

# Clinical Competency During Undergraduate Midwifery Training in Malawi: A Concept Analysis

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**Background:** The purpose of midwifery education is to produce clinically competent midwives. However, clinical training in Malawi faces multiple challenges, and the concept of Clinical Competency (CC) has not been analysed in this context. This article analyses CC during undergraduate midwifery training in Malawi to elucidate its attributes, antecedents, consequences, and empirical referents.

**Methods:** A literature search was performed on data bases, Google Scholar, PubMed, and CINAHL, using the following terms: clinical competency, midwifery competency, nursing competency, nursing and midwifery competency. Published articles were retrieved and clinical competency analysis was guided by Walker and Avant's strategy.

**Results:** CC attributes were knowledge, skills, attitudes, performance level, professionalism, and entrustable professional activity. Antecedents included motivation, role models, learning environment and personal traits. The consequences of CC include confidence, client safety, and quality of care. CC can be measured through a combination of four strategies: observing a student practising it in clinical area, simulation or Objective Structured Clinical Examination (OSCE), application through written essays or case presentations, and knowledge-based assessment.

**Conclusion:** CC is a multidimensional concept and its definition and defining attributes are contextual. Similarly, clinical competencies are a major determinant of educational decisions such as curriculum nucleus, length of clinical placement, teaching strategies, and student assessment methods. However, CC and its attributes have not been fully utilised in Malawi, especially in clinical teaching and student clinical assessments. There is a need to adequately prepare midwifery educators, clinical staff, and students to deliver quality clinical competencies consistent with competency-based education. Adoption of different assessment strategies and development of valid and reliable tools is necessary to comprehensively measure CC among midwifery students in Malawi.

**Keywords:** competency, competence, competencies, clinical competency, midwifery education

## Introduction

Midwifery education aims at producing graduates who have basic competencies that can effectively meet maternal and neonatal health needs.<sup>1</sup> Midwives trained and well acquainted with core competencies are key to the reduction of high maternal and neonatal deaths.<sup>2,3</sup> The International Confederation of Midwives (ICM) prescribed mandatory competencies to guide midwifery pre-service education curricula on the essential attributes of the graduates.<sup>1</sup> Furthermore, the Nurses and Midwives Council of Malawi (NMCM) adapted the ICM's competencies to inform and guide local undergraduate midwifery training.<sup>4</sup> However, clinical training in Malawi faces myriad challenges,<sup>5,6</sup> and attaining requisite competency in such context is questionable. Literature describes the concept of competency as dynamic and highly contextualised.<sup>7-9</sup> Therefore, it is necessary to analyse the concept of Clinical Competency (CC) to explore its facets and practicality for undergraduate students in Malawi.

Attaining clinical competencies is known to be challenging among undergraduate midwifery students.<sup>10,11</sup> Similarly, negative experiences are prevalent in Malawi's clinical learning environment.<sup>6,12,13</sup> Literature reveals that there is inadequate support from clinical teachers and staff towards student learning in practice areas.<sup>5,14,15</sup> Furthermore, the clinical learning environment is

characterised by severe shortages of human and material resources for care<sup>6,12,13</sup> which greatly contributes to the theory-practice gap.<sup>5,12</sup> Furthermore, an increase of student intakes in most training colleges has led to congestion in clinical placement areas, overcrowding of students, few learning opportunities,<sup>5,13,15</sup> and an exacerbation of human and material resource challenges.<sup>5</sup> These contextual circumstances affect the nature of CC, necessitating analysis of the concept in this setting.

Literature describes a competency in midwifery practice as a combination of specific psychomotor skills, knowledge and professional behaviour that should be demonstrated at a defined level of proficiency in practice.<sup>16,17</sup> The NMCM prescribed a set of core competencies needed for each midwifery practitioner to provide high quality services.<sup>4</sup> Essential competencies guides curriculum development, teaching, assessment and evaluation in midwifery education.<sup>4,8,18</sup> A competent midwife is a well-trained person who has attained core competencies in clinical practice. For students to be assisted effectively, there is a need to clearly define competency and competency levels in simple, easy, and measurable terms.<sup>8,18</sup> In addition, Fullerton<sup>19</sup> stated that the advantages of using competencies in training can be positive if the midwifery workforce shares a common definition and identity.

