorship training program for midwifery practitioners

Manuscript title: Evaluating a mentorship training program for midwifery practitioners: An investment amid the COVID-19 pandemic

ABSTRACT

Introduction: Investing in high quality education and training of midwives is crucial in achieving the full potential of all midwives. In South Africa, the existing challenges in the healthcare systems over the past decade and the recent disruptions caused by the Coronavirus pandemic have had a negative effect on the clinical experiences of midwifery students. Calls to improve clinical support through formal mentorship training has become a global initiative. This article explores the experiences of midwifery practitioners who participated in a mentorship training.

Method: In Cycle 3, this study adopted a qualitative approach incorporating a descriptive design. There was a convenient and purposive sampling technique undertaken to recruit 15 midwifery practitioners to participate in two focus group sessions and five semi-structured interviews to determine the outcomes of a mentorship training. Data collection occurred between March and June 2022. Content analysis analyzed the qualitative data.

Results: Three themes emerged from the focus group discussion, namely the mentorship training was a new phenomenon, empowered mentorship abilities, and was an investment toward midwifery leadership. Interview results showed that the mentorship training program was a new, well-structured and valuable program, was a refresher course for midwifery clinical practitioners and educators, was adequate to support midwifery practitioners in their mentorship roles and responsibilities and produced recommendations for midwifery practice and education.

Conclusions: Mentorship training in midwifery clinical placements is valuable to midwifery students, practitioners, and educators in South Africa. Offering mentorship training is a new and innovative approach to train midwifery practitioners who support midwifery students during clinical placements.

Keywords: midwifery; mentorship; COVID-19; online training; South Africa

INTRODUCTION

Competency-based curricula in midwifery programs at higher education institutions ensure that upon graduation, midwifery students have the knowledge, skills, and attitudes to meet national health priorities (WHO Global Strategic Direction for Nursing and Midwifery, 2021-2025). Hence, the expectation is that midwifery students will work in a safe and supportive clinical environment to the full extent of their education and training.

Investing in high-quality education and training of midwives and strengthening institutional capacity building towards service delivery improvements is crucial in achieving the full potential of all midwives (State of World Midwifery report, 2021). In South Africa, the existing challenges and changes in the healthcare systems over the past decade and the recent disruptions caused by the Coronavirus pandemic have had a negative effect on the clinical experiences of midwifery students. Findings from studies by Serhan (2020), Angasu, Bekela, Gelan, Wakjira, Melkamu, Belachew, Diribsa, Ahmed, Eba, Tadesse, and Boche (2021), and Rasmussen, Hutchinson, Lowe, Wynter, Redley, Holton, Manias, Phillips, McDonall, McTier, and Kerr, (2022) also showed that the COVID-19 pandemic had a negative effect on students' clinical experiences and clinical outcomes. Uncertainties regarding their learning during the COVID-19 era left students feeling expendable, devalued, confused, and anxious about completion of the program (Kuliukas, Hauck, Sweet, Vasilevski, Homer, Wynter, Wilson, Szabo, and Bradfield, 2021; Duprez, Vermote, Van Hecke, Verhaeghe, Malfait, 2021).

Midwifery practitioners who support students during clinical placements share the professional responsibility of producing safe and competent graduates to improve maternal and neonatal health outcomes (Gray, 2018). Aside from patient care, which precedes the responsibility of student supervision, the challenges of clinical placements are compounding. These challenges well known, and calls to improve clinical support through formal mentorship training has become a global initiative; however, developing a mentorship training program is no easy task (Casey, Clark, and Gould, 2018; Sheehan, Elmir, Hammond, Schmied, Coulten, Soreneson, Arundell, Keedle, Dahlen, and Burns, 2021). The voluntary role of midwifery practitioners in supporting midwifery students during clinical placement maybe advantageous, and efforts to strengthen this role through

mentorship training is likely to improve the overall clinical support of students (Amod and Mkhize, 2022, in review).

The researcher conceptualized and developed a Mentorship Training Program (MTP) in this study. The development of this program followed a generic framework for mentorship training, which was the outcome of a systematic scoping review conducted in Cycle 1 of this study. The framework to guide mentorship training for midwifery practitioners (Amod and Mkhize, 2022, in review) underpinned the conceptualization of a guide for developing a mentorship training program in Cycle 2 of the study. In the same cycle, the researcher conducted the mentorship training, and this article reports on the experiences of midwifery specialists (Educators and operational managers) attending the mentorship training program.

METHOD:

This study adopted a qualitative approach with a descriptive design. A non-randomized sampling method, adopting a convenient and purposive sampling technique, recruited 15 midwifery practitioners to participate in focus group sessions and semi-structured interviews to evaluate the outcomes of the mentorship training. Focus group discussions and interviews took place between March and June 2022.

Invitations to partake in the focus group sessions were emailed to potential participants. There was one contact session and one online focus group session scheduled. The planning of the first focus group session was with the assistance of the operational manager from one clinical learning site. The participants of this session had requested a face-to-face meeting, which took place in a board room. To maintain social distance, seating arrangement was in a circle, with one empty seat distance apart. The researcher and the researcher assistant welcomed the participants as they seated themselves in the available spaces. The discussion commenced with the welcomes, introductions, the purpose of the meeting and the announcing of the ground rules. Before distributing the information sheet to each group member, it was read aloud together with an informed consent form. The second focus group session used the ZOOM meetings platform. The midwifery practitioners received the information sheet and consent forms via email and timeously returned

them before the scheduled meeting date. The researcher waited until all participants entered the ZOOM meeting and began the welcomes, introductions, the purpose of the meeting, and announced the ground rules. After verbalizing the opening question, the discussion continued. Participants observed the voluntary participation and agreed to the audio-recording. Each focus group discussion lasted between 40-50 minutes. Content analysis analyzed the data from the focus group discussions.

There were semi-structured interviews conducted with five midwifery specialists (two educators, two operational managers and one clinical facilitator). The schedule for the interviews was in accordance with the availability of participants. All interviews were conducted voluntarily, independently and audio-recorded with participant's permission using the ZOOM application. Interviews lasted between 45 and 60 minutes, and analyzed using content analysis.

RESULTS:

The results of this cycle are the experiences of midwifery practitioners who attended the mentorship training program. The data captured was from two focus group sessions and five semi-structured interviews, with the results presented accordingly.

FOCUS GROUP RESULTS

Following the mentorship training, focus group discussions took place with attendees to evaluate their experience with the mentorship training. Focus group audio recordings underwent transcription and analysis using content analysis, as described by Erlingsson and Brysiewicz (2017). Content analysis is a reflective process and suits this study's Problem Resolving Action Research framework. During the data analysis process, the researcher repeatedly read the transcribed text many times to develop meaning units from participants' spoken words, then condensed and labelled them by formulating codes. Codes with similar meanings were grouped into categories. Six categories were developed (a new training method, challenges of online learning, impact of training, reflective knowledge, positive experiences, and recommendations), and these categories were further interrogated to obtain a deeper understanding of the text. Three themes emanated from the content analysis of data.

Theme 1: The mentorship training is a new phenomenon for midwifery practitioners

Participants attended mentorship training, delivered using the ZOOM meetings application. On the first day of training, participants found the training slightly challenging, as they were unfamiliar with online training methods. The feedback shows some participants still preferred traditional training methods, such as the presence of a teacher and a chalkboard in a classroom.

One participant said:

“So, remember we are used to studying like those days where we focus on the boards. So, it [online method] becomes a challenge for us, but I think if you go to these kids in this era today, they would say a different story from us.” (FG1 P1)

Another participant added:

“So, I am also not used to it [online method]. We usually write down notes. The teacher will come and give us notes, and we will write it down” (FG1 P3)

Although participants at one clinical site experienced the method of training as challenging on the first day, they quickly adapted to the online method because they were interested in what the training had to offer them. This was evident in their discussion, as one participant stated that when they experienced technical challenges they opted to join the training using their cellular phones. Participants further disclosed that they subsequently joined the training using their mobile phones for the remaining days. Some participants from this group stated:

“The first day, the whole thing [training] I found it interesting...but on the first day, we watched from a shared laptop in the front, so the sound was low. But on the second day, I was screening from my phone, then I could get what you were saying and everything.” (FG1P2)

“There were audio challenges on day 1 when we connected from the hospital, then I quickly attached to [viewed from] my colleague’s private phone, then everything went fine.” (FG1 P5)

The colleague who shared her phone emphasized the same.

“While we were trying to connect, the time was going, I even connected on my phone, and they were listening from my phone. It was easier than waiting for HR [human resource] to help us.” (FG1 P4).

This highlighted that the training was captivating as participants found the mentorship training, interesting, good, informative, valuable and a good refresher course.

Some related comments from participants were:

“The course was good and helped to refresh my midwifery knowledge” (FG2 P3)

“For me, the mentorship training was really valuable. I liked the fact that not only are we taught how to mentor and the values that a mentor should have but also reminded us of the [midwifery] procedures.” (FG2 P4)

“I also felt that the mentorship training was very informative. It was a refresher on most of the things” (FG2 P1)

In essence, the mentorship training was a new phenomenon that participants found interesting and valuable to their clinical development. The training was interesting to participants as they had exposure to mentoring of students at clinical sites prior to this mentorship training. However, the mentoring role is usually on a voluntary, informal and unplanned basis. Hence this training was offering guidance to improve their mentor-student relationships using a more formal and planned process.

Theme 2: The training empowered the mentorship abilities of midwifery practitioners

This mentorship training offered guidance in mentorship and included eight midwifery competencies, which attendees felt was a reminder on how to perform the procedure. Training and supporting midwifery practitioners on mentorship roles and responsibilities is likely to bring about changes in mentorship attitudes and clinical outcomes. The participants of this training felt that the mentorship training was beneficial to their professional growth. The training offered sufficient guidance, knowledge, and skills to mentor students and become confident and empowered in the role. One participant said:

“I would say, it [the training] provided much guidance for any midwife [who is] interested in doing mentorship in the midwifery units.” FG1 P5

Another participant said:

“It [the training] has equipped attendees in terms of being able to take what was learned, take the skills and the tips offered in this training and apply it in the actual clinical sites they are working in.” FG2P3

She went on further to say:

“I feel very confident going into the clinical sites to mentor students, and it helped me gain a little bit of insight as well as a few tips on how I can apply my skills in the clinical sites.” FG2 P3

A third participant stated:

“It taught me the good values that a mentor should have, so carrying these values to the clinical sites gives me confidence that I am doing the right thing.” FG2P4

In addition, participant 1 agreed and added:

“This training was efficient and very useful, and I know everyone who attended this training will be able to do a good job in mentoring students. We know exactly what is required; we have all the skills and the information that is necessary for midwifery.” FG2 P1

The training aimed to empower midwifery practitioners with the knowledge and skills necessary to mentor undergraduate midwifery students during clinical placement. The comments received from participants confirmed the fulfilling of the training objective, as participants felt empowered (confident and ready) to use the guidance provided in this training to mentor undergraduate midwifery students. By empowering midwifery practitioners in their roles and responsibilities to mentor students, the researcher hoped to strengthen the clinical support of midwifery students through mentorship.

Theme 3: The mentorship training is an investment toward midwifery leadership

In this study, participants found the training included many aspects (knowledge and skills) related to mentorship and midwifery, which they needed to mentor midwifery students. One participant highlighted:

"The training was a comprehensive one and exposes us to many aspects of midwifery that we are supposed to be acquainted with [in order] to guide students in the clinical area and ensure the interventions we do as midwives." FG2 P2

She further elaborated:

"For me, the visuals were very helpful, and also the presentation was very comprehensive and touched every aspect of the skills we needed to know about." FG P2

Another participant said:

"My experience was good. The training had every section about midwifery. It was quite good. Everything was fine, and there were opportunities to ask questions." FG2P5

A third participant commented:

"Especially for midwifery, the theory is very important; however, demonstrations and visual learning in midwifery are [so much] more important. So, when the demonstrations were done during the training, I felt it was very beneficial because if you have a visual representation of the theory that was discussed, it just clicks so much better in a student or individual's mind...So, I felt that aspect of the training was absolutely beneficial." FG2 P1

Participants appreciated attending the training, which was a revelation regarding their own mentorship ideologies. The training prompted them to reflect on their own competencies and mentorship skills. This was evident in the response of one participant who said:

"I really liked the demonstrations of the competencies. The videos because we also go out to the clinical field, and we take shortcuts and do things that other people are doing that are not necessarily correct. So those demonstrations were my highlights. It reminds you that the demonstrations must be done correctly. I also like that after each presentation, you

stopped and checked with everyone if they were on the same page and if there were any questions before we proceeded." FG2P4

Another participant mentioned:

"So later on, I even gave feedback to my team. I said to them- you must all go and have this mentorship training to open up your minds. After going through the mentorship [training], you realize that not all people are the same. So, we have to work together." FG1 P1

Her colleague added:

"So that particular video on toxic mentorship was so interesting. Now I can be more focused when [I am] talking to them [students]. It was an eye-opener for me because you could see where you went wrong." FG1 P3

A third participant reiterated:

"So, after the training, I understood that I needed to focus on myself to mentor students. Like with filling out the forms. Because previously, if you say I am mentoring students, I didn't know what to do or what was expected of me. But now, I have the to-do the indemnity forms and everything. I have to take them through and make sure they are doing the work and not dodging. Previously I did not know." FG1 P2

Training and supporting midwifery practitioners, who mentor undergraduate midwifery students during clinical placement, is of benefit to maternal and child healthcare services. When midwifery practitioners feel empowered to lead, they strive to become change agents. Such confidence in role-taking encourages transformational leadership, fostering positive attitudes/behaviour in colleagues and students who identify these role models as leaders. The participants in this study appreciated the training that was available to them.

One participant said:

"This training program helped me increase my confidence, self-awareness, and leadership skills, and I'm also becoming a good listener, which is important when [you are] mentoring students." FG2 P1

Another stated:

"Through the information provided, I feel I am ready to interact and lead students who present in the labor ward. Because I feel confident now, and I feel like I can be of assistance to the students. I am not really concerned on my part as a mentor." FG1 P5

Midwifery practitioners who attended this mentorship training program felt empowered to supervise midwifery students with confidence. By investing in mentorship training for midwifery practitioners, current and future midwifery students will reap the benefits of this training during their midwifery clinical placement.

Investing in high-quality education and training of midwives ensures that the clinical outcomes of maternity care services are in safe hands. The future of maternity care services lies in the hands of the current midwifery students in training. Therefore, efforts to ensure that midwifery students receive the best possible clinical support are vital. Mentorship training and support for midwifery practitioners ensures that, in return, midwifery students will receive high-quality education and support during clinical training. By training and supporting midwives, we invest in quality maternity care outcomes. The study's findings showed that by the end of the mentorship training, participants were equipped to take on the role of a mentor, they had received the knowledge and the skills necessary to carry out the function, and they felt empowered and ready to lead midwifery students. This mentorship training was therefore an investment toward midwifery leadership.

RESULTS OF THE INTERVIEWS

Currently in local hospitals, there is no designated mentor responsible for the supervision of midwifery students during placement. Student supervision occurs informally and without any preparation. Although midwifery practitioners are aware of their professional teaching function, they do not accept responsibility for mentorship, as they have no training to perform this role. Furthermore, lack of communication with educators regarding students' needs poses challenges, because midwifery practitioners receive no information about midwifery students' clinical needs/requirements. With no or little insight about the role expectations, midwifery practitioners undertake the supervision of midwifery students on a voluntary and informal capacity. This

mentorship training program aimed to train and support midwifery practitioners in their mentorship roles and responsibilities.

There were semi-structured interviews conducted with five (5) midwifery specialists who attended the mentorship training program. The interview comprised two midwifery practitioners (operational managers) from the local hospital, one clinical facilitator and two midwifery educators. The post-training interviews were to evaluate the overall success of the mentorship training. The results of the interviews highlighted four themes, as discussed below.

Theme 1: The mentorship training was a new, well-structured and valuable program.

The mentorship training program was a new course offered to midwifery practitioners for the first time, and described as a wonderful initiative to promote mentorship in clinical facilities. One midwifery practitioner said:

'This was the first time I attended a Mentorship Training Course. I have been training students and junior midwives in our institution but we never had a training.' (P1)

Participant 5 mentioned:

'In terms of mentorship offered to midwives, it has been the first time. We have not had it before.' (P5)

One participant stated:

'I think it is a wonderful initiative. From my experience in the hospital, there is not much mentoring going on for students... So, from your program you are introducing, I think it is a good initiative' (P4)

Participants were impressed with the training program as it contained important mentorship information, was well structured and presented. Some comments related to the description of the training program included valuable, excellent, detailed, well-explained, empowering, of high standard and beyond expectations.

One participant said:

'I must say I was very impressed with it. It's not what I expected, I thought it was just you know, training, like all other trainings. I wasn't expecting that you will be teaching or training colleagues on each and every skill so it was above my expectation.' (P2)

Another participant reiterated:

'It [the training] gave me more; it empowered me in the specific ways to go about teaching students the correct ways, procedures and steps. It makes it easier if we follow all your steps explained.' (P1)

Participant 3 shared:

'It [the training] was of high-standard with what transpired in the training, it was so valuable.' (P3)

In this study, the researcher used a step-by-step method to develop and then conduct the mentorship training program developed for midwifery practitioners. The development occurred in three action research cycles consisting of a plan, act and reflect phase. Careful planning, an extensive literature review and the input of midwifery education experts ensured the contents of the training were detailed, up-to-date, structured and of high quality, thus assuring the mentorship training program was valuable to midwifery practitioners, educators and facilitators who attended the training.

Theme 2: The mentorship training program was a refresher course for both midwifery practitioners and educators.

During the interview, participants highlighted how the mentorship training program offered them clarity on performing procedures using the correct techniques. Participants found the images, demonstrations and videos included in the mentorship training program helpful. Some participants revisited the training videos to withdraw information, which they were currently using to mentor midwifery students in clinical placement. Most participants felt that the training was also refresher course on how to teach important midwifery clinical skills. Some comments received were:

'The mentorship training program enhanced what I knew and gave me a clearer perspective on teaching students and ensuring that students are learning the correct way.' (P1)

'So, the videos were very helpful specially to act as a reminder on my side on how the skills are done.' (P2)

'Personally, for me, like I said I have not worked much in obstetric wards, so it was a refresher course. I feel I can go to the ward and assess a pregnant lady because of what you put in your modules. It was very good teaching material' (P4)

The mentorship training as a refresher course helped midwifery educators to evaluate their own practices and those of their colleagues. One midwifery educator identified that the mentorship training would benefit fellow clinical facilitators from a clinical skills laboratory, and invited them to join the training. She shared:

'Immediately when I saw what your workshop was about, I invited one of the clinical instructors that I'm working with. Afterwards, we had to discuss your videos I had to call the other one so we could correct how we were doing things. So, since then we have been polishing our skills, you know from the knowledge that I gained from your workshop.' (P2)

Another midwifery educator said:

'What I can say is [that] most of the things you put into the training.... is very important, bringing into focus some of the things that were neglected by us midwifery lecturers, so you [were] able to take some of the things we were not doing correctly in the past.' (P3)

One participant who found the training excellent shared the training videos with colleagues in other hospitals, and she declared:

'The overall program was excellent, I shared the videos with some of my colleagues from other institutions and they were very happy to have the videos.' (P4)

The aim of this study was to train and support midwifery practitioners on mentorship. The researcher deliberately complemented the mentorship training with a refresher course incorporating a number of midwifery clinical procedures into the course content. The idea was to teach and demonstrate to midwifery practitioners how to undertake mentorship with undergraduate midwifery students using the step-by-step guidance found in the mentorship training guide

(booklet). As seen in the results, the demonstration of important procedures helped midwifery practitioners, clinical facilitators and educators to ‘polish up their skills.’

Theme 3: The mentorship training program was adequate to support midwifery practitioners in their mentorship roles and responsibilities

Midwifery practitioners found that the content of the program was sufficient to support them in their mentoring roles and responsibilities. The course content was explicitly explained, clear, straightforward, and easy to understand. The mentorship guide containing the midwifery competencies together with the contents of the training was sufficient to support midwifery practitioners in mentoring roles and responsibilities. One participant stated:

‘You gave a good explanation of all things required in terms of mentoring students. You also explained how students learn, [and] how we [should] interact with each other.’ (P1)

Another participant said:

‘You know the objective were covered, all the steps were done properly and [yeah] I think it went very well. I thought you were just calling the colleagues to emphasize what should be done, how it should be done not that you will be in detail with each and every skill, so that was perfect on my side.’ (P2)

A third participant added:

‘So, if you have the program with the booklet on hand, it will be better to visualize things. Yah, so the videos and the booklet were good enough for a mentor.’ (P4)

Training of midwifery practitioners in mentorship roles, complemented with teaching of midwifery competencies, has dual benefits for mentors and students. A well-structured formal mentorship training program for midwifery practitioners is necessary to bring about a change in behaviour regarding mentorship roles and responsibilities. When requested to elaborate on how she found the mentorship training adequate to support her mentoring roles, one participant shared:

‘There were some areas where I had time to reflect on like I mentioned about the positive feedback, like being more approachable and the importance of not letting the different

personality traits interfere with how you give feedback. So, there were various other things you mentioned but you covered all the bases of mentorship. '(P5)

Mentors who feel empowered in mentoring roles are likely to adapt their approach to mentor students using the knowledge and skills derived from the training.

Theme 4: Recommendations for midwifery practice and education

This mentorship training program was a formal and structured program focusing on improving midwifery practice and clinical education. Participants found the training offered a standardized method of mentorship and contained numerous midwifery competencies. The training was valuable and adequate to support midwifery practitioners in their mentoring roles and responsibilities. Hence, important recommendations were made, which included extending the training to junior professional nurses to formalize mentorship across facilities, the need for intentional collaborations between nursing education institutions and clinical facilities to standardize midwifery procedures and competencies, developing competencies for mentors, placement of clinical instructors in each clinical facility to support mentors and oversee clinical mentorship of students, and conducting collaborative workshops on mentorship. One participant recommended:

'I would recommend the training especially for junior ones [midwives] coming from community service, because they only have 6 months of midwifery training after community service and then come to the unit as junior PN's. (P1)

Another participant mentioned:

'I would recommend it a lot, because you know the facilities they don't do the skills exactly how they are supposed to be done [so] ... maybe if it [the training] is done per hospital.' (P2)

A third participant stated:

I will recommend this course for other midwives. It should be a component of midwifery training or in an isolated training. (P3)

One educator recommended:

'Just to emphasize, or maybe encourage you to do the collaborative workshops that we requesting. It will be beneficial to us as educators, as well as to the service, we can even do it together as educators, because that's our duty anyway, and then we can take it out there to assist our colleagues in service' (P2)

Formal mentorship training programs have significant benefits for midwifery clinical practice and midwifery education. Midwifery practitioners who attended the mentorship training recognized the value and the adequacy of the training in supporting their mentorship roles and responsibilities. They recommend that the training extends across nursing education institutions (universities and colleges) and across clinical facilities to bring about standardization in mentorship training. Adopting collaborative partnerships is a good initiative to promote the shared responsibility of mentorship between midwifery educators and midwifery practitioners.

Mentorship training is an effective mechanism to strengthen the clinical support of undergraduate midwifery students during clinical placement.

DISCUSSIONS

Due to the COVID-19 pandemic, higher education institutions had to adopt online pedagogical teaching and learning methods as an emergency action. This study took place during the COVID-19 pandemic, and the availability of the ZOOM software application was a golden opportunity to conduct training using an online platform.

Midwifery practitioners who attended the mentorship training program encountered technical challenges on the first day of training; like any new phenomenon, challenges are bound to occur. Likewise, some participants in this study reported connectivity issues, time constraints, and poor management support. Similar challenges of using online training methods during the COVID-19 pandemic are evident in recent studies by Simamora (2020), Serhan (2020), Ross, Newstrom, and Coleman (2021), and Leaver, Stanley, and Veenema (2022), to name a few. Despite the challenges of using online methods, pedagogical education is moving forward with the advancements in digital technology. Konrad, Fitzgerald, and Decker (2021) deduced that it is feasible to teach nursing modules using an online platform, and the method could transform students into graduates

who are work-safe ready. Similarly, participants who attended the mentorship training were empowered and felt ready to undertake mentorship.

The value of mentorship is well supported, and nursing education institutions are calling for more mentorship initiatives (Nowell, Norris, Mrklas and White, 2017; Kemp, Shaw and Musoke, 2018; Stefaniak and Dmoch-Gajzlerska, 2020; Bradshaw, McAllister, Mulvogue, Ryan and Happell, 2021; Stefaniak and Dmoch-Gajzlerska, 2021). Recent findings by Casey, Clark and Gould (2018) and Bradshaw, McAllister, Mulvogue, Ryan and Happell (2021) highlighted that mentorship training using online methods in nursing programs is uncommon, and there is little literature available for discussion; consequently, the need for more robust mentorship training programs exists. Developing mentorship training programs is generally not an easy task (Casey, Clark, and Gould, 2018), and developing successful midwifery mentorship training requires persistence, reassurance, encouragement, and support (Sheehan et al., 2021). As described by some participants in this study, the mentorship training was well organized and provided adequate guidance to undertake mentorship of midwifery students during clinical practice. Thus, investing in high-quality education and training through mentorship skills training and capacity development is undoubtedly a victory for midwifery practitioners in South Africa.

CONCLUSION

Mentorship training in midwifery clinical placements is a valuable quality improvement program in South Africa. Offering mentorship training is a new approach to training midwifery practitioners who support midwifery students during clinical placements. In this study, midwifery practitioners who attended mentorship training found the new phenomenon interesting. Training and support in mentorship roles and responsibilities empowered midwifery practitioners to take on the role with confidence and competence. Midwifery mentorship training is an investment towards midwifery leadership.

STRENGTHS OF THE STUDY

This mentorship training used an online platform, which facilitated the delivery process during the COVID-19 pandemic. This study contributes to new knowledge on mentorship training in South Africa. The study also contributes to literature related to COVID-19, midwifery and remote training methods within a South African context.

LIMITATIONS OF THE STUDY

The study took place during the COVID-19 pandemic and influenced the recruitment of participants. The training used an online platform and some participants experienced technical challenges on the first training day. Recruiting participants for the focus group sessions was difficult as participants were at various clinical sites and arrangements to meet either face-to-face or online were not feasible. The small sample size, used in this study, does not permit generalization of the results.

RECOMMENDATIONS OF THE STUDY

This study encourages researchers, academics, and clinical training specialists to adapt and adopt mentorship training as an investment towards high-quality education and training. Mentorship training in midwifery programs is an investment in midwifery leadership. Online training is the new norm in healthcare settings.

Abbreviations used:

ICM- International Confederation of Midwives

WHO- World Health Organization

FG- Focus group

P- Participant

COVID-19- Coronavirus disease 2019

MTP- mentorship training program

n- number

PhD- Doctor of Philosophy

SPSS- Statistical Package for the Social Sciences

HR- Human Resource

DECLARATIONS

Ethics approval and consent to participate

The Human and Social Science Research Ethics Committee of the University of KwaZulu-Natal granted ethical approval - Ethics approval number: HSS/1509/018M.

Consent for publication

Not applicable

Availability of Data and Materials

All data generated and analyzed from this study will be available on request.

Disclosure of a conflict of Interest

Nil. There is no competing interest declared.

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Author's contribution

HBA conceptualized and prepared the review under the guidance of SWM. Both authors contributed to reviewing of the draft manuscript and approved the final version of this paper.

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REFERENCE LIST

- Angasu, K., Bekela, T., Gelan, M., Wakjira, D., Melkamu, E., Belachew, B., Diribsa, T., Ahmed, A.A., Eba, A., Tadesse, K. and Boche, B. (2021). COVID-19's Negative Impacts on Clinical Learning and Proposed Compensation Mechanisms Among Undergraduate Midwifery and Nursing Students of Jimma University. *Advances in Medical Education and Practice*, 12, page.1411. <https://doi.org/10.2147%2FAMEP.S342386>
- Bradshaw, J., McAllister, M., Mulvogue, J., Ryan, R., and Happell, B. (2021). Exploring Online Mentorship as a Potential Strategy to Enhance Postgraduate Mental Health Nursing Education through Online Delivery: A Review of the Literature. *Issues in mental health nursing*, 42(4), pages.376–380. <https://doi.org/10.1080/01612840.2020.1806966>
- Casey, D., Clark, L., and Gould, K. (2018). Developing a digital learning version of a mentorship training programme. *British Journal of Nursing* (Mark Allen Publishing), 27(2), pages 82–86. <https://doi.org/10.12968/bjon.2018.27.2.82>
- Duprez, V., Vermote, B., Van Hecke, A., Verhaeghe, R., Vansteenkiste, M., and Malfait, S. (2021). Are internship experiences during a pandemic related to students' commitment to nursing education? A cross-sectional study. *Nurse education today*, 107, page 105124. <https://doi.org/10.1016/j.nedt.2021.105124>
- Erlandsson, K., Doraiswamy, S., Wallin, L., and Bogren, M. (2018). Capacity building of midwifery faculty to implement a 3-years midwifery diploma curriculum in Bangladesh: A process evaluation of a mentorship programme. *Nurse education in practice*, 29, pages 212–218. <https://doi.org/10.1016/j.nepr.2018.02.006>
- Erlingsson, C. and Brysiewicz, P. (2017). A hands-on guide to doing content analysis. *African Journal of Emergency Medicine*, 7, (3), pages 93-99. ISSN 2211-419X, <https://doi.org/10.1016/j.afjem.2017.08.001>.
- Global strategic directions for nursing and midwifery (2021-2025). Geneva: World Health Organization; 2021. Licence: CC BY-NC-SA 3.0 IGO.

- Gray, M. (2018). "Research into Midwifery Mentorship: The Challenge of Exploring Reluctant Mentors' Perspective of Their Role," *Australian Nursing and Midwifery Journal*, 26(1), pages 35–35. https://www.unfpa.org/sites/default/files/pub-pdf/21-038-UNFPA-SoWMy2021-Report-ENv4302_0.pdf
- Kemp, J., Shaw, E., and Musoke, M. G. (2018). Developing a model of midwifery mentorship for Uganda: The MOMENTUM project 2015-2017. *Midwifery*, 59, pages 127–129. <https://doi.org/10.1016/j.midw.2018.01.013>
- Konrad, S., Fitzgerald, A., and Deckers, C. (2021). Nursing fundamentals - supporting clinical competency online during the COVID-19 pandemic. *Teaching and learning in nursing: Official Journal of the National Organization for Associate Degree Nursing*, 16(1), pages 53–56. <https://doi.org/10.1016/j.teln.2020.07.005>
- Kuliukas, L., Hauck, Y., Sweet, L., Vasilevski, V., Homer, C., Wynter, K., Wilson, A., Szabo, R. and Bradfield, Z. (2021). A cross sectional study of midwifery students' experiences of COVID-19: Uncertainty and expendability. *Nurse education in practice*, 51, page 102988. <https://doi.org/10.1016/j.nepr.2021.102988>
- Leaver, C. A., Stanley, J. M., and Goodwin Veenema, T. (2022). Impact of the COVID-19 Pandemic on the Future of Nursing Education. *Academic medicine: Journal of the Association of American Medical Colleges*, 97(3S), S82–S89. <https://doi.org/10.1097/ACM.0000000000004528>
- Nowell, L., Norris, J. M., Mrklas, K., and White, D. E. (2017). Mixed methods systematic review exploring mentorship outcomes in nursing academia. *Journal of Advanced Nursing*, 73(3), pages 527–544. <https://doi.org/10.1111/jan.13152>
- Rasmussen, B., Hutchinson, A., Lowe, G., Wynter, K., Redley, B., Holton, S., Manias, E., Phillips, N., McDonall, J., McTier, L., and Kerr, D. (2022). The impact of Covid-19 on psychosocial wellbeing and learning of Australian nursing and midwifery undergraduate students: a cross-sectional survey. *Nurse education in practice*, 58, page103275. <https://doi.org/10.1016/j.nepr.2021.103275>

- Ross, M.W., Newstrom, N. and Coleman, E. (2020). Teaching sexual history taking in healthcare using online technology: A PLISSIT-Plus Zoom® approach during the COVID-19 Shutdown. *Sexual Medicine*. 9. page 100290. <https://doi.org/10.1016/j.esxm.2020.100290>
- Rumsey, M., Catling, C., Thiessen, J. and Neill, A. (2017) “Building Nursing and Midwifery Leadership Capacity in the Pacific,” *International Nursing Review*, 64(1), pages 50–58. <https://doi.org/10.1111/inr.12274>
- Serhan, D. (2020). Transitioning from face-to-face to remote learning: Students’ attitudes and perceptions of using Zoom during COVID-19 pandemic. *International Journal of Technology in Education and Science (IJTES)*, 4(4), pages 335-342. DOI: <https://doi.org/10.46328/ijtes.v4i4.148>
- Sheehan, A., Elmir, R., Hammond, A., Schmied, V., Coulton, S., Sorensen, K., Arundell, F., Keedle, H., Dahlen, H. and Burns, E. (2021). The midwife-student mentor relationship: Creating the virtuous circle. *Women and Birth: Journal of the Australian College of Midwives*, S1871-5192(21)00179-7. Advance online publication. <https://doi.org/10.1016/j.wombi.2021.10.007>
- Simamora, R. M. (2020). The Challenges of Online Learning during the COVID-19 Pandemic: An Essay Analysis of Performing Arts Education Students. *Studies in Learning and Teaching*, 1(2), pages 86-103. <https://doi.org/10.46627/silet.v1i2.38>
- Stefaniak, M., and Dmoch-Gajzlerska, E. (2020). Mentoring in the clinical training of midwifery students - a focus study of the experiences and opinions of midwifery students at the Medical University of Warsaw participating in a mentoring program. *BMC medical education*, 20(1), page 394. <https://doi.org/10.1186/s12909-020-02324-w>
- Stefaniak, M., and Dmoch-Gajzlerska, E. (2021). Evaluation of a Mentor training program for midwives in two hospitals in Warsaw, Poland - a qualitative descriptive study. *BMC medical education*, 21(1), page 345. <https://doi.org/10.1186/s12909-021-02769-7>

CHAPTER 7: SYNTHESIS OF FINDINGS

7.1. Introduction

The clinical competence of undergraduate midwifery students at higher education institutions lies with the quality of clinical support they receive during placement at various public health facilities. Midwifery educators and practitioners share the responsibility in preparing midwifery students towards clinical competence. Currently in South Africa, midwifery practitioners who support students during clinical placements have no training or support in their mentorship roles and responsibilities, and therefore the quality of clinical support that undergraduate students receive is of concern for the future health system in South Africa.

This study analyzed the clinical support of undergraduate midwifery students from a local university in KwaZulu-Natal, South Africa, and placed at five public hospitals for clinical learning and practice. The study then aimed to strengthen clinical support of midwifery students by developing a mentorship training program to support midwifery practitioners in their mentorship roles and responsibilities.

7.2. Reflecting on the methodology of this study

A mixed-methods and an action research design allowed the researcher to explore and describe the events and outcomes of this study undertaken in four action cycles.

The research design, adopted in this study, supported a step-by-step method to achieve the research objectives. The mixed-methods design allowed the researcher to explore and describe midwifery clinical support using a combination of research tools, such as protocols, surveys, document analysis, focus group discussions and interviews, at each cycle of the study.

The researcher used the Problem-Resolving Action Research (PRAR) framework by Piggot-Irvine (2001) in this study. The action research design allowed the researcher to undertake the study in four cycles, which facilitated the careful planning, deliberate implementation and a reflection on the outcomes of each cycle. Hence, the intentional and solution-driven process complemented the study's pragmatic paradigm, which promotes the practical application of ideas through human interaction. In this study, the application of the idea (strengthening the clinical support of

midwifery students) into practice was by developing an intervention (a mentorship training program) through human interaction (midwifery educators, practitioners and students who were the participants of this study). Implementing the PRAR framework was appropriate to the research purpose and objectives of this study.

7.3. Reflecting on the research purpose and objectives

The purpose of the study was to analyze and strengthen the clinical support of undergraduate midwifery students and, develop a mentorship training program at a selected higher education institution in KwaZulu-Natal, South Africa. The undermentioned four research objectives of this study achieved the purpose.

Research objective 1: To identify mechanisms that will strengthen clinical support for midwifery students globally

Achieved by conducting a systematic scoping review on the clinical support interventions available to midwifery students on a global platform. Systematic scoping reviews allow for a step-by-step method of undertaking literature reviews and ensures the retrieval of only high-quality concept-specific and population-specific articles. In this study, the outcomes of the systematic scoping review showed that most studies (Clements, Fenwick and Davis, 2012; Dixon et al., 2015; Moran and Banks, 2016; Thunes and Sekse, 2015; Hogan, Fox and Barratt-See, 2017; Kemp, Shaw and Musoke, 2018) adopted a mentorship approach, with one study by Tweedie, Yerrel and Crozier, 2019) adopting a collaborative coaching approach. The significant findings of these studies highlighted four essential components/pre-requisites for developing mentorship training programs, namely:

- (1) Strong partnerships and collaborations between HEI and hospital placements provides opportunities to train and support registered midwives who mentor midwifery students during clinical placements.
- (2) Continued consultations between crucial stakeholders contribute to a better understanding of students' clinical expectations.

- (3) The duration and structure of the training should consider the core responsibilities of clinical practice.
- (4) The program content is central to the quality of support offered to midwifery students during clinical practice.

The careful integration of the components developed a framework to guide mentorship training (Chapter 2, Figure 2). Training and support for midwifery practitioners on mentorship is likely to improve the quality of clinical support that midwifery students receive during clinical placement. **A framework to guide mentorship training** may be advantageous to midwifery educators and researchers. The developed generic framework to guide mentorship training is likely to encourage midwifery educators to pursue more mentorship training opportunities and improve the quality of midwifery clinical education.

In the same action cycle, which related to the situational analysis of midwifery clinical support, the researcher planned to evaluate the clinical support of undergraduate midwifery students from a local university. This addressed research objective 2.

Research objective 2: To analyze the existing clinical support available to undergraduate midwifery students from a selected higher education institution in South Africa

A self-evaluation questionnaire analyzed the clinical support of midwifery students from a higher education institution, and placed at five public hospitals within the local district. The survey took place at the end of the semester once there was completion of the clinical placements for the module. A quantitative data analysis described the clinical support and the perceived competency levels of midwifery students against 70 midwifery clinical requirements. In the clinical support section, the results identified that midwifery students had clinical support from midwifery practitioners using all three types of clinical support, namely clinical supervision, mentorship or preceptorship approaches. Most clinical support was from midwifery practitioners without any speciality qualification. Across antenatal, labour and postnatal units, midwifery practitioners supported midwifery students using clinical supervision on a greater extent. In the competency

section, students perceived themselves incompetent in eight out of the 70 midwifery clinical requirements. The outcomes of this cycle contributed to the development of a guide for mentorship training, which aligned to the next research objective.

Research objective 3: To develop and conduct a mentorship training program for midwifery practitioners who support undergraduate midwifery students

In Cycle 2 of the study, the researcher developed a mentorship training program developed for midwifery practitioners. The program's development took into consideration the findings of Cycle 1. The researcher first developed a guide for mentorship, which was reviewed by six midwifery experts in round 1 of a Delphi Study approach. The findings from an evaluation checklist revealed that 76.8% of reviewers agreed while 21.4% were unsure in terms of the quality of the contents of the guide. Eighty-three percent (83%) of reviewers agreed that the guide was effective and easy to use. The overall quality score of 81% showed that the guide for developing a mentorship training program was of high-quality. Feedback comments from the document analysis allowed the researcher to add value to areas that were deficient and subsequently finalize the content for the guide. The final document contained information on the mentorship roles and responsibilities, the process of mentorship, 21 competencies for midwifery clinical practice, 12 modules on the Essential Steps in the Management of Obstetric Emergencies (ESMOE) and materials to support the mentoring roles (attendance forms, record of mentorship sessions, student report cards). Reflections of the researcher showed that developing a mentorship training program is challenging in respect of time, labour and support.

Cycle 2 of the study took place in the midst of the COVID-19 pandemic, which encouraged the researcher to conduct the mentorship training using an online platform, following all the preparations planned for a webinar. Round 2 of the Delphi study showed that the mentorship training program scored 96% in all three categories and therefore rated of high quality, effective and easy to use.

Research objective 4: To evaluate the developed mentorship training program at a selected higher education institution

In Cycle 3, the researcher conducted focus group discussions and semi-structured interviews to evaluate the effectiveness of the mentorship training program, which aligned with research objective 4 of this study. Three themes emerged from the focus group discussion, namely the mentorship training was a new phenomenon, empowered mentorship abilities, and is an investment towards midwifery leadership.

The researcher conducted five interviews to measure the overall success of the mentorship two midwifery educators, one clinical facilitator and two midwifery operational managers. Findings from the interviews showed that the mentorship training program was a new, well-structured and valuable program, it was a refresher course for midwifery practitioners and educators, it was adequate to support midwifery practitioners in their mentorship roles and responsibilities, and produced recommendations for midwifery practice and education.

Hence, the **purpose of this study**, which focused on analyzing and strengthening the clinical support of undergraduate midwifery students and developing a mentorship training program at a selected higher education institution in KwaZulu-Natal, South Africa, was achieved.

Table 1 is a summary of how the research objectives met the purpose of the study.

TABLE 1: SUMMARY OF RESEARCH FINDINGS

The purpose of the study: To analyze and strengthen the clinical support of undergraduate midwifery students and, develop a mentorship training program at a selected higher education institution in KwaZulu-Natal, South Africa

	Research Objectives	Action Taken	Research tools used	Research participant	Outcomes of the cycle
Cycle 1:	1.To identify mechanisms that will strengthen clinical support for midwifery students globally	1. Conducting a scoping review	Scoping review protocol	Documents and desktop review	The significant findings of these studies highlighted four essential components/pre-requisites for developing mentorship training programs, namely: (1) Strong partnerships and collaborations between HEI and hospital placements (2) Continued consultations between crucial stakeholders (3) The duration and structure of the training should consider the core responsibilities of clinical practice (4) The program content is central to the quality of support offered to midwifery students during clinical practice. Nine (9) of the 10 interventions included in the review promoted mentorship as the key intervention to strengthen midwifery clinical support The recommendation was for a framework for mentorship training
	2. To analyze the existing clinical support available for undergraduate midwifery students at a selected higher education institution in South Africa	2. Assessed the current clinical support available to midwifery students from a Higher education Institution.	Questionnaire	Undergraduate midwifery students	Ninety-three percent of midwifery students receive support from midwifery practitioners without a speciality qualification. Most clinical support (80%) is through clinical supervision, 93% found the clinical support received during placement, beneficial to their learning outcomes. Students perceived themselves incompetent in 11.4% (8 out of 70) midwifery clinical requirements
Cycle 2:	3. To develop and conduct a mentorship training program for midwifery practitioners who support undergraduate midwifery students	1. Developed a mentorship training guide and training materials	An evaluation checklist and a Document analysis	Midwifery educators	An overall quality score of 81% was obtained in round 1 of the Delphi rated by six midwifery education experts Feedback from the document analysis was selectively integrated to finalize the guide for mentorship training
		2. Developed a mentorship training program	Evaluation checklist	Midwifery educators and midwifery practitioners	The guide assisted the researcher to convert the contained information into PowerPoint presentation and develop videos for training In round 2 of the Delphi, midwifery practitioners who attended the mentorship training rated the overall quality score of the mentorship training program at 96%
Cycle 3:	4. To evaluate the developed mentorship training program at the selected higher education institution	Conduct the mentorship training following the guides developed for the intervention Evaluate the training with training attendees	Focus group discussions Semi-structured interviews	Midwifery practitioners	Focus group sessions revealed that the mentorship training was a new phenomenon, empowered midwifery practitioners and is an investment towards midwifery leadership Results from semi-structured interviews showed that the mentorship training was a new, well-structured and valuable program, was a refresher course for midwifery practitioners and educators, was adequate to support midwifery practitioners in their mentorship roles and responsibilities and provided recommendations for midwifery practice and education

7.4. Reflecting on the Discussion

Clinical support in nursing is an integral component of students' experiential learning which aims to integrate knowledge and skills to become competent in real-life situations. Time spent in clinical practice should enable students to achieve the required competencies and become competent and confident on registration. Mentors play a vital role in preparing students for role-taking. In maternity departments, it is the responsibility of midwifery practitioners to ensure that the current generation of students become the next generation of safe and independent midwives. Mentorship training for midwifery practitioners is currently not available in South Africa leaving practitioners unsure about their roles and responsibilities when supporting students at clinical sites. Despite uncertainties in the role, midwifery practitioners undertake mentorship on a voluntary and informal capacity. Recently, high numbers of student intakes at nursing education institutions has increased the demand for mentorship but the responsibility for mentorship at clinical sites is slowly decreasing. Clinical teaching departments no longer exist, and midwifery practitioners who are not trained on mentorship have reservations to take on the role. Results from cycle 1 of this study, highlighted that midwifery students remained incompetent in eight midwifery competencies post their clinical placement revealing that students are not adequately prepared for role-taking.

Hence, an urgent need to strengthen clinical support of midwifery students through mentorship is warranted. But midwifery practitioners, who are expected to mentor students during clinical placement, are not trained to carry out the role effectively. In cycle 2, a mentorship training program for midwifery practitioners was developed and then implemented in cycle 3 of this study. The purpose of the program was to train and support midwifery practitioners in mentorship skills, roles and responsibilities so that mentorship in clinical placements can be undertaken with ease. By so doing, midwifery practitioners will be knowledgeable of mentorship roles, processes and expectations and thus midwifery students placed at clinical sites will reap the benefits of mentorship. The evaluation of program, which was conducted in cycle 4, revealed that the mentorship training program was new, well-structured, valuable and adequate to support midwifery practitioners in mentorship roles and responsibilities. Much of the success of the program is owed to the 'Framework to guide mentorship training.' The framework demands support from managers of clinical facilities and nursing education institutions to promote collaborative partnerships and engagements to roll-out mentorship in clinical departments.

Effective and regular communication is a core element in mentorship and Thus, the framework promoted mentorship as 3-tiered responsibility shared between midwifery practitioners, educators and the students. A well-planned training relies on the content, duration and structure of the program. Developing mentorship training programs is time-consuming, expensive and resource dependent but is highly recommended as an effective strategy to strengthen midwifery clinical support.

7.5.Uniqueness of the study

1. The study developed ‘A generic framework to guide mentorship training for midwifery practitioners.’ The framework explains the four components, which are pre-requisite steps to consider when developing mentorship training programs. The intervention adds new knowledge from a South African study to guide mentorship training.
2. The second outcome, which is central to the success of this study, is ‘A mentorship training guide for midwifery practitioners: Investing and strengthening midwifery clinical support.’ The guide contains important information and guidelines, which were used to develop and conduct a mentorship training program in Cycle 3 of this study. The guide can be a valuable handbook for midwifery practitioners, midwifery students and midwifery educators. It contains 21 essential midwifery competencies for undergraduate midwifery students, presented in step-by-step methods from preparation to completion for each of the 21 procedures. In addition, the guide includes 12 modules on the Essential Steps in Managing Obstetric emergencies, which is currently a national initiative to reduce perinatal morbidity and mortality rates in South Africa. The guide is therefore comprehensive and when evaluated in a two-round Delphi study, was of high quality, effective and user-friendly.
3. The developed mentorship training program to train midwifery practitioners in mentorship roles and responsibilities is a new, valuable and innovative intervention developed at a higher education institution in a local district in KwaZulu-Natal, South Africa. The outcomes of the mentorship training program provide recommendations for planning mentorship training across universities in South Africa and attempt to standardize midwifery clinical procedures across clinical facilities, nursing campuses and higher education institutions, which offer nursing undergraduate and postgraduate programs.

4. The mentorship training program comprises updated guidelines, which were underpinned by global initiatives and global standards related to midwifery clinical education placing the South African intervention on a global platform.

7.6. Strengths

1. The study intervention is replicable when conducting research related to clinical education in a similar research setting.
2. The framework to guide mentorship training can be useful to midwifery educators and researchers.
3. The mentorship guide for midwifery practitioners is a useful handbook to guide midwifery practitioners in their mentorship roles and responsibilities, and refresh their knowledge and skills to perform midwifery clinical competencies.
4. The evaluation of the overall study included relevant key role-players in midwifery education, namely midwifery students, midwifery practitioners and midwifery educators.

7.7. Limitations

1. The study took place at one local university and therefore there should be no generalization.
2. The study was restricted to a midwifery clinical approach and therefore did not include other categories, such as general, community and psychiatry nursing.
3. The unexpected effects of the COVID-9 pandemic delayed the study completion deadline.

7.8. Recommendations

1. Using a guide to develop a mentorship training program is a useful tool to ensure successful outcomes.
2. Contemporary mentorship training programs should promote collaboration and leadership in midwifery clinical practice.

3. New developments in mentorship training programs, using online training methods is necessary to prepare for future natural and global disasters.
4. Mentorship training within health facilities is necessary to improve the district and subsequently national health outcomes.
5. Collaborative engagements across nursing education institutions and clinical facilities should be encouraged through workshops to standardize clinical guidelines of all nursing and midwifery competencies.

7.9. Conclusion

The future of the country's maternal and neonatal health outcomes depends on the quality of midwifery students currently in training. Midwifery clinical support is the responsibility of midwifery practitioners who supervise midwifery students during placement. Knowledge and skills related to the mentorship process and refresher courses on midwifery clinical procedures will ensure that midwifery practitioners prepare midwifery students adequately to become safe, competent and independent practitioners of the future. In retrospect, midwifery practitioners trained in mentorship are likely to be empowered, thus, mentorship training is an investment towards midwifery leadership. The evaluation of the mentorship training program developed in this study, revealed that the mentorship training program was new, well-structured and valuable, was a refresher course for midwifery practitioners, clinical facilitators and educators, was adequate to support midwifery practitioners in their mentorship roles and responsibilities and highlighted recommendations from further planning.

7.10. Reference

- Clements, V., Fenwick, J. and Davis, D. (2012). Core elements of transition support programs: the experiences of newly qualified Australian midwives. *Sexual & reproductive healthcare: Official Journal of the Swedish Association of Midwives*, 3(4), 155–162. <https://doi.org/10.1016/j.srhc.2012.08.001>
- Dixon, L., Calvert, S., Tumilty, E., Kensington, M., Gray, E., Lennox, S., Campbell, N., and Pairman, S. (2015). Supporting New Zealand graduate midwives to stay in the profession: An evaluation of the Midwifery First Year of Practice programme. *Midwifery*, Jul;31(6):633-639. [doi: [10.1016/j.midw.2015.02.010](https://doi.org/10.1016/j.midw.2015.02.010)] [Medline: [25819705](https://pubmed.ncbi.nlm.nih.gov/25819705/)]
- Hogan, R., Fox, D. and Barratt-See, G. (2017). Peer to peer mentoring: Outcomes of third-year midwifery students mentoring first-year students. *Women and birth: Journal of the Australian College of Midwives*, 30(3), 206–213. <https://doi.org/10.1016/j.wombi.2017.03.004>
- Kemp, J., Shaw, E. and Musoke, M.G. (2018). Developing a model of midwifery mentorship for Uganda: The MOMENTUM project 2015-2017. *Midwifery*, 59, pp. 127-129.
- Moran, M. and Banks, D. An exploration of the value of the role of the mentor and mentoring in midwifery. *Nurse Educ Today* 2016 May; 40:52-56. [doi: [10.1016/j.nedt.2016.02.010](https://doi.org/10.1016/j.nedt.2016.02.010)]
- Piggot-Irvine, E. (2001). Appraisal: reducing control, enhancing effectiveness: a thesis submitted in partial fulfilment of the requirements for the degree of Ph. D. in Education at Massey University, Albany Campus, Auckland, New Zealand.
- Thunes, S. and Sekse, R.J. (2015). Midwifery students first encounter with the maternity ward. *Nurse Education in Practice* 15(3): 243-248.
- Tweedie, K., Yerrell, J. and Crozier, K. (2019). Collaborative coaching and learning in midwifery clinical placements. *British Journal of Midwifery*, 27(5), pp.324-329.

ANNEXURES

ANNEXURE 1: INFORMATION SHEET

Dear Participant

My name is Mrs Hafaza Bibi Amod and I am a student registered for a Doctoral degree in Nursing at the University of KwaZulu-Natal. I am undertaking a study entitled, **“Analyzing and strengthening the clinical support of undergraduate midwifery students and developing a mentorship training program at a higher education institution in KwaZulu-Natal, South Africa: A mixed methods and action research design.”**

I kindly invite you to participate in this study. The study aims to analyze the clinical support of midwifery students and to develop a mentorship training program to strengthen midwifery education at a selected university. Your participation in this study will require your permission to be audio-recorded. The study does not involve any risks. Your identity and information will be treated with the utmost confidentiality. Please feel free to ask any questions you may have so that you are clear about what is expected of you. Please note the following:

- You are free to participate in this research
- You are free to withdraw at any stage without repercussions
- Your name will not be disclosed, nor will you be identified with any comment made when the data is published
- There will be no risks/harm attached to your participation.

This study has been ethically reviewed and approved by the UKZN Humanities and Social Sciences Research Ethics Committee (Approval Number: HSS/1509/018M).

In the event of any problems, concerns, questions or queries, you may contact the researcher, the research supervisor or the Research Committee as follows:

1. The Researcher: Mrs. Hafaza Bibi Amod, 5th floor Desmond Clarence Building, Howard Campus, Tel 031 260 3037 E-mail: Amodh@ukzn.ac.za

2. The Research Supervisor: Dr Sipho Wellington Mkhize, 5th floor Desmond Clarence Building, Howard Campus, Tel 031 260 1421 E-mail: MkhizeS4 @ukzn.ac.za
3. University Research Office, Govan Bheki Building, Westville Campus, Tel: 0312604557.

ANNEXURE 2: INFORMED CONSENT FORM

I, _____, (Participants Full Name) hereby consent to participate in this study entitled, **“Analyzing and strengthening the clinical support of undergraduate midwifery students and developing a mentorship training program at a higher education institution in KwaZulu-Natal, South Africa: A mixed method and action research design.”**

I understand the purpose and the procedures of the study, read the attached information sheet and I am aware that my participation will be audio-recorded. The researcher (Mrs Hafaza Bibi Amod) offered me an opportunity to ask questions about the study and I received adequate explanations that were to my satisfaction.

I declare that my participation in this study is voluntary and that I may withdraw at any time without prejudice or it affecting my educational activities in any way.

If I have any questions or concerns about my rights as a study participant, or if I am concerned about an aspect of the study or the researchers then I am free to contact:

Humanities and Social Sciences Research Ethics Administration:

Mr Prem Mohan, Research Office, Westville Campus, Govan Mbeki Building, Private Bag
X54001, Durban, 4000, KwaZulu-Natal, South Africa.

Contact: 0312604557, Email: mohunp@ukzn.ac.za

I hereby consent to:

1. Complete of a questionnaire and a semi-structured interview
2. Be audio-recorded during my interview

Signature of Participant: _____ Date: _____

ANNEXURE 3.1: LETTER- REGISTRAR

20 June 2020

The Registrar
School of Nursing and Public Health
University of KwaZulu-Natal
P.O Box 4041
Durban

**RE: REQUESTING PERMISSION TO CONDUCT A RESEARCH STUDY AT THE
UKZN- Howard Campus**

I, Mrs Hafaza Bibi Amod, am a student at the School of Nursing and Public Health. I am currently registered for a Doctoral Degree in Nursing. As a requirement for the degree, I am expected to conduct a research study, which is new and will generate knowledge that can be published. My research study is entitled, **“Analyzing and strengthening the clinical support of undergraduate midwifery students and developing a mentorship training program at a higher education institution in KwaZulu-Natal, South Africa: A mixed method and action research design.”**

The study aims to analyze the clinical support of undergraduate midwifery students and to develop a mentorship training program to strengthen midwifery education at a selected university. I humbly request your permission to conduct this study in this institution. The study will involve the use of the venue, equipment and supplies at Clinical Skills Laboratory, George Campbell Building, Howard Campus. The researcher plans to conduct a five days mentorship training for midwifery practitioners who supervise students at clinical facilities. The data collection tools will include a questionnaire, an evaluation checklist, focus group sessions and semi-structured interviews. Qualitative data will be audio-recorded. The data collection process will commence once approval by the Human Social Sciences Research Ethics Committee is obtained.

Permission for voluntary participation will be requested from all participants of the study. Their rights to confidentiality, informed consent, freedom of choice and anonymity will be observed.

I trust that my application will receive your favorable consideration. Kindly contact me for any queries or additional information, if required.

Mrs Hafaza Bibi Amod

E-mail: Amodh@ukzn.ac.za

Student number: 214 582 170

Supervisor's Name: Dr Sipho Wellington Mkhize

E-mail: Mkhize S4@ukzn.ac.za

ANNEXURE 3.2: LETTER-DEAN

20 June 2020

The Dean
School of Nursing and Public Health
University of KwaZulu-Natal
P.O Box 4041
Durban

**RE: REQUESTING PERMISSION TO CONDUCT A RESEARCH STUDY AT THE
UKZN- Howard Campus**

I, Mrs Hafaza Bibi Amod, am a student at the School of Nursing and Public Health. I am currently registered for a Doctoral Degree in Nursing. As a requirement for the degree, I am expected to conduct a research study, which is new and will generate knowledge that can be published. My research study is entitled, **“Analyzing and strengthening the clinical support of undergraduate midwifery students and developing a mentorship training program at a higher education institution in KwaZulu-Natal, South Africa: A mixed method and action research design.”**

The study aims to analyze the clinical support of undergraduate midwifery students and to develop a mentorship training program to strengthen midwifery education at a selected university. I humbly request your permission to conduct this study in this institution. The study will involve the use of the venue, equipment and supplies at Clinical Skills Laboratory, George Campbell Building, Howard Campus. The researcher plans to conduct a five days mentorship training for midwifery practitioners who supervise students at clinical facilities. The data collection tools will include a questionnaire, an evaluation checklist, focus group sessions and semi-structured interviews. Qualitative data will be audio-recorded. The data collection process will commence once approval by the Human Social Sciences Research Ethics Committee is obtained.

Permission for voluntary participation will be requested from all participants of the study. Their rights to confidentiality, informed consent, freedom of choice and anonymity will be observed.

I trust that my application will receive your favorable consideration. Kindly contact me for any queries or additional information, if required.

Mrs Hafaza Bibi Amod

E-mail: Amodh@ukzn.ac.za

Student number: 214 582 170

Supervisor's Name: Dr Sipho Wellington Mkhize

E-mail: MkhizeS4@ukzn.ac.za

ANNEXURE 3.3: LETTER- ACADEMIC LEADER

20 June 2020

The Academic Leader
School of Nursing and Public Health
University of KwaZulu-Natal
P.O Box 4041
Durban

**RE: REQUESTING PERMISSION TO CONDUCT A RESEARCH STUDY AT THE
UKZN- Howard Campus**

I, Mrs Hafaza Bibi Amod, am a student at the School of Nursing and Public Health. I am currently registered for a Doctoral Degree in Nursing. As a requirement for the degree, I am expected to conduct a research study, which is new and will generate knowledge that can be published. My research study is entitled, **“Analyzing and strengthening the clinical support of undergraduate midwifery students and developing a mentorship training program at a higher education institution in KwaZulu-Natal, South Africa: A mixed method and action research design.”**

The study aims to analyze the clinical support of undergraduate midwifery students and to develop a mentorship training program to strengthen midwifery education at a selected university. I humbly request your permission to conduct this study in this institution. The study will involve the use of the venue, equipment and supplies at Clinical Skills Laboratory, George Campbell Building, Howard Campus. The researcher plans to conduct a five days mentorship training for midwifery practitioners who supervise students at clinical facilities. The data collection tools will include a questionnaire, an evaluation checklist, focus group sessions and semi-structured interviews. Qualitative data will be audio-recorded. The data collection process will commence once approval by the Human Social Sciences Research Ethics Committee is obtained.

Permission for voluntary participation will be requested from all participants of the study. Their rights to confidentiality, informed consent, freedom of choice and anonymity will be observed.

I trust that my application will receive your favourable consideration. Kindly contact me for any queries or additional information, if required.

Mrs Hafaza Bibi Amod

E-mail: Amodh@ukzn.ac.za

Student number: 214 582 170

Supervisor's Name: Dr Sipho Wellington Mkhize

E-mail: MkhizeS4@ukzn.ac.za

ANNEXURE 3.4: LETTER- PMMH

20 June 2020

The Nursing Service Manager
Prince Mshiyeni Memorial Hospital
1 Mangosuthu Road
Umlazi
4060

RE: REQUESTING PERMISSION TO CONDUCT A RESEARCH STUDY AT YOUR FACILITY

I, Mrs Hafaza Bibi Amod, am a student at the School of Nursing and Public Health at the University of KwaZulu-Natal. I am currently registered for a Doctoral Degree in Nursing. As a requirement for the degree, I am expected to conduct a research study, which is new and will generate knowledge that can be published. My research study is entitled, **“Analyzing and strengthening the clinical support of undergraduate midwifery students and developing a mentorship training program at a higher education institution in KwaZulu-Natal, South Africa: A mixed method and action research design.”**

The study aims to analyze the clinical support of undergraduate midwifery students and develop a mentorship training program to strengthen midwifery education at a selected university. The study will involve the observations of clinical mentorship between registered midwives and undergraduate midwifery students. The data collection process will involve completions of a checklist, focus group discussions and semi-structured interviews with research participants. The data collection process will commence once approval by the Human Social Sciences Research Ethics Committee is obtained.

Permission for voluntary participation will be requested from all participants of the study. Their rights to confidentiality, informed consent, freedom of choice and anonymity will be observed.

I trust that my application will receive your favourable consideration. Kindly feel free to contact me for any queries or additional information.

Mrs Hafaza Bibi Amod

E-mail: Amodh@ukzn.ac.za

Supervisor's Name: Dr Sipho Wellington Mkhize

E-mail: MkhizeS4@ukzn.ac.za

ANNEXURE 3.5: LETTER-KEH

20 June 2020

The Nursing Service Manager
King Edward VIII Hospital
Sydney Road
Umbilo
Durban
4013

RE: REQUESTING PERMISSION TO CONDUCT A RESEARCH STUDY AT YOUR FACILITY

I, Mrs Hafaza Bibi Amod, am a student at the School of Nursing and Public Health at the University of KwaZulu-Natal. I am currently registered for a Doctoral Degree in Nursing. As a requirement for the degree, I am expected to conduct a research study, which is new and will generate knowledge that can be published. My research study is entitled, “**Analyzing and strengthening the clinical support of undergraduate midwifery students and developing a mentorship training program at a higher education institution in KwaZulu-Natal, South Africa: A mixed method and action research design.**”

The study aims to analyze the clinical support of undergraduate midwifery students and develop a mentorship training program to strengthen midwifery education at a selected university. The study will involve the observations of clinical mentorship between registered midwives and undergraduate midwifery students. The data collection process will involve the completion of a checklist, focus group discussions and semi-structured interviews with research participants. The data collection process will commence once approval by the Human Social Sciences Research Ethics Committee is obtained.

Permission for voluntary participation will be requested from all participants of the study. Their rights to confidentiality, informed consent, freedom of choice and anonymity will be observed.

I trust that my application will receive your favourable consideration. Kindly feel free to contact me for any queries or additional information.

Mrs Hafaza Bibi Amod

E-mail: Amodh@ukzn.ac.za

Supervisor's Name: Dr Sipho Wellington Mkhize

E-mail: MkhizeS4@ukzn.ac.za

ANNEXURE 3.6: LETTER- RKK

20 June 2020

The Nursing Service Manager
R.K. Khan Hospital
Chatsworth
4030

RE: REQUESTING PERMISSION TO CONDUCT A RESEARCH STUDY AT YOUR FACILITY

I, Mrs Hafaza Bibi Amod, am a student at the School of Nursing and Public Health at the University of KwaZulu-Natal. I am currently registered for a Doctoral Degree in Nursing. As a requirement for the degree, I am expected to conduct a research study, which is new and will generate knowledge that can be published. My research study is entitled, “**Analyzing and strengthening the clinical support of undergraduate midwifery students and developing a mentorship training program at a higher education institution in KwaZulu-Natal, South Africa: A mixed method and action research design.**”

The study aims to analyze the clinical support of undergraduate midwifery students and develop a mentorship training program to strengthen midwifery education at a selected university. The study will involve the observations of clinical mentorship between registered midwives and undergraduate midwifery students. The data collection process will involve the completion of a checklist, focus group discussions and semi-structured interviews with research participants. The data collection process will commence once approval by the Human Social Sciences Research Ethics Committee is obtained.

Permission for voluntary participation will be requested from all participants of the study. Their rights to confidentiality, informed consent, freedom of choice and anonymity will be observed.

I trust that my application will receive your favourable consideration. Kindly feel free to contact me for any queries or additional information.

Mrs Hafaza Bibi Amod

E-mail: Amodh@ukzn.ac.za

Supervisor's Name: Dr Sipho Wellington Mkhize

E-mail: MkhizeS4@ukzn.ac.za

ANNEXURE 4: QUESTIONNAIRE

Cohort Code	
Participant No.	

Analyzing and strengthening the clinical support of undergraduate midwifery students and developing a mentorship training program at a higher education institution in KwaZulu-Natal, South Africa: A mixed methods and action research design.

SELF-EVALUATION QUESTIONNAIRE FOR MIDWIFERY STUDENTS

1. Section A: Demographic Data

NB: Kindly complete the questionnaire by ticking the most appropriate answer.

1.1. Age Group:

1	18-24	
2	25-30	
3	Over 30	

1.2. Gender:

1	Female	
2	Male	

1.3. In which province is your original home?

1	Eastern Cape		6.	Mpumalanga	
2	Free State		7.	Northern cape	
3	Gauteng		8.	North West	
4	KwaZulu-Natal		9.	Western Cape	
5	Limpopo				

1.4. At which facilities are you currently placed for clinical learning:

1	Addington	
2	St. Mary	
3	King Edward	
4	RK Khan	
5	Prince Mshiyeni	
6	Dundee	
7	Hlabisa	

1.5. Who was responsible for your clinical support?

1.	A Midwife	
2.	An Advanced Midwife	

3.	A Designated Person	
----	---------------------	--

2. Section B: Clinical support received at clinical placement facilities

NB. The midwifery module is a community-based module which places students at hospital settings for clinical learning. Kindly tick in the column that best describes your experience.

2.1. To what extent did you receive clinical support during **Preconception and Antenatal** placement?

	Type of support	Greater extent	Lesser Extent
1.	Clinical Supervision		
2.	Preceptorship		
3.	Mentorship		

2.2. To what extent did you receive clinical support during **Labour and Delivery** placement?

	Type of support	Greater extent	Lesser Extent
1.	Clinical Supervision		
2.	Preceptorship		
3.	Mentorship		

2.3. To what extent did you receive clinical support during **Postnatal and Newborn** placement?

	Type of support	Greater extent	Lesser Extent
1.	Clinical Supervision		
2.	Preceptorship		
3.	Mentorship		

2.4. Do you think that the clinical support received was beneficial to your learning?

1.	Yes	
2.	No	

2.5. Did you meet the minimum requirements as stipulated by SANC?

1.	Yes	
2.	No	

3. Section C: Perceived Perinatal Competency Levels

NB: On completion of the midwifery module, students are expected to practice with a set of skills, knowledge and values. You are requested to rate your perceived level of competence as honestly as possible using the criteria below.

1= Incompetent

2= Needs more practice

3= Competent

3.1. REQUIREMENTS DURING PRE- AND ANTENATAL CARE	1	2	3
3.1.1. Identify the signs and symptoms of pregnancy			
3.1.2. Conduct pre-natal and antenatal history-taking			
3.1.3. Conduct a full physical examination of a pregnant women			
3.1.4. Conduct abdominal examination of a pregnant woman			
3.1.5. Calculate E.D.D using Naegele's rule			
3.1.6. Perform a Pap Smear			
3.1.7. Recognize the minor and common disorders in pregnancy			
3.1.8. Give advice relating to the common disorders in pregnancy			
3.1.9. Teach ante- natal exercise to pregnant woman			
3.1.10. Monitor foetal kicks and record on the kick count chart			
3.1.11. Perform pelvic assessment to detect abnormalities			
3.1.12. Give appropriate health education			
3.1.13. Screen high- risk pregnancies			
3.1.14. Identify abnormal physiological changes during pregnancy			
3.1.15. Formulate nursing care plan for identified needs			
3.2. REQUIREMENTS DURING LABOUR/DELIVERY CARE	1	2	3
3.2.1. Assess for signs and symptoms of labour			
3.2.2. Monitor for contractions- intensity, duration and frequency			
3.2.3. Perform a vaginal examination			
3.2.4. Confirm the diagnosis of labour			
3.2.5. Record data accurately using the partograph			
3.2.6. Interpret data accurately using the partograph			
3.2.7. Monitor and interpret maternal and fetal condition			
3.2.8. Perform artificial rupture of membranes			
3.2.9. Monitor a woman on oxytocin infusion			
3.2.10. Monitor a woman undergoing an induction of labour			
3.2.11. Infiltrate, Perform and suture an episiotomy if necessary			
3.2.12. Deliver the baby safely following the mechanism of normal labour			
3.2.13. Perform passive management of the 3rd stage of labour			
3.2.14. Perform active management of the 3rd stage of labour			
3.2.15. Examine the perineum and vulva for lacerations			
3.2.16. Manage the 4th stage of labour			
3.2.17. Check the uterus post delivery			
3.2.18. Examine the placenta and membrane			

3.2.19. Assess the blood loss			
3.3. REQUIREMENTS DURING POSTNATAL CARE	1	2	3
3.3.1. Recognize the physiological changes to the reproductive system			
3.3.2. Conduct a thorough physical examination -post-normal delivery			
3.3.3. Conduct a thorough physical examination -post caesarean section			
3.3.4. Perform post-delivery breast examination			
3.3.5. Monitor symphysis fundal height			
3.3.6. Monitor the vaginal discharge/lochia			
3.3.7. Perform vulva swabbing			
3.3.8. Examine the perineum			
3.3.9. Teach the mother the technique of breast feeding			
3.3.10. Give relevant health education			
3.3.11. Identify problems and potential problems in the care of the mother and baby in the puerperium			
3.3.12. Demonstrate post-natal exercise to the women			
3.3.13. Counsel on and administer family planning method			
3.3.14. Conduct a discharge procedure of a postnatal mother and baby			
3.4. REQUIREMENTS DURING NEWBORN CARE	1	2	3
3.4.1. Assess the Apgar score			
3.4.2. Complete the immediate care of the newborn			
3.4.3. Perform a physical assessment of the neonate			
3.4.4. Perform a neurological assessment of the neonate			
3.4.5. Perform basic resuscitation on a newborn			
3.4.6. Complete birth notification			
3.4.7. Transfer a sick neonate to the nursery			
3.4.8. Perform first baby bath and teach the mother			
3.4.9. Perform cord care and teach the mother			
3.4.10. Plan, implement, evaluate the care of the neonate			
3.4.11. Administer B.C.G and polio drops			
3.4.12. Care for a baby receiving phototherapy			
3.4.13. Perform a stomach washout			
3.4.14. Administer a nasogastric feed			
3.4.15. Perform dextrose sticks monitoring			
3.5. GENERAL REQUIREMENTS	1	2	3
3.5.1. Communicate using effective interpersonal skills			
3.5.2. Demonstrate good clinical judgement and reasoning			
3.5.3. Work effectively in a team			
3.5.4. Practice Professional conduct			
3.5.5. Accept responsibility and accountability for acts and omission			
3.5.6. Maintain effective writing skills and complete documentation			
3.5.7. Demonstrate cultural awareness and sensitivity			

ANNEXURE 5: A CHECKLIST TO EVALUATE A MENTORSHIP TRAINING PROGRAM

Analyzing and strengthening the clinical support of undergraduate midwifery students and developing a mentorship training program at a higher education institution in KwaZulu-Natal, South Africa: A mixed method and action research design

Instructions:

Thank you for your participation in this study. Kindly complete the checklist by ticking the column that best describes the quality of the mentorship training program.

A CHECKLIST TO EVALUATE THE QUALITY OF A MENTORSHIP TRAINING PROGRAM FOR MIDWIFERY PRACTITIONERS					
KEY: SA= Strongly Agree		A= Agree		U= Unsure	
D= Disagree		SD= Strongly Disagree			
	SA	A	U	D	SD
Quality of the Content					
The content of the mentorship training program is appropriate for the training of registered midwives					
The program objectives are clear and specific to the training					
The program content is aligned to the scope of practice for registered midwives in a South African context					
The program framework is appropriate to support clinical mentorship					
The training program includes theoretical knowledge and practical skills required to perform mentorship successfully					
The program content is relevant to the needs of participants					
The program materials are appropriate, accurate and updated					

	SA	A	U	D	SD
Effectiveness of the training program					
The training program includes active learning of essential midwifery competencies					
The training program allows for individual and group participation					
The training program allows for collaboration with peers and the facilitators					
The training program reflects high expectations of the participants					
Ease of Use					
The training program presents information in an appealing way					
The training program ensures effective and respectful communication					
The training program allows for questions and feedback opportunities					

Thank you for your participation!!!

ANNEXURE 6. FOCUS GROUP SESSION FOR CYCLE 3 (MIDWIFERY PRACTITIONERS)

The focus group discussion will take place in the clinical setting. The meeting will be arranged with the nurse manager and requirements such as a meeting venue, seating arrangement and audio-recording will be discussed. Seating will be arranged in a circle to prevent any barriers or feelings of intimidation among participants. All participants should be comfortable. Directions to the restrooms will be given prior to commencement of the discussion.

The focus group discussion will be conducted in three phases.

The introduction phase includes the following:

1. Welcome
2. Introduction of the Facilitator, Co-facilitator and participants
3. Purpose of the focus group
4. Ground rules
 - voluntary participation and probing if necessary
 - Every person's experiences and opinions are important.
 - There are no right or wrong answers
 - Speak up whether you agree or disagree.
 - We want to hear a wide range of opinions.
 - What is said in this room stays here
 - Feel comfortable to share your views
 - We want to capture everything you have to say. WE WILL BE TAPE RECORDING THE GROUP
 - You will remain anonymous in our report

Conducting the focus group

A facilitator (who is the research assistant) and a co-facilitator (who is the researcher) will conduct the focus group. The facilitator will lead the discussion whilst the co-facilitator will take notes and run the tape recorder. Name tents with associated numbers will be used identify participants for

anonymous identification of individuals as they make comments. The facilitator will ask the first question to commence the discussion. She will try to keep the group talking by stimulating the discussion wherever necessary without using any bias comments. Probing techniques will be used to clarify comments that are unclear.

The following questions were designed to guide the focus group session:

1. How would you describe your experience related to the mentorship training that you attended?
2. Was the training beneficial to you?
3. Can you explain further?
4. How do you feel about mentoring students in the clinical area after this training?
5. What challenges did you experience during the mentorship training that you would like to discuss further?
6. What can we do to improve the mentorship skills training?
7. Think back about the training session-
 - 7.1. What did you like best in the training session?
 - 7.2. What did you dislike about the training session?
 - 7.3. Are there any concerns about your role as a mentor to undergraduate students?

Conclusion phase:

In this phase, the facilitator will relook at the purpose of the focus group and identify if all aspects were completed. The co-facilitator will summarize the main points. She will then thank the facilitator and the participants and turn the tape recorder off. Refreshments will be available at the end of the focus group for all participants.

ANNEXURE 7: INTERVIEW GUIDE FOR MIDWIFERY PRACTITIONERS

Thank you for taking the time to meet with us today. My name is Mrs Hafaza Bibi Amod and this is my research assistant (Name to be confirmed). He/she is also the person who will be conducting the interview. We would like you to talk about your experiences in the 4-weeks mentorship training that you completed. As one of the overall components of our program is evaluation, we are assessing the effectiveness of the training and at the same time identifying suggestions/recommendations to improve the training. The interview should last about 45 minutes. The interviewer will audiotape the session to ensure that all valuable comments are captured. I will be assisting by taking some notes during the session. All responses will be kept confidential. This means that your interview responses will only be shared with research team members and we will ensure that any information we include in our report does not identify you as the respondent. Remember, you don't have to talk about anything you don't want to and you may end the interview at any time. Are there any questions about what I have just explained?

Are you willing to participate in this interview?

Interviewee: _____

Date: _____

The interview questions

1. Can you tell us your personal experience in the Mentorship training course that you attended and completed?
2. Has the training been what you expected? How?
3. What aspects of the training did you find beneficial?
4. What aspects of the training would you like to improve?
5. In terms of the course content:
 - 5.1. Was it easy to understand?
 - 5.2. Was it adequate to support you in your role as a mentor?
6. How would you rate your mentorship skills on a scale of 1-4? (1= poor, 2= satisfactory, 3= good, 4= excellent)
7. Would you recommend this course to other registered midwives in practice?
8. Are there any suggestions to improve the training and what are they?
9. Is there anything more you would like to add?

We will be analyzing the information you and others gave to us. A draft report will be written and available in the next 3 months.

Would you like a copy to review at that time? [YES/NO]

ANNEXURE 8: PERMISSION LETTERS

8.1: REGISTRAR'S APPROVAL LETTER



12 July 2018

Mrs Hafaza Bibi Amod (SN 214582170)
School of Nursing and Public Health
College of Health Sciences
Howard College Campus
UKZN
Email: Amodh@ukzn.ac.za

Dear Mrs Hafaza Amod

RE: PERMISSION TO CONDUCT RESEARCH

Gatekeeper's permission is hereby granted for you to conduct research at the University of KwaZulu-Natal (UKZN) towards your postgraduate studies, provided Ethical clearance has been obtained. We note the title of your research project is:

"Analyzing and strengthening clinical support for midwifery students at a selected University in KwaZulu-Natal, South Africa: A mixed methods design."

It is noted that you will be constituting your sample as follows:

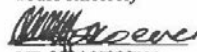
- Handing out questionnaires to undergraduate Midwifery students
- Conducting focus group discussions and/or interviews with postgraduate Midwifery students
- Conducting pre- and post-test experiments on Masters Midwifery students on the Howard College Campus.

Please ensure that the following appears on your notice/questionnaire:

- Ethical clearance number;
- Research title and details of the research, the researcher and the supervisor;
- Consent form is attached to the notice/questionnaire and to be signed by user before he/she fills in questionnaire;
- gatekeepers approval by the Registrar.

You are not authorized to contact staff and students using 'Microsoft Outlook' address book. Identity numbers and email addresses of individuals are not a matter of public record and are protected according to Section 14 of the South African Constitution, as well as the Protection of Public Information Act. For the release of such information over to yourself for research purposes, the University of KwaZulu-Natal will need express consent from the relevant data subjects. Data collected must be treated with due confidentiality and anonymity.

Yours sincerely

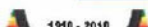

MR S S MOKOENA
REGISTRAR

Office of the Registrar


Postal Address: Private Bag X54001, Durban, South Africa

Telephone: +27 (0) 31 260 8005/2206 Facsimile: +27 (0) 31 260 7824/2204 Email: registrar@ukzn.ac.za

Website: www.ukzn.ac.za



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ANNEXURE 8.2. DEAN'S APPROVAL



10 August 2018

To whom it may concern

Re: Gatekeeper Permission Letter - Mrs Hafaza Bibi Amod, Student Number: 214582170

I am pleased to grant Mrs Amod the full support to conduct the research study, title: **"Analyzing and strengthening the clinical support for midwifery students at a selected University in KwaZulu-Natal, South Africa. A mixed methods and action research design"**

I also acknowledge that Mrs Amod's research study will include Midwifery Undergraduate and Advance Midwifery Post-graduate students, enrolled into Nursing Programmes in the School of Nursing and Public Health, at the University of KwaZulu Natal, Durban. Further, she will require the use of the skill laboratory, available equipment and supplies to conduct mentorship skills training for Advanced Midwifery students.

I hereby grant Mrs Hafaza Bibi Amod the provisional support, so she could continue with the planned research activities in order to complete her PhD Degree.

Should you require any information in this regard, please contact my office on 031 260 3316 or e-mail Moshabela@ukzn.ac.za

Thanking you

Yours sincerely

**PROFESSOR: MOSA MOSHABELA
DEAN AND HEAD
SCHOOL OF NURSING & PUBLIC HEALTH**

School of Nursing and Public Health
Postal Address: University of KwaZulu-Natal, School of Nursing and Public Health, Howard Campus, Private Bag X 54001,
Durban, 4000
Telephone: +27 (0) 31 2602499 Facsimile: +27 (0) 31 2601543 Website: www.ukzn.ac.za

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ANNEXURE 8.3. ACADEMIC LEADER'S APPROVAL



Date: 24 July 2018

Re: GATE KEEPER LETTER FOR RESEARCH PROPOSAL

We are pleased to provide this letter of support for the research study proposed by the Mrs. Hafaza Bibi Amod, student Number: 214582170 at the university of Kwazulu Natal, School of Nursing and Public health:

Our understanding is that the research proposal titled: **Analyzing and strengthening clinical support for Midwifery students at a selected University in Kwazulu-Natal, South Africa: A mixed method design**, will involve collection of data from Midwifery students registered into Masters and 4th year Bachelor of Nursing students.

This letter serves as a gatekeeper permission letter to grant provisional support for these planned activities and to support the staff application to the relevant ethics Committee.

Yours sincerely

Professor GG Mchunu

Academic Leader: Nursing

School of Nursing and Public Health
Postal Address: University of Kwazulu-Natal, School of Nursing and Public Health, Howard Campus, Private Bag X 54001,
Durban, 4000
Telephone: +27 (0) 31 2602499 Facsimile: +27 (0) 31 2601543 Website: www.ukzn.ac.za

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ANNEXURE 8.4. PERMISSION TO USE OF RESEARCH TOOL

Professor Mary Carolan (Victoria University)

From: Mary Carolan <Mary.Carolan@vu.edu.au>
Sent: Friday, 22 June 2018 02:48
To: Hafaza Amod
Subject: RE: permission to use research ideas

Hi Hafaza,

You are welcome to use any ideas/ questions from the paper, that you find useful.

The only thing that is required is that you should reference the paper in any publications.

All the best with your research.

Kind regards,

Mary

Prof Mary Carolan-Olah

Professor of Midwifery and Women's Health

College of Health and Biomedicine

Victoria University, PO Box 14428

Melbourne 8001, Australia

Email: mary.carolan@vu.edu.au

CRICOS Provider No. 00124K (Melbourne) CRICOS Provider No. 02475D (Sydney)



This email and any files transmitted with it are confidential and are intended solely for the use of the individual or entity to whom they are addressed. If you have received this email in error please notify the system manager. Please note that any views or opinions presented in this email are solely those of the author and do not necessarily represent those of Victoria University.

From: Hafaza Amod <Amodh@ukzn.ac.za>

Sent: Thursday, 21 June 2018 3:36 AM

To: Mary Carolan <Mary.Carolan@vu.edu.au>; Gina Kruger <Gina.Kruger@vu.edu.au>; Ruby Walter <Ruby.Walter@vu.edu.au>; mazzarino@vu.edu.au

Subject: re: permission to use research ideas

Respected Authors

I hope this email finds you well.

My name is Mrs Hafaza B. Amod. I am a lecturer and PhD student at the University of KwaZulu-Natal, South Africa.

I am currently working on my research proposal entitled "Analyzing and strengthening the clinical support for midwifery students at a selected University in Kwa Zulu-Natal, South Africa: a mixed method and action research design.

I read your article "Final year students' experiences of a Bachelor of Midwifery course."

I humbly request permission to use some ideas from your interview questions by amending them to suit my own study objectives.

Your support in this regard will be highly appreciated.

I look forward to your response.

Kind regards

Mrs HB Amod

Lecturer- Howard Campus

UKZN- School of Nursing and Public Health

ANNEXURE 8.5. PERMISSION TO USE RESEARCH TOOL

Professor Rosemary Hogan (University of Technology Sydney) -

From: [Hafaza Amod](#)
To: [Rosemarie Hogan](#)
Subject: Re: permission to use research tools
Date: Tuesday, June 26, 2018 4:19:14 AM

Dear Rosemary Hogan

Thank you for granting me permission to use and adapt your research tool. Yes I will acknowledge you as the authors.

God bless.

Your sincerely
Hafaza

Get [Outlook for Android](#)

From: Rosemarie Hogan
Sent: Tuesday, June 26, 1:21 AM
Subject: Re: permission to use research tools
To: Hafaza Amod

Dear Hafaza,

Thank you for your email. Yes, we give you permission to use a selection of the the survey questions in the tables. However, we ask that you acknowledge the source which I am sure you intend to do anyway.

I wish you every success with your studies,

Yours sincerely,
Rosemarie Hogan

On 25 Jun 2018, at 5:54 pm, Hafaza Amod <Amodh@ukzn.ac.za> wrote:

Respected Authors

I hope this email finds you well.
My name is Mrs Hafaza B. Amod. I am a lecturer and PhD student at the University of KwaZulu-Natal, South Africa.
I am currently working on my research proposal entitled "Analyzing and strengthening the clinical support for midwifery students at a selected University in Kwa Zulu-Natal, South Africa: a mixed method and action research design.

I read your article "Peer to peer mentoring: Outcomes of third-year midwifery students

ANNEXURE 8.6. APPROVAL FROM NATIONAL HEALTH RESEARCH DATABASE



health

Department:
Health
PROVINCE OF KWAZULU-NATAL

Physical Address: 330 Langalibalele Street, Pietermaritzburg
Postal Address: Private Bag X9051
Tel: 033 395 2805/ 3189/ 3123 Fax: 033 394 3782
Email: hrkm@kznhealth.gov.za
www.kznhealth.gov.za

DIRECTORATE:

Health Research & Knowledge
Management

Ref: KZ_201810_020

Dear Mrs H B Amod
(UKZN)

Subject: Approval of a Research Proposal:

1. The research proposal titled '**Analyzing and strengthening the clinical support for midwifery students at a selected University in KwaZulu-Natal, South Africa: A mixed methods and action research design**' was reviewed by the KwaZulu-Natal Department of Health.

The proposal is hereby **approved** for research to be undertaken at King Edward VIII, Prince Mshiyeni Memorial, RK Khan and Addington hospitals.

2. You are requested to take note of the following:
 - a. Kindly liaise with the facility manager *BEFORE* your research begins in order to ensure that conditions in the facility are conducive to the conduct of your research. These include, but are not limited to, an assurance that the numbers of patients attending the facility are sufficient to support your sample size requirements, and that the space and physical infrastructure of the facility can accommodate the research team and any additional equipment required for the research.
 - b. Please ensure that you provide your letter of ethics re-certification to this unit, when the current approval expires.
 - c. Provide an interim progress report and final report (electronic and hard copies) when your research is complete.
3. Your final report must be posted to **HEALTH RESEARCH AND KNOWLEDGE MANAGEMENT, 10-102, PRIVATE BAG X9051, PIETERMARITZBURG, 3200** and e-mail an electronic copy to hrkm@kznhealth.gov.za

For any additional information please contact Ms G Khumalo on 033-395 3189.

Yours Sincerely

Dr E Lutge

Chairperson, Health Research Committee

Date: 2018/11/18

Fighting Disease, Fighting Poverty, Giving Hope

ANNEXURE 8.7. ETHICAL APPROVAL- 2018 UKZN



10 December 2018

Mrs Hafaza Bibi Amod (214582170)
School of Nursing & Public Health
Howard College Campus

Dear Mrs Amod,

Protocol reference number: HSS/1509/018M

Project title: Analyzing and strengthening the clinical support for midwifery students at a university in KwaZulu-Natal, South Africa.
A mixed methods and action research design

Approval Notification – Expedited Approval

With regards to your response received on 26 November 2018 to our letter of 09 October 2018, the Humanities & Social Sciences Research Ethics Committee has considered the abovementioned application and the protocol have been granted **FULL APPROVAL**.

Any alteration/s to the approved research protocol i.e. Questionnaire/Interview Schedule, Informed Consent Form, Title of the Project, Location of the Study, Research Approach and Methods must be reviewed and approved through the amendment/modification prior to its implementation. In case you have further queries, please quote the above reference number.

Please note: Research data should be securely stored in the discipline/department for a period of 5 years.

The ethical clearance certificate is only valid for a period of 3 years from the date of issue. Thereafter Recertification must be applied for on an annual basis.

I take this opportunity of wishing you everything of the best with your study.

Yours faithfully

Professor Shenuka Singh (Chair)

/ms

cc Supervisor: Professor NG Mtshali
cc Academic Leader Research: Dr Tivani Mashamba-Thompson
cc School Administrator: Ms Carol Dhanraj

Humanities & Social Sciences Research Ethics Committee

Professor Shenuka Singh (Chair)

Westville Campus, Govan Mbeki Building

Postal Address: Private Bag X54001, Durban 4000

Telephone: +27 (0) 31 260 3587/8350/4557 Facsimile: +27 (0) 31 260 4609 Email: ximbap@ukzn.ac.za / snymann@ukzn.ac.za / mohunp@ukzn.ac.za

Website: www.ukzn.ac.za



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ANNEXURE 8.8. ETHICAL APPROVAL- 2020 amendments application



09 September 2020

Mrs Hafaza Bibi Amod (214582170)
School of Nursing & Public Health
Howard College Campus

Dear Mrs Amod,

Protocol reference number: HSS/1509/018M

New project title: Analyzing and strengthening the clinical support of undergraduate midwifery students and developing a mentorship training program at a higher education institution in KwaZulu-Natal, South Africa: A mixed method and action research design

Approval Notification – Amendment Application

This letter serves to notify you that your application and request for an amendment received on 04 August 2020 has now been approved as follows:

- Change in title
- Change in Supervisor (Prof NG Mtshali → Dr SW Mkhize)
- Amendment to the Purpose of the study
- Amendment to Research Objectives 3 and 4
- Amendment to Research Questions
- Changes in Research Participants
- Changes in Research Instrument (Questionnaire)

Any alterations to the approved research protocol i.e. Questionnaire/Interview Schedule, Informed Consent Form; Title of the Project, Location of the Study must be reviewed and approved through an amendment /modification prior to its implementation. In case you have further queries, please quote the above reference number.

PLEASE NOTE: Research data should be securely stored in the discipline/department for a period of 5 years.

All research conducted during the COVID-19 period must adhere to the national and UKZN guidelines.

Best wishes for the successful completion of your research protocol.

Yours faithfully

.....
Professor Dipane Hlalele (Chair)

/ms

Humanities & Social Sciences Research Ethics Committee
UKZN Research Ethics Office Westville Campus, Govan Mbeki Building
Postal Address: Private Bag X54001, Durban 4000
Tel: +27 31 260 8350 / 4557 / 3587
Website: <http://research.ukzn.ac.za/Research-Ethics/>

Founding Campuses: Edgewood Howard College Medical School Pietermaritzburg Westville

INSPIRING GREATNESS

ANNEXURE 9: LANGUAGE EDITORS REPORT

Gill Smithies

Proofreading & Language Editing Services

59, Lewis Drive, Amanzimtoti, 4126, KwaZulu Natal

Cell: 071 352 5410 E-mail: moramist@vodamail.co.za

Work Certificate

To	Ms. H. Amod
Address	School of Nursing and Public Health, University of KwaZulu Natal
Date	04/07/2022
Subject	Thesis: Analyzing and strengthening the clinical support of undergraduate midwifery students and developing a mentorship training program at a higher education institution in KwaZulu-Natal, South Africa: A mixed method and action research design
Ref	HA/gS/01

I certify that I have edited the following for language (US English), grammar and style,

Thesis, Chapters 1,5,6,7: Analyzing and strengthening the clinical support of undergraduate midwifery students and developing a mentorship training program at a higher education institution in KwaZulu-Natal, South Africa: A mixed method and action research design, by H. Amod,

to the standard as required by the University of KwaZulu Natal.

Gill Smithies

ANNEXURE 10: TURNITIN REPORT

The screenshot displays a Turnitin report interface. The main document area shows the title "Analyzing and strengthening the clinical support of undergraduate midwifery students and developing a mentorship training program at a higher education institution in KwaZulu-Natal, South Africa: A mixed method and action research design." and the author "Mrs Hafaza Bibi Amod" with student number "214 582 170". The document is identified as a dissertation submitted to the Discipline of Nursing, School of Nursing and Public Health, College of Health Sciences, University of KwaZulu-Natal.

The right sidebar, titled "Match Overview", shows a total match percentage of 5%. It lists six matches with their respective percentages and sources:

Match Number	Source	Percentage
1	www.ncbi.nlm.nih.gov (Internet Source)	1%
2	hdl.handle.net (Internet Source)	1%
3	repository.up.ac.za (Internet Source)	<1%
4	ajhpe.org.za (Internet Source)	<1%
5	Submitted to University... (Student Paper)	<1%
6	researchprotocols.org (Internet Source)	<1%

The bottom status bar indicates "Page: 1 of 84", "Word Count: 25704", and options for "Text-Only Report" and "High Resolution" (set to On).

ANNEXURE 11: TRANSCRIPTIONS OF FOCUS GROUP 2

DATE: 13 APRIL 2022

Researcher: How would you describe your experience in the mentorship training that you attended?

Participant 3: The course was good and helped to refresh my midwifery knowledge especially when you are a registered midwife. You tend to forget a lot of information because you are not seeing things anymore and also adding to the things I didn't know in terms of mentorship and how to go about mentoring students in clinical practice. What was important for me was how I could go about interacting with my students in the clinical sites.

Participant 1: I also felt that the mentorship training was very informative. It was a refresher on most of the things and most importantly my mentorship skills have improved. SO if I have to go about mentoring students now I have the knowledge on how to go about doing that- so it was very informative.

Participant 4: for me the MTP was really valuable. I liked the fact that not only are we taught on how to mentor and the values that a mentor should have but also reminded us of the procedures. It was like a refresher course. If I need to teach someone how to do a competency I need to be reminded of the correct way myself. So, I liked that we had videos included especially for the pelvic assessment because it was something even in my midwifery training, it was not something that we saw often. So, I really appreciated how the whole MTP was set up.

Participant 2: The mentorship training was a good experience because it shows registered midwives are being guided and we were shown what to do in the clinical areas. The training was a comprehensive one and exposes us to many aspects of midwifery which we are supposed to be acquainted with in order to guide students in the clinical area and be sure of the interventions we do as midwives.

Participant 5: my experience was good. The training had every section about midwifery. It was quite good. Everything was fine and there were opportunities to ask questions. So, students will be given the same opportunities when they ask for help from supervisors and mentors who will help them to practice everything.

Researcher: How was the training beneficial to you

Participant 2: the training for me was very very beneficial like some of the demonstrations you presented. I think it was the visual aspects of the training was the part that I benefitted the most. Even if you can not remember what was said you will be able to visualize some of the

demonstrations presented during the training. So, for me the training was very very beneficial even though I was unable to join the whole week. But for the sessions, I attended, I gained a lot.

Participant 1: I would like to add on from what was said. Especially for midwifery, theory is very important however demonstrating and visual learning in midwifery it is so much more important. So when the demonstrations were done during the training I felt it was very beneficial because if you have a visual representation of the theory that was discussed, it just clicks so much better in a student or individuals mind, When you actually teach something from the text book and then you actually see it taking place- in accordance to the theory it helps so much more as opposed to just discussing it, reading from the books and then discussing it again. So I felt that aspect of the training was absolutely beneficial.

Participant 4: it was beneficial because it basically teaches you how give the best to the students as you mentor them. Sometimes we want to mentor students but we are not doing it correctly and you end up not benefitting the student. The student is not gaining anything because you are not doing a good job, then you both end up frustrated because you are not coming across clearly to your student. But here you are reminding us how to be a proper mentor and how you can teach and assist students you are mentoring to gain the most from the knowledge you giving them.

Participant 5: the training was very good- it reminded us about the value of mentorship and what to do when we are supervising students, how to check on the attendance and how many students. So, I appreciated that I had the opportunity to attend this training.

Participant 3: It was very beneficial to me. Like my colleagues have said now the inclusion of the videos in the main discussions was very important. It makes you remember and to understand even more better what was being discussed. And it helps. For me. To remember a lot of the things cos if you have seen something then you would remember it, it will click what you discussed and then it will all make sense.

Researcher: how do you feel about mentoring students post the training?

Participant 4: it gives me a it of confidence because I know when I go the clinical skills lab, I will be doing the right thing. In the mentorship training it teaches you that when you are mentoring or assessing a student, it is for their benefit so you don't need to be too harsh. It taught me the good values that a mentor should have, so carrying these values to the clinical sites gives me confidence that I am doing the right thing.

Participant 3: Personally, I enjoy mentoring students just in general, so that is why I felt that nursing education will be the right choice -so as mentoring is a facet of education, I will feel very confident going into the clinical sites to mentor students and it helped me gain a little bit of insight as well as a few tips on how I can apply my skills in the clinical sites.

Participant 2: for me, mentoring students is an aspect of nursing I enjoy but unfortunately when you go to the clinical areas you can see that there are no mentors both in general and midwifery

and if that can be looked into and the school and the hospitals are able to allocate mentors for students it will be so helpful and for me with this mentorship training I attended , I feel equipped to mentor nurse and midwives in the clinical areas and mentoring is very very necessary and important in nursing and you show them how to do mentoring.

Participant 5: I feel comfortable because sometimes I can be a mentor but I don't know the roles and responsibilities so I had to be reminded so I can be a good example to our students.

Participant 1: Personally, I do enjoy mentoring students and with this training program , it helped me increase my confidence, self-awareness and leadership skills and I'm also becoming a good listener which is important when you are mentoring students because you also have to listen and get to understand things from their own perspectives and it is a very good thing that at least students will have somebody or people with them during their nursing practical and some people who are mentoring them and this people will be like equipped and know what they are doing. So, this training is beneficial and helped me a lot.

Participant 3: ye, I want to add one more thing about mentorship and inclusion at school level. If you look at other facets of education, like facilitation, lecturing, preceptorship etc, mentorship is possible in my opinion the most beneficial support that can be offered to students because it puts an expert into the clinical sites to guide students at that level. Which I feel for them will be absolutely beneficial so I think maybe the school should also look into the inclusion of these mentors especially for the undergraduate modules. It will help them when learning theory in class and then have someone who can actually guide them in the clinical sites based on the theory that was learnt.

Researcher: how did the training equip the attendees to do mentorship?

Participant 3: Yes, it has equipped attendees in terms of being able to take what was learned, take the skills and the tips offered in this training and apply it in the actual clinical sites they are working in with students and mentor them efficiently and also see growth in these students based on the mentorship skills they gained in this training.

Participant 1: I also agree. This training was efficient and very useful and I know everyone who attended this training will be able to do a good job in mentoring students. we know exactly what is required, we have all the skills and the information that is necessary in midwifery.

Researcher: did you have challenges with the training method:

Participant 3: I think when you have training sessions, then you miss the face to face interaction with the host and with the other attendees as well. Other than that, may be the time constraints

especially if you had to be at work. Even though you could join in but my attention may not have been 100%.

Participant 4: Hmm, with learning people can become distracted. Face to face is easier to talk like for keeping the attention, keeping the focus, to ask questions but I am not sure if it is practical or feasible for working people. But with online teaching, it can reach a wider range of mentors- not only people who can come to the venue.

Participant 5: no, there were no challenges except that one needs to have data to log in and a problem may arise if you are in a rural area with poor WIFI coverage.

Participant 2: yes, with me it was the connectivity issue. Another challenge was the time because some of the time I was busy with work and other things. So those were the challenges for me.

Participant 1: my challenge was that I was at work but I managed to attend. Some days I joined late.

Participant 4: having it Monday to Friday and working, so the flexibility of the time was an issue. Otherwise it was very clear and the video presentation was easy to understand and you were there to answer questions if we had any.

Researcher: what aspect of the training was the best?

Participant 1: I enjoyed the visuals- watched the videos and actually see what was being discussed.

Participant 3: I also agree, personally I am a visual learner. The videos, pictures, the demonstrations, the examples attached to the visual parts- that for me was the best part

Participant 2: For me the visuals were very helpful and also the presentation was very comprehensive and touched every aspect of the skills needed to know about. The videos are there and the demonstration were the most beneficial to me.

Participant 4: I really liked the demonstrations of the competencies. The videos because we also go out to the clinical field and we make short cuts and we do things what other people are doing which is not necessarily correct. So those demonstrations were my highlights. It reminds you that the demonstrations you teaching must be done correctly. I also like that after each presentation you stopped and checked with everyone if they were on the same page and if there were any questions before we proceeded.

Participant 5: yah, everything was good, but the best one was how to do Pelvis examination. So, I also teach this to my students and it was the best for me. The information was adequate to support me and how to support other registered midwives supervising students.

Researcher: Were there any aspect of the training you disliked?

Participant 1: no

Participant 2: No, the training was very nice. The youTube videos you made for someone who could not join the whole online sessions, I was able to go back to the youtube videos and catch up on those sessions.

Participant 4: Hmm, I didn't dislike anything, nothing I can think about this moment, but like I said the challenge was the time but there was nothing I disliked.

Participant 5: yes, everything was good.

Participant 3: there was not anything I didn't enjoy. I enjoyed the entire week of training.

Researcher: are there any concerns around your role as a mentor?

Participant 3: I think for me, the only concern is not knowing the information needed to mentor students and that is my own gap/ lack in knowledge. Not only in midwifery not being equipped with the proper knowledge to go in and mentor these students.

Participant 2: I don't have any concerns regarding my role as a mentor because the mentorship is about helping students to link theory learned and practice, SO I have the basics to mentor students effectively so I don't have any concerns.

Participant 5: no concerns at the moment

Participant 1: I also don't think I have any concerns

Participant 4: So, there is no one checking if I am doing the right thing. So if we have these training programs which is beneficial for the people who are mentoring, then if maybe there is like an orientation for mentors. SO the mentorship training is beneficial and must be offered to anyone mentoring students as a compulsory thing.

Participant 3: because in our day and age, I enjoy online training. Sometimes you are not able to go to a classroom, workshop or seminar but with online training sessions I can still go for a training and be at work.

Researcher: any recommendations to improve the MTP?

Participant 2: If the MTP is to be done for nurses in the clinical area- permission to be taken from the employer to allow nurses the time to attend this training which is going to benefit everyone., the nurses and the students. in terms of the connectivity, it depends on the area you are staying and this is an individual issue.

Participant 4: I suggest having a once a week thing which will be easier for people to avail themselves.

Participant 3: yes, I do agree with that point of the allocation of staff who will be responsible for mentorship in the clinical sites. So the training not only benefits the school also the training hospital because you will be having training for experts who will remain in the department so it will be very beneficial for that hospital.

Participant 1: yes I agree with that

Participant 3: can I also add that another challenge is to get staff members to attend for a week. So sometimes, we have to consider the department they are working in so that is why it may be a challenge.

Participant 5: more time to practice and master the skills. We need to encourage more people to attend the training to improve their mentorship skills.

ANNEXURE 12: TRANSCRIPTIONS OF INTERVIEW

Interview 2:

Researcher: The purpose of this interview is to evaluate the recent mentorship training program that you have attended during 14-18 March 2022. So, the interview is basically to find out how was your experience in the recent mentorship training.

Researcher: Can you describe your personal experience in the mentorship training program that you attended?

Interviewee: Okay, thank you. Even though I didn't attend all the days but during the days when I attended I enjoyed the training. The only thing is, people kept on you know joining late and I think it's important for the health professionals to try and keep so the time because of the kind of work that we are doing, but anyway, about the training the training was planned well. The information that was given was enough it's just that I didn't take my laptop on. I will send to you on email just to tell you which skill, where we were supposed to give feedback to the patients at the end where you forgot to do that, otherwise you know the objectives were covered all the steps were done properly and yeah I think it went very well.

Researcher: Okay, so has the training been what you expected? How?

Interviewee: It was. it's not what I expected I thought it was just you know, training, like all other trainings I wasn't expecting that you will be teaching or training colleagues on each and every skill so it was above my expectation. I must say I was very impressed with it. Because really I thought you were just calling the colleagues to emphasize what should be done, how it should be done not that you will be in detail with each and every skill, so that was perfect on my side.

Researcher: Was there any aspects of the training that you found was beneficial to you?

Interviewee: The whole workshop was beneficial to me as a midwife, even though I am a lecturer we do have clinical instructors, but on my side because I work closely with the clinical instructors and I also go to the lab to do clinical skills, so it was very beneficial to me as well in that manner.

Researcher: Okay, was the demonstration of and the videos the aspect that you found more beneficial or was there any other aspects?

Interviewee: That yeah, the videos on how you are doing the skills. It also reminded me on how to do some of the skills, because I haven't been to the lab you know, in a while, because in the university where I am working usually the lecture is just teaching and there are clinical instructors, who will do the clinical parts, but since last year, we started to collaborate with the clinical instructors, so I also work closely with them, so the videos were very helpful. Especially, to act as a reminder on my side and how the skills are done, what are the critical points you know on that.

Researcher: So what aspects of the training would you like to improve?

Interviewee: there's nothing much besides what we suggested that we can continue with this as a team, maybe. In any case at the end, for now, have midwives coming together reminding each other on how different skills should be done, you know that will be beneficial to all the midwives in the facilities colleges and universities and keeping the standard of excellence exactly.

Researcher: Okay, so in terms of the course content was it easy to understand.

Interviewee: it was very easy for me, it was clear. I think, even the colleagues from the service benefited a lot from it.

Researcher: Was the information contained in the course content adequate to support you in a role as a mentor.

Interviewee: Yes it was adequate.

Researcher: Would you like to elaborate a little bit on how you found it to be adequate.

Interviewee: Adequate because you know you had all the steps on each and every skill and the steps were clear and you were supporting you know verbally on the side, so you know each person who wants to do any skill that you demonstrated that they would know exactly what to do, because each and every step was clear and there was a flow on whatever you were doing. You know, from the beginning to the end.

Researcher: So post your attendance to this mentorship training, how would you rate your own mentorship skills on a scale of one to four where One is poor two is satisfactory, three is good and four is excellent.

Interviewee: You know I would rate it's at three, I would like to rate myself at four, because I work very closely with my clinical instructors, but I will leave maybe a one, but so far, I will rate it to three because Immediately when I saw what your workshop was about, I invited one of the clinical instructors that i'm working with. Afterwards, we had to discuss your videos I had to call the other one so we could correct how we were doing things you know as I said to you, we need to work together collaboratively. So, since then we have been polishing our skills, you know from the knowledge that I gained from your workshop.

Researcher: that's so good to hear. Okay, would you recommend this course to other registered midwives in practice.

Interviewee: Lots, I would recommend it a lot, because you know when you are accompanying students you'll find that whatever is being taught at a university or college in most cases in the facilities, they don't do the skills exactly how they are supposed to be done. So, you know that our colleagues from service needs that reminder that constant workshop as well. Maybe if it's done per hospital -have just those sessions for all the midwives, and then go there or send them videos. maybe you will have to just send videos to all the hospitals I don't know but, again, for them to be able to ask questions I think it's also important that we go to them physically. And now I say 'we' because we want to do this collaboratively. So you know when you are there, it's better for the next person to ask a question if there is something that she or, he is not clear about.

Researcher: Do you have any recommendations or any suggestions on how to improve future training sessions is there anything that you think we can improve on and maybe add in the next training.

Interviewee: it's just that I didn't attend all your workshop days so i'm not sure which other skills you demonstrated, but I think, looking at the current, especially under the abnormalities we can just look at what is more out there, what is happening, a lot out today, and then you know each time improve with what is the gap that we find when maybe looking at the stats. And then we can identify that as our midwives are lacking here, maybe there is high maternal mortality and morbidity rates due to this, then we try and quickly develop something that will help the midwives. so it's not easy to be specific on skills, I think, with what you presented it was enough thereafter,

we just need to look at the problems that we have out there, listen to the news check the stats from DOH and also see where we can help.

Researcher: Okay, so we almost at the end of this interview is there anything that you would like to add in this interview.

Interviewee: Just to emphasize, or maybe encourage you to do the collaborative workshops that we requesting. It will be beneficial to us as educators, as well as to the service, we can even do it together as educators, because that's our duty anyway, and then we can take it out there to assist our colleagues in service.

Researcher: So this brings us to the end of the interview, I would like to thank you for your participation in this interview, and in the larger part of my study. It was so good, having you give me the support and encouragement I know it's not only now but you have been doing so for some time now, and I just wanted to take this opportunity to thank you and say that your support is greatly appreciated.

Interviewee: Thank you so much, and I wish you all the best in your PhD and the stage you are in. I wish you all the best success, I hope, everything goes well. Thank you so much.

Researcher: Okay, thank you and all the best with your visitors. Hope you have a lovely day.

Interviewee: Thank you, you too.

ANNEXURE 13: A MENTORSHIP GUIDE FOR MIDWIFERY PRACTITIONERS