

instructions from the clinical teacher or mentor. In such cases supervision is needed throughout the performance for the NMT to complete a simple task. Similarly, the beginner is uncertain about what actions would be performed and performs simple tasks better under supervision. On the other hand, the competent student performs some of the basic skills but requires constant supervision to improve speed and accuracy. The proficient student is able to perform most of the basic skills as a routine but needs supervision for refinement of the performance.

5.2.4.1.2.1.3 Autonomy

This is concerned with the level of independence and responsibility demonstrated by the student during the performance of a skill. A student performing at the novice level does not make his/her own decision to execute an action unless she/he gets instruction and assistance from the clinical teacher or mentor. Likewise, the beginner follows rules to perform an action and does not feel responsible for the outcome of his/her actions. However, the competent student will demonstrate some responsibility and performs some tasks based on his/her own judgement. Similarly, the proficient student takes responsibility and makes some decisions to perform most of the basic skills required for neonatal health within the NMT's scope of practice.

5.2.4.1.2.1.4 Attitude and perception of context

This is concerned with the student's approach and sensitiveness around patient care and interaction. The behaviour and attitude portrayed by nurses and midwives during the provision of care may affect the outcome and quality of neonatal health. In view of this, assessment of attitude and perception of the NMTs during the provision of neonatal nursing care is important to enhance professional development and quality care. Thus, the activities to be assessed under this

element might include students' interpersonal relationships and communication. A student performing at the novice stage has fragmented ideas, is unable to interact with the patient and family members and seems confused and uninterested in performing any task. The beginner may have some ideas of the situation but he/she is not sure what information would be needed, and usually becomes self-defensive because of confusion. On the other hand, the competent student is good at establishing rapport and seeks assistance when needed but becomes easily stressed and confused in complex situations. The proficient student is confident with good interpersonal relationships and seeks assistance wherever she has identified limitations.

Thus, the clinical teachers or mentors would be guided by this rubric to interpret the NMT's performance for each clinical competency area in neonatal nursing. However, neonatal nursing being a course taught in the final year of the NMT's training programme, midwifery part 2 module, the student is expected to apply some basic knowledge and skills obtained during the midwifery part one module to provide care to the neonate and the family. As such, the NMT may not necessarily move from one stage to the other, sequentially, in the process of skills acquisition. For instance, during the neonatal nursing practice, the NMT may demonstrate some skills as either a beginner or novice or competent or proficient depending on the complexity of the skill or previous encounter with a similar situation. Nevertheless, the NMT is expected to demonstrate the minimum level of proficiency in the provision of basic neonatal care services throughout the midwifery and neonatal nursing training programme. It is believed that using this rubric for the competency-based clinical assessments would enhance the objectivity and fairness of clinical assessment outcomes for nurse-midwife technicians.

5.2.4.1.2.2 Reflective questions

Following the rating scale, the assessment tool includes a component of reflection for each competency area to guide the student and clinical teacher provide evidence of the level of clinical performance. For instance, the NMT will be required to provide evidence regarding his/her performance for each competency area by responding to the reflective questions. This will enable the NMT to give evidence of his/her own performance through a self-assessment on the progress towards the targeted performance 'in relation to the established standards and criteria' (McMillan & Hearn, 2008:42). In addition, using this approach, the NMT would be encouraged to identify his/her strengths and challenges faced during practice and strategies for further improvement of own clinical performance.

Similarly, to ensure credibility of the assessment outcome, the clinical teacher who had observed the student performing the skill will be required to provide evidence of the student's level of performance also by responding to reflective questions. This will help them to describe the attributes demonstrated by the student in the course of practice, thereby aiding the interpretation of the level of performance on the scale of 1-4. In addition, the clinical teacher will utilise this information to provide objective feedback to students that clearly relate to the established performance standard and criteria (McMillan & Hearn, 2008:4) as well as help in devising ways to assist the student improve his/her clinical competence where necessary.

5.2.4.1.2.3 Roles and responsibilities

In addition to the rubric and reflective questions, the assessment tool includes the roles and responsibilities expected of both the clinical teachers (Box 4.3) and students (Box 4.2). These

roles and responsibilities define the specific tasks and activities expected of the two parties during clinical practice in neonatal nursing. Upon understanding all the requirements of the clinical teaching and assessments, stipulated in the tool, both the clinical teacher and the student will be required to sign in the provided spaces to show commitment. This would promote accountability in clinical teaching and learning, thereby enhancing the achievement of clinical competence.

5.3 Summary

In this chapter, the researcher has discussed the study findings in relation to available literature on the subject, focusing on the study objectives. It has been noted that there is a dearth of literature on studies done to assess or describe neonatal nursing clinical competencies for pre-registration training. In addition, it has been noted that neonatal nursing practice for pre-registration nursing students is not a requirement for pre-requisite knowledge in other countries. Students are expected to apply knowledge and skills acquired from other areas for entry level practice in neonatal nursing. As such, clinical placement and assessments in neonatal care settings for pre-registration nursing students is not emphasised in the literature. However, in Malawi, neonatal nursing services are provided by nurse-midwife practitioners, most of whom are midlevel practitioners, with knowledge and skills attained during the pre-registration training, hence the need for effective strategies to improve clinical competence for this cadre of healthcare providers.

It has been noted from the literature that clinical assessments are important to provide evidence of the student's performance in the clinical setting as well as aid the identification of effective teaching strategies to improve clinical competence in preparation for entry level practice. As

such, the identification of neonatal nursing clinical competencies as well as emphasis on clinical teaching and assessment of these competencies is an important aspect to ensuring quality neonatal health services. In view of this, the chapter has also discussed the neonatal nursing care clinical competency-based assessment tool that was developed to validate the NMT's achievement of clinical competence.



CHAPTER SIX

Conclusions and Recommendations

6.1 Introduction

In this chapter, the researcher makes a conclusion on the study findings. The researcher also highlights the contributions of the study, focusing on both the theoretical and practical aspects and its implications for future research. The chapter proceeds with some recommendations to improve neonatal nursing education and practice in Malawi.

6.2 Conclusion

The purpose of the study was to develop a neonatal nursing care clinical competency-based assessment tool for Nurse-Midwife Technicians' clinical competence, in CHAM nursing colleges in Malawi. This was proposed in an attempt to promote the acquisition of clinical competence among nursing and midwifery midlevel practitioners for entry level practice. In view of this, the researcher reviewed literature on competence and assessment of clinical competence in nursing and midwifery practice, to get an in-depth understanding of the topic and to identify gaps existing in clinical competency-based assessments. The literature revealed that there is no consensus on the definition and assessment of clinical competence. However, in nursing practice, clinical competence has been viewed as holistic involving the cognitive, affective and psychomotor skills (Gillespie et al., 2012:90). The nurse and/or midwife practitioner must demonstrate attributes within these domains such as personal characteristics, professional attitude, values, knowledge and skills (Takase & Teraoka, 2011:398) to be deemed competent.

In addition, the theoretical concept surrounding clinical competence and assessment was reviewed. It was noted that improvement of clinical competence does not only involve assessment, but rather a number of concepts that include competency-based, practice-oriented methods and outcomes that promote both effective and efficient learning and assessment of the competencies. As such the COPA model (Lenburg, 1999:par.1-21) and skills acquisition model (Dreyfus & Dreyfus, 1980:1-18) were used to form the foundation for the study and the establishment of criteria for the assessment of clinical competence respectively.

Utilising a design and development model, the researcher involved midwifery clinical teachers and third year students from CHAM nursing colleges in Malawi and a consensus workshop to collect data. In addition, the researcher reviewed the learning and assessment tools used in neonatal nursing practice for this cadre of nursing/midwifery students. The study finding showed that the NMTs were taught basic nursing skills that would help them to provide basic care to health newborn babies. However, there were inadequate clinical teaching and assessments done to facilitate and assess the NMT's achievement of these skills respectively. The clinical teachers used skills checklists to evaluate specific nursing procedures. This could be attributed to the complexity surrounding the definition and description of competence in the literature that led to 'nurse educators developing tools that closely measure clinical competence' (Nicholson et al., 2013:1089). If neonatal health services are to be improved to maintain and reduce neonatal mortality rates further in Malawi, pre-registration training should emphasise clinical teaching and assessment in this field to impart the midlevel practitioners with adequate skills for entry level practice. As such, the researcher developed a neonatal nursing care clinical competency-based assessment tool to facilitate the evaluation of the NMT's clinical competence. Using this tool,

clinical teachers would be assisted to gather evidence for the students' learning experience and level of clinical performance achieved in neonatal nursing practice, thereby contributing to quality student's outcome for entry level practice in neonatal nursing. In addition, the tool may work as a framework for clinical teaching and assessment by guiding the users, both clinical teachers and students, on the requirements for neonatal nursing practice.

6.3 Contribution of the study

As previously indicated in section 6.2 the study aimed at developing a neonatal nursing clinical competency-based assessment tool that would be used for evaluation of the NMT's clinical competence. Thus by developing this tool, the study has contributed to both theoretical and practical aspects of neonatal nursing by establishing a framework for clinical teaching and assessment to enhance midlevel practitioners' skills acquisition and clinical competence. As such, the researcher discusses how the assessment tool impacts on these areas in sections 6.3.1 and 6.3.2.

6.3.1 Theoretical contribution

The study increased an understanding of clinical competence and assessment in nursing and midwifery practice. The findings from the reviewed literature on the study area and the empirical results enabled the researcher to establish the neonatal nursing clinical competencies and develop the neonatal nursing care clinical competency-based assessment tool for NMTs. The assessment tool comprises seven clinical competencies and expected standards of practice for the NMTs in neonatal nursing practice. It also presents the criteria for determining and interpreting the student's performance and setting a consistent approach to the assessment and validation of clinical competence for pre-registration training in this field. From the reviewed literature on

clinical competence assessment, some assessment tools have been developed to assess the student's clinical competence in other nursing practice settings as opposed to neonatal nursing. In addition, these assessment tools focus on registered nurses. However, the literature shows that not all the domains have been assessed using these tools, with attitude being the most difficult domain to be incorporated.

However, in this study, the developed competency-based assessment tool brings a new knowledge to the assessment of clinical competence in that the tool addresses the assessment of attitude, by defining the attributes that would demonstrate the NMT's attitude during practice. In addition, it presents a framework for the assessment of clinical competence in pre-registration neonatal nursing practice by defining what is expected of the student. This would help the student to become involved in his/her own clinical learning and assessment through reflection, thereby enhancing the acquisition of clinical competence.

6.3.2 Practical contribution

The findings from this study and the developed neonatal nursing clinical competency-based assessment tool are important for neonatal nursing clinical practice, teaching and assessment. In this study, it was revealed that there was a lack of emphasis on neonatal nursing clinical teaching and assessment for the NMTs, thereby creating a gap between theory and practice. As such, the developed clinical competency-based assessment tool will form the basis for tracking students' clinical learning experience and support as well as the achievement of clinical competence for entry level practice, thereby improving the quality of neonatal healthcare services in Malawi.

In addition, the development of the clinical competency-based assessment tool involved stakeholders who are key to the implementation of nursing and midwifery education and practice

in Malawi. This allowed for the establishment of the clinical competencies and performance standards expected of the NMTs in neonatal nursing with consensus by incorporating the needs of the consumers. As such, its practical contribution is based on its relevance in assessing the achievement of clinical competence in neonatal nursing and how it would be used by the training and practice institutions. Furthermore, the development of the assessment tool followed the prescribed steps for developing reliable clinical assessment tools (section 4.3), making it reliable for the validation of clinical competence.

The clinical competency-based assessment tool is the first tool to focus on assessment of clinical competence in pre-registration neonatal nursing, not only in Malawi but globally as well, as well as targeting the midlevel nurse-midwife practitioners. Despite focusing on neonatal nursing, the tool might be helpful in guiding other researchers and educators to develop other assessment tools, specific to their fields, to bridge the existing theory-practice gap, thereby enhancing the acquisition of clinical competence for entry level practice.

6.4 Implications for research

The study findings showed that there are no clinical competency-based assessment tools developed to validate the achievement of clinical competence in neonatal nursing practice. As such, the researcher developed a neonatal nursing care clinical competency-based assessment tool for the NMTs in Malawi. However, the researcher did not proceed to test and implement the assessment tool within the study period because of time constraints. This will be part of subsequent research studies by the researcher to contribute to the quality of nursing and midwifery education and practice. Following the outcome of the proposed study, the assessment

tool will either be adopted for use in neonatal nursing or be modified to meet the future needs of the consumers.

6.5 Limitations of the study

The study faced some limitations, specifically due to time constraints and limited funding. For instance, the researcher did not proceed to the testing of the assessment tool to establish its psychometric properties for validity and reliability. As such, it was difficult for the researcher to confirm authenticity when using the tool in the intended clinical setting for the NMTs. However, considering that establishment of psychometric properties for clinical assessment tools is an important process to ensure the objectivity of clinical performance results, testing of the assessment tool will be conducted outside of this thesis.

In addition, the researcher faced challenges with gaining entry and access to some institutions and participants respectively. For instance, some training institutions did not allow the researcher entry. No reasons were given for the refusal. In other institutions participants were reportedly busy or unavailable, despite several attempts to meet them. This led to the researcher accessing fewer participants than previously planned. Despite these constraints, the researcher was of the view that there would have been no significant difference if these participants had given their contributions to the study because the training institutions used a single curriculum for the training of NMTs. As such, these findings could be generalised to other institutions offering a similar training programme.

6.6 Recommendations

The following are the recommendations for the use of the development neonatal nursing clinical competency-based assessment tool.

6.6.1 Nursing education

The study findings showed that there is a lack of emphasis on neonatal nursing clinical teaching for the NMTs. It was reported that most of the clinical teachers and mentors emphasised the teaching of maternal health rather than neonatal health during clinical supervision despite giving the students clinical objectives for neonatal nursing practice. Clinical teaching in neonatal nursing is important for the development and acquisition of skills that would enable the NMTs to provide quality neonatal health services within the primary healthcare setting. However, effective clinical teaching requires that the teachers have the necessary knowledge and skills to help them guide and assist the students in the learning process. The lack of emphasis on neonatal nursing clinical teaching could be attributed to the fact that the clinical teachers did not have adequate knowledge and skills in this field, therefore, lacked confidence when teaching the students. In view of this, the researcher recommends that training institutions should reinforce clinical teaching in neonatal nursing to ensure that the NMTs acquire the required clinical competence in this field. In addition, the training institutions should ensure that all the clinical teachers are oriented and encouraged to update their skills in neonatal nursing to ensure that students are taught and assisted by teachers who are knowledgeable and skilled.

Furthermore, the training institutions should put in place mechanisms to track the students' learning experience and clinical performance throughout the duration of clinical placement. For

instance, students can be encouraged to keep a diary of their clinical experience and the type of support received from the clinical teachers. In addition, clinical teachers should be allocated a group of students that she/he can be following during the clinical experience and submit a report of their clinical performance at the end of the clinical placement. This approach may promote responsibility and accountability for both the students and clinical teachers, thereby improving the quality of clinical teaching.

The study findings also revealed that there are inadequate clinical assessments conducted in neonatal nursing clinical placements. It was reported that the student's achievement of some of the clinical skills was assessed through OSCE or NMCM assessments. However these two assessments took the form of a summative assessment which focused on the technical skills and knowledge, leaving out the affective domain. Focusing on summative assessments for students' performance put the student at a disadvantage as the student did not have room to improve performance during the process. In view of this, the researcher developed the clinical competency-based assessment tool that would be used to assess the achievement of clinical competence, both formative and summative. The tool may help clinical teachers to assess the students' clinical performance during the clinical teaching process, thereby allowing for the improvement of clinical competence among the students. Considering that this tool is new and has never been used for pre-registration neonatal nursing practice there will be need for the clinical teachers to become acquainted with the tool. As such, the researcher recommends that in-service training and orientation on how to use the tool should be conducted for all those involved in neonatal nursing clinical teaching and assessment of students. This would promote the

effective use of the tool thereby improving the quality of clinical assessments and student outcomes.

The study findings also showed that the clinical teachers utilise a skills checklist developed by the Nurses and Midwives Council of Malawi to evaluate the NMT's clinical performance for specific procedures. Having reviewed the NMT syllabus to adopt a competency-based approach, there is need for the NMCM to adopt tools that would enable the clinical teachers to validate the achievement of clinical competence congruent with competency-based nursing education. As such, the NMCM may consider incorporating the developed neonatal nursing care clinical competency-based assessment tool, as a framework for clinical teaching and assessment, to accompany the competency-based syllabus for use in the nursing colleges. Furthermore, the tool may work as a guide to assist NMCM and CHAM nursing colleges to develop competency-based assessment tools for other nursing field other than neonatal nursing.

6.6.2 Nursing practice

Despite focusing on pre-registration neonatal nursing clinical teaching and assessment, the tool highlights clinical competencies and competency standards defining the minimum requirements for neonatal nursing practice. As such, the tool may also work as a guide for the evaluation of clinical competence for practicing nurse-midwife technicians. To this effect, clinical practice institutions may consider adopting and/or modifying this tool for the evaluation of clinical performance and appraisal, thereby contributing to the development of competent practitioners and quality patient care.

6.6.3 Nursing research

The neonatal nursing care clinical competency-based assessment tool development in this study is new and has never been used for clinical teaching and assessments anywhere. As such, this opens more opportunities for further research to ascertain the tool's psychometric properties and reliability in validating the achievement of clinical competence in neonatal nursing. In addition, this study focused on neonatal nursing clinical teaching and assessment. Considering that the nurse-midwife technicians are trained as general nursing/midwifery practitioners, more research should be conducted to establish how the students are assisted to acquire and/or are assessed to validate the achievement of clinical competence in other clinical settings.

6.7 Summary

In this chapter the researcher makes a conclusion and recommendations on the study and the developed competency-based assessment tool. The study identified that the NMTs were taught basic nursing skills yet there were inadequate clinical assessments for competence. Furthermore, there was no competency-based assessment tools developed for the assessment of clinical competence in neonatal nursing. As such the researcher developed a clinical competency-based assessment tool. The tool is the first of its kind for the assessment of pre-registration clinical competence in neonatal nursing practice among nurse-midwife technicians. As such, the tool will contribute to the training and assessment of competent nurse-midwives, by guiding the clinical teachers and tutors on areas of assessment for students in clinical practice. However, the researcher recommends further research to ascertain the psychometric properties of the assessment tool for adoption in various clinical practice settings.

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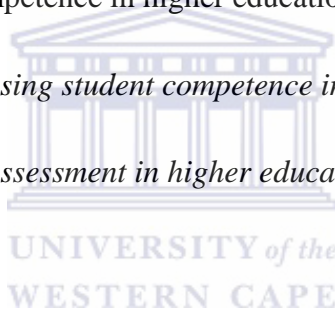
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Appendices

Appendix 1: Focus group discussion guide

1. Introduction
 - a) The moderator introduced the purpose of the discussion, and
 - b) Then members introduced themselves
2. Discussion guiding questions
 - a) What are the competencies taught to NMTs in neonatal nursing?
 - b) What areas of neonatal nursing do these competencies cover?
 - c) How do clinical teachers assist the student to acquire these competencies?
 - d) Probe for c: could you explain clearly your experiences in using that approach to assist the NMT to acquire the competencies (this probing question was discussed with clinical teachers only).
 - e) How do clinical teachers validate the NMTs achievement of the competencies in neonatal nursing?
 - f) Probe for e: could you explain clearly your experiences in validating NMTs' achievement of the required competencies in neonatal nursing. (This probing question was discussed with clinical teachers only).
 - g) What behaviours do clinical teachers observe in the NMT that reflect achievement of the competencies in neonatal nursing? (This question was discussed with clinical teachers only).
3. Considering all the issues discussed, which ones do you feel are effective in:
 - a) Assisting the NMT to acquire the required competencies in neonatal nursing
 - b) Validating the NMT's achievement of competencies?**

Appendix 2: Document analysis checklist

Type of document	Competencies			Teaching approach	Assessment approach	Grading criteria
	Knowledge	Skills	Attitude			
Syllabus outline						
Course outline						
Assessment tools:						
• NMCM tool						
• Green book						
• Competency checklist						



Appendix 3: Clinical teachers' questionnaire

Section A: Demographic information

Participant code	:
Age	:
Gender	:
College of Nursing	:
Position	:
Qualification	:
Teaching Experience in Neonatal Nursing	:

Section B: Competencies, teaching and assessment approaches

Instructions:

Tick in the appropriate box whether you strongly agree, agree, disagree or strongly disagree with the statements provided. The scale is presented in an ascending order as follows: 1= Strongly disagree; 2= Disagree; 3= Uncertain; 4=Agree; 5= Strongly agree

	1 SD	2 D	3 U	4 A	5 SA
B1: Competencies taught to NMTs in Neonatal Nursing					
The student was taught how to care for the new born baby immediately after delivery					
The student was taught resuscitation of the new born baby					
The student was taught how to assess the new born baby one hour after delivery					
The student was taught how to conduct subsequent assessment of the new born baby					
The student was taught how to manage new born babies with different conditions					
The student was taught on communication skills					
The student was taught how to administer medications to neonates					
The student was taught on infection prevention measures when managing neonates					
The student was taught to apply critical thinking skills when managing neonates					
The student was taught to apply ethical decision making when managing neonates					
The student was taught how to assist mothers with kangaroo mother care					

Assessor's summative assessment report form

1. What were the student's strengths?

2. What were the student's challenges during the performance?



3. What strategies would help to improve the student's performance?

Student's signature Date

Clinical teacher/mentor's name Date

Clinical teacher/mentor's signature Date