This article aims to analyse the concept of CC within undergraduate midwifery education in Malawi. Specifically, it assesses the meaning of clinical competence and competency; develops a clear definition of the concept of CC to improve communication of the concept and its use in clinical education; clarifies the defining attributes; and determines the antecedents, consequences, and empirical referents. Understanding this concept will guide the clinical teaching, assessment, and evaluation of undergraduate midwifery students.

## Methods

The study adopted Walker and Avant's<sup>20</sup> guidelines for concept analysis and followed stepwise recommendations: selection of a concept, determination of the purpose of the analysis, identification of all uses of the concept, and determination of defining attributes. The characteristics of the attributes were extracted from the articles, compared item by item, and then similar data were grouped together until data saturation was achieved, after which they became defining attributes. This step was followed by constructing model, borderline and contrary cases. Finally, there was identification of antecedents, consequences, and defining empirical referents.<sup>20</sup>

## Literature Search

A literature search was performed to identify published articles from databases, such as Google Scholar, PubMed, and CINAHL. The search terms included clinical competence, midwifery competency, and nursing competency. Articles published between 2012 and 2022 were included in this review to capture recent scholarly contributions to this concept. Articles cited by relevant articles were manually searched. In addition, two relevant articles published in 2010 and 2011 were included because of their information value. A total of 38 published articles were reviewed, of which 14 were included, whereas others were excluded because they were not relevant for the analysis of competency.

The definitions and characteristics of CC were analysed using articles by Englander et al,<sup>7</sup> Fernandez et al,<sup>21</sup> Frank et al,<sup>22</sup> Fukada,<sup>8</sup> Fullerton et al,<sup>16</sup> Mills et al,<sup>9</sup> Nabizadeh-Gharghozar et al,<sup>23</sup> Sam et al,<sup>24</sup> Satu et al,<sup>25</sup> Smith,<sup>26</sup> and Smothers.<sup>27</sup> A deductive approach was used to identify the antecedents and consequences to enhance understanding. Finally, empirical referents were listed and discussed.

## Results

### Definitions of Clinical Competency and Competence

A clinic is a building or part of a hospital where people can go for special medical treatment or advice.<sup>28</sup> Clinical nursing/midwifery practice is the provision of patient-centred care to achieve certain objectives.<sup>8</sup> Nurses and midwives provide care in a dynamic clinical environment using abilities developed through knowledge and skill acquisition processes.<sup>8,16</sup> This is where clinical learning occurs for undergraduate students.

In order to understand competency, scholars recommend that the first step is to get a clear meaning of the words "competence" and "competency".<sup>8,9,19</sup> According to the Oxford Online Dictionary,<sup>28</sup> the meaning of the words competence and competency are the same. Both denote an ability to perform something well. However, this is contrary to the findings of

Fullerton et al,<sup>16</sup> and Mills et al,<sup>9</sup> who demonstrated differences in the meanings of the two words. In general terms, competence relates to behavioural tasks and competency is a personal characteristic that underpins performance of the tasks.<sup>9,16</sup>

Fullerton et al,<sup>16</sup> wrote an article that reviewed literature with the aim of exploring the meanings of competence and competency as core concepts for midwifery profession. Their findings revealed the lack of a universally acceptable definition of competence. Furthermore, they have established that these concepts are continuously changing in response to advances in science and technology. The authors described competence as behavioural tasks and midwifery competency as a combination of knowledge, professional behaviour, and specific skills that are demonstrated at a defined level of proficiency in the context of education and practice.<sup>16</sup> They further recommended that the midwifery profession should keep pace with emerging knowledge and evidence-based clinical practices so that it continues to redefine a midwifery competency.

A comprehensive literature review by Fukada<sup>8</sup> also attempted to define and differentiate concepts competence and competency. The author described competence as the ability acquired through experience and learning. These include potential abilities that may work effectively under certain circumstances based on individuals' motivation to show their usefulness in using those abilities.<sup>8</sup> On the other hand, competency is a behavioural characteristic that is based on one's interests and experiences, usually influenced by his/her motivation and attitude. The author further linked competence (ability) as a premise for developing competency (behavioural characteristics). After a comprehensive analysis of the attributes, nursing competency was described as a complex integration of knowledge including professional judgment, skills, values, and attitudes. She further explained that competency intelligently integrates practical skills with different factors in particular settings, and is specific to each situation.

A systematic literature review conducted in medical education journals to identify similarities and differences between the definitions of competence.<sup>21</sup> They found out that knowledge and skills were the most frequently mentioned components of competence. However, literature could not agree on other components although the most frequently mentioned concepts included attitudes and values, character attributes, professional socialisation and judgment, attitudes and "competence" as personal ability.<sup>21</sup> The authors also came up with three themes, which included components of competence comprising of knowledge and skills, what a competence can make a competent practitioner do successfully, and the purpose of competence such as the ability to improve quality of care. In conclusion, a competence was viewed as a combination of components describing desired outcomes and a driving force towards professionally meaningful actions.<sup>21</sup> However, the authors did not attempt to differentiate "competence" from "competency".

A three-phase hybrid model was used to analyse clinical competence among practising nurses by combining data from semi structured interviews and then literature reviews analysis.<sup>23</sup> Participants were practicing nurses, university lecturers, mentors, practising nurses, and students. The results revealed that the majority of literature and participants defined clinical competence in nursing as a combination of knowledge, skills, and attitudes. Furthermore, most interviewees agreed that clinical competence gained over time through repeated practice and increased experience. Additionally, it is recommended that undergraduate education should enable students to gain personal, social, and professional competencies. Efficient education and organisational support were considered antecedents of clinical competence, while satisfaction and quality care were consequences.<sup>23</sup> They concluded that attaining clinical competence is a continuous process of obtaining knowledge, values, attitudes, and skills that involves critical thinking and creativity in nursing practice.

Mills et al,<sup>9</sup> also conducted a detailed review of the literature to understand conceptual differences and proposed a reconceptualisation of the competency framework for healthcare professionals. The framework describes competency as the observable ability of a person, integrating knowledge, skills, and attitudes in the performance of tasks. Features of competencies identified were durability, trainability, and measurable through expressions or observation of behaviours. Competencies can develop, improve, or erode over time. The authors further clarified the concept of being "competent" as the performance of the required competencies and activities in a defined standard for an occupational role. Thus, an individual can be either competent or not competent.<sup>9</sup>

A journal article by Englander et al,<sup>7</sup> reported on the proceedings of a competency-based medical education collaborator summit held in 2013, aimed at exploring shared language that could be adapted to suit medical training. In this context, competency is described as a health professional's observable ability to undertake specific activities that integrate knowledge, skills, values, and attitudes. Considering that competencies are observable, it was deduced that they should be measurable and assessable to ensure acquisition. Competencies are building blocks that can be assembled to facilitate progressive development. In addition, terms such as milestone and Entrustable Professional Activity (EPA) were clarified in relation to competencies.<sup>7</sup>

A milestone is an observable marker of an individual's ability along a developmental continuum, and that EPA relate to an essential task of a profession that can be entrusted for an individual to perform without supervision in care context.<sup>7</sup>

According to Smothers<sup>27</sup> competence, competency, and performance level are related concepts. The author defined competence as being in possession of the necessary adequate knowledge, skill, and attitude for an individual that allows him/her to safely and effectively perform a specific task. Competence is multidimensional and changes with time, experience, and setting, where it needs application. Competency describes a set of abilities that require specific knowledge, skills, and/or attitudes. This asserts that competency is a set standard for performance levels that must be met. They relate to measurable behaviours or performance criteria related to a specific competence.

Frank et al,<sup>22</sup> described the evolution of competency-based medical education by focusing on curricular outcomes organised around competencies. They suggested definitions of major concepts and explored future directions for developing health professionals' competencies. In their propositions, competence is described as a range of abilities across multiple domains of a physician's performance within a certain context. On the other hand, competency is a visible ability of a physician to integrate different components such as knowledge, skills, values and attitudes in practice. They also agreed that competencies could be measured and assessed to determine whether they were acquired in practice. Furthermore, they adopted key related terms such as competent professional, dyscompetent, and incompetent. A professional with the required abilities in all domains in a certain context at a defined stage of medical education is competent, whereas those with relatively less abilities are dyscompetent. An incompetent physician lacks the ability to perform tasks at an expected level. For each competency area, the ability move from novice to mastery.<sup>22</sup>

A literature review by Satu et al,<sup>25</sup> confirmed that competence areas are contextual and situation-based. In addition to knowledge and skills, students across European Union had multiple competence areas which they were supposed to fulfil. The authors identified 67 competence areas classified into eight main categories: professional and ethical values, nursing skills and intervention, communication and interpersonal skills, knowledge and cognitive ability, assessment and improvement of quality in nursing, professional development, leadership, management and teamwork, and research utilisation. Thus, there is a need for more research on nursing competence as it is essential for promoting patient care outcomes.<sup>25</sup>

Rizany et al,<sup>29</sup> supports the multi-dimensional and contextual facets of competence. In their systematic review, they found that competence development was affected by work experience, type of nursing environment, educational level, adherence to professionalism, critical thinking, and issues related to personal factors.<sup>29</sup> This finding affirms that both internal and external factors may influence competency.

In their ground-breaking research, Sam et al,<sup>24</sup> outlined three main approaches to the concept of competence in nursing scholarship. The first was the behaviourist approach which mainly focuses on the distinct skills of an individual associated with task completion. This comprises knowledge, skills, and attitude domains. The second view was the holistic/generic approach that regards competence as a broad and interrelated set of one's overall abilities and competencies, enabling a practitioner to fulfil one's work. In this view, competence attributes are included in broad competence statements regarded as essential for work performance. The third approach shares the same view as holistic, and is called normative. This approach adds that the competence-performance continuum changes over time in one's course of work. Furthermore, competencies should be categorised to differentiate superior from average performance. However, the authors also found a lack of consensus on the conceptualisation of the terms competence and competency.<sup>24</sup>

Firoozehchian et al,<sup>30</sup> sought to explore the domains of clinical competence of undergraduate midwifery students in Iran. The participants were midwifery students, midwives, midwifery academicians, reproductive and sexual health faculty members, and obstetricians. Four categories were ensued, which were considered as domains of midwifery competence. The first was ethical and professional functions in midwifery, for example, integrating science and practice and compliance with ethics and regulations in care provision. Another category was holistic midwifery care, which included facilitating the involvement of women and their families in care and providing education and support to clients. The third is effective interaction, such as communication skills and coordination with co-workers. The last domain was personal and professional development, which included commitment to continuous learning and accountability. It was concluded that these domains could be used to develop competence assessment tool.<sup>30</sup>

## Operational Definition of Clinical Competency

Therefore, clinical competency in midwifery education denotes the observable ability of a student midwife to use knowledge, skills, and expected professional attributes at a defined performance level within Malawi's context over a given period of practice, as spelled out by the NMCM.

## Defining Attributes of Clinical Competence

### Knowledge

Knowledge is the information and understanding of a phenomenon that is gained through education or experience.<sup>28</sup> In clinical practice, it means possessing and integrating information and understanding into practice as an ingredient of competence.<sup>26</sup> For example, a student midwife should have knowledge on physiology of labour, anatomy of the fetal skull and measures for assessing maternal well-being during labour.<sup>4</sup>

### Skill

This is the expertise or practice ability that can be demonstrated by a midwife in rendering a service to clients.<sup>4</sup> A skilled midwife possesses the required level of performance in a skill to be labelled as competent.<sup>26</sup> A student midwife should demonstrate skills in areas such as conducting abdominal examination for fetal position and descent, inspecting placenta and membranes, and estimating maternal blood loss.<sup>4</sup>

### Performance Level

Performance refers to what a health worker actually does do.<sup>31</sup> While the level in this sense is a standard measure describing the defined point of proficiency at which someone may be deemed competent in a specific context.<sup>9,26</sup> For example, based on the level of skill in conducting a delivery, a student midwife can be at the level of novice or expert.<sup>31</sup>

### Attitudes

The NMCM<sup>4</sup> describes attitudes toward midwifery as the most significant behaviour of midwives, reflecting traits such as being empathetic, understanding, comforting, and valuing in the care of clients. These attributes are known to influence a person's behaviour and task performance.<sup>31</sup>

### Professionalism

The authors found difficulties in accurately defining professionalism.<sup>26,32</sup> According to Khakbazan et al,<sup>32</sup> these are elements of personal requirements, professional requirements, and intra-professional morality. Smith<sup>26</sup> identified some attributes of professionalism which are not limited to practising within professional standards, following a code of ethics, being self-driven, acting as a role model for the profession, and mentoring.

### Entrustable Professional Activity

This is an essential task of the midwifery profession in which a student can be trusted to perform without direct supervision in a given healthcare context after demonstrating sufficient competence in performing that activity.<sup>7</sup> A student who has undergone training should demonstrate knowledge, skills and judgements in basic midwifery competencies independently.<sup>4</sup>

## Cases

### Model Case

Walker and Avant<sup>20</sup> describes a model case as an example of the use of the concept, demonstrating all the defining attributes. This was the case for Mrs. P, a midwifery educator at University B. She had seven students who had undergone low-risk midwifery theory, including practice in a skills laboratory. She conducted skill checks on all the students prior to the beginning of the allocation, and they were placed in the labour ward at hospital C for clinical practice. The students were allocated to a mentor who worked in the same ward. All students were required to prepare portfolios to check learning progress, and the mentor was given assessment tools to complete the level of performance for

each student every week. The mentor was monitoring and discussing with the students on their attitude and professionalism throughout assessment encounters. After eight weeks of clinical practice, Mrs. P arranged an Objective Structured Clinical Examination (OSCE) that used eight stations with different scenarios related to competencies required in the labour ward. All students passed the examinations and were labelled as competent at this level.

## Analysis

The students were exposed to low-risk midwifery and were given time to practice their skills in the laboratory. In clinical practice, students are monitored on their level of performance every week, and the mentor assesses their practical and affective skills, including professionalism. Finally, the OSCE evaluates knowledge, skills, and selected professional behaviour. This case constitutes all attributes of competency because the literature alludes to the multidimensional aspects of the CC concept, hence requiring multiple strategies of assessment and evaluation.<sup>7,22,24</sup>

## Borderline Case

Mrs. L is a midwifery educator at the University of B. She taught a low-risk midwifery course to 15 students, including practising in a skills laboratory. The students were then allocated to the labour ward at Hospital C for eight weeks. Students were advised to work hard and take the personal initiative to learn and ask qualified staff in the ward whenever they needed assistance. At the end of eight weeks, Mrs. L formulated multiple-choice items that required students to analyse and synthesise midwifery scenarios. After writing the examination, all students passed and were recognised as competent at this level.

## Analysis

The nurse educator in this scenario was assessing “competence” (abilities) and not competency (behavioural) of the learners. The midwifery scenarios on paper will prompt learners to understand what they can do and not their actual behaviour in practice, if a situation arises. Competency requires different assessment strategies because it comprises different dimensions.<sup>16,21</sup> This is a borderline case, because it does not assess all attributes of CC.

## Contrary Case

Mr. X is a Midwife educator at the University of C. She taught high-risk midwifery theory to a group of 20 students and then allocated them to the labour ward for eight weeks. After each procedure, the educator prepared competency evaluation checklists for all students to get them signed by the qualified staff in the ward after conducting a procedure. At the end of the allocation, she collected checklists and approved that all the students’ competencies were signed. Mr. X was satisfied that the students had attained clinical competencies.

## Analysis

Competencies have multiple attributes that are not limited to knowledge or skills. The checklists provided information on whether the skill was completed without showing the level of performance. Contrary to this case, there is no competency attribute.

## Antecedents of Clinical Competency

Antecedents are events or incidents that must occur or be in place prior to the concept’s occurrence.<sup>20</sup> The authors further clarified that this may help shed considerable light on the contexts in which the concept can be generally used. CC is motivated by the availability of role models, favourable clinical learning environments, and personal traits.

## Motivation

Individuals who are motivated to be competent from either personal or external sources have a drive to successfully link theory to clinical practice and deliver safe services.<sup>26</sup> A lack of motivation to learn is known to compromise competency acquisition among nursing and midwifery students.<sup>12,13</sup>

## Role Models and/or Mentors for Midwifery

Students and new midwives are more likely to look to competent midwifery supervisors and be motivated to acquire relevant competencies.<sup>8</sup> Mentoring is known to promote skill acquisition, understanding professional roles, and facilitating personal and professional development.<sup>33</sup>

## Clinical Learning Environment

The clinical learning environment includes interrelationships between physical space, psychosocial and interaction factors, organisational culture, and teaching and learning components.<sup>10,11</sup> Students and staff alike need a favourable clinical learning environment to foster clinical competency acquisition.<sup>8,10</sup>

## Personal Traits

Fukada<sup>8</sup> describes some personal traits among qualified nurses that are consistent with the acquisition of competencies. These are also relevant for midwifery students, and include self-control, critical thinking, and problem-solving abilities.

## Consequences

Consequences are events, situations, or circumstances that occur due to the use of a concept.<sup>20</sup> Development of confidence during care has been frequently highlighted as a consequence of clinical competence.<sup>8,26</sup> In addition, clients receive high-quality care that they deserve, leading to improved healthcare outcomes.<sup>8,18</sup>

## Discussion

The NCMCM<sup>4</sup> prescribed essential midwifery competencies for basic education and practice. To this end, teaching institutions are obliged to use CC during undergraduate training. However, there is a need for analysis to clearly understand the concepts of competence and competency, especially among undergraduate students. Clinical competencies are major determinants of midwifery education decisions such as curriculum nucleus, length of clinical placement, teaching strategies, and student assessment methods.<sup>7,24,26</sup> Accordingly, there is a need to adequately prepare midwifery educators, clinical staff, and resources for delivery of quality consistent with competency-based education.<sup>19</sup> For example, every student midwife requires individualised direct clinical supervision which is not possible with huge student intakes and congestion in teaching hospitals.<sup>5,13</sup> In addition, competency based practices focus on learning attained practice, and not time the learner spent on an educational unit.<sup>22</sup>

Educators must adopt different strategies to teach students in clinical practice to facilitate their acquisition of competencies. CC demands use of active teaching methods with a variety of scenarios using simulation, role plays and problem-based learning strategies to expose students to different aspect of competency.<sup>8,24</sup> Similarly, assessment of CC should focus on mastery of each attribute.<sup>8</sup> A student should demonstrate that he/she possesses the correct knowledge, proper skills and appropriate personal and professional attitudes to be deemed competent.<sup>21</sup> According to Sam et al,<sup>24</sup> eclectic approaches of assessment such as simulation, portfolio, clinical observations and Osce are advocated to holistically measure constructs of CC.

## Empirical Referents

Walker and Avant<sup>20</sup> describes this stage as necessary to know how the existence of the concept can be determined or measured in the real world. To ascertain CC in a student midwife, it should be observed and measured in four levels.<sup>24</sup> The first one is work-based observation of the student in clinical practice through multisource feedback from the practice area or a professional portfolio. Second, it should be observed in either the simulation or the Osce. Third, it needs to be demonstrated in application-based assessments such as written essays, case presentations, or skills tests. Finally, it should manifest in knowledge-based assessments such as multiple-choice and short-answer questions. However, the challenge lies in the tools used to measure the CC as a complex concept.<sup>24,34,35</sup> Measurement tools often have issues with validity, reliability, subjectivity, and bias.<sup>35</sup> The Australian midwifery standards assessment tool was tested and proved to be a valid, reliable, and acceptable tool for consistent assessment of midwifery students competence.<sup>34</sup> Similarly, the nurse

competence scale has been widely used to measure Registered Nurses' competence after graduation.<sup>18</sup> In Malawi, NMCM and individual training colleges have developed assessment tools that are used to measure knowledge, skills, attitudes, and other attributes. However, there is no published literature on the validity, reliability, subjectivity, or bias of these tools. Therefore, it is difficult to objectively determine the learning outcomes of clinical competencies in undergraduate midwifery education in Malawi.

## Conclusion

This review supports the existing literature that CC is a multidimensional concept and is not easy to define.<sup>9,16,24</sup> There is consensus that competence and competency are different concepts, with the former signifying abilities and the latter entailing behavioural characteristics.<sup>8,9,16</sup> Although knowledge, skills, and attitudes are the most cited attributes of competency, there is a wide range of other additional characteristics described differently depending on the context and time.<sup>21,24,26</sup> The antecedents identified for midwifery students include student motivation, role modelling, clinical environment, and personal traits. The consequences of clinical competency were increased confidence and quality of care. There is a need for Malawi's midwifery educators to reflect on the degree to which educational activities such as teaching strategies and clinical assessments conform to competency-based approaches. Furthermore, competency being an abstract concept requires clear and valid assessment instruments so that it is measurable.<sup>24,30,35</sup> Malawi needs valid and reliable tools to measure CC among undergraduate midwifery students that can be applicable to its setting. Similarly, there is a need for analysis and research regarding CC in students at each level of education so that qualified midwives and midwifery educators are aware of its clear definition and attributes.

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## References

1. International Confederation of Midwives. Essential competencies for basic midwifery practice; 2013.
2. Ngcobo A, Baloyi OB, Ann Jarvis M. Newly qualified midwives' perceptions of their level of midwifery clinical competence during community service in KwaZulu-Natal, South Africa. *Health SA Gesondheid*. 2021;26:1670. doi:10.4102/hsag.v26i0.1670
3. Yigzaw T, Ayalew F, Kim YM, et al. How well does pre-service education prepare midwives for practice: competence assessment of midwifery students at the point of graduation in Ethiopia. *BMC Med Educ*. 2015;15(1):1–10. doi:10.1186/s12909-015-0410-6
4. Nurses and Midwives Council of Malawi. Essential Midwifery competencies for Malawi; 2012.
5. Mbakaya BC, Kalembo FW, Zgambo M, et al. Nursing and midwifery students' experiences and perception of their clinical learning environment in Malawi: a mixed-method study. *BMC Nurs*. 2020;19(1):1–14. doi:10.1186/s12912-020-00480-4
6. Msiska G, Smith P, Fawcett T. The "lifeworld" of Malawian undergraduate student nurses: the challenge of learning in resource poor clinical settings. *Int J Afr Nurs Sci*. 2014;1:35–42.
7. Englander R, Frank JR, Carraccio C, et al. Toward a shared language for competency-based medical education. *Med Teach*. 2017;39(6):582–587. doi:10.1080/0142159X.2017.1315066
8. Fukada M. Nursing competency: definition, structure and development. *Yonago Acta Med*. 2018;61(1):001–007. doi:10.33160/yam.2018.03.001
9. Mills JA, Middleton JW, Schafer A, Fitzpatrick S, Short S, Cieza A. Proposing a re-conceptualisation of competency framework terminology for health: a scoping review. *Hum Resour Health*. 2020;18(1):1–16. doi:10.1186/s12960-019-0443-8
10. Flott EA, Linden L. The clinical learning environment in nursing education: a concept analysis. *J Adv Nurs*. 2016;72(3):501–513. doi:10.1111/jan.12861
11. Panda S, Dash M, John J, et al. Challenges faced by student nurses and midwives in clinical learning environment – a systematic review and meta-synthesis. *Nurse Educ Today*. 2021;101:104875. doi:10.1016/j.nedt.2021.104875
12. Mwale OG, Kalawa R. Factors affecting acquisition of psychomotor clinical skills by student nurses and midwives in CHAM nursing colleges in Malawi: a qualitative exploratory study. *BMC Nurs*. 2016;15(1):1–9. doi:10.1186/s12912-016-0153-7

13. Phuma-Ngaiyaye EE, Adejumo O, Dartey AF. Challenges in neonatal nursing clinical teaching to nurse-midwife technicians in Malawi. *J Nurs Educ*. 2017;56(4):215–221. doi:10.3928/01484834-20170323-05
14. Kamphinda S, Chilemba EB. Clinical supervision and support: perspectives of undergraduate nursing students on their clinical learning environment in Malawi. *Curationis*. 2019;42(1):1–10. doi:10.4102/curationis.v42i1.1812
15. Kaphagawani NC, Useh U. Clinical supervision and support: exploring pre-registration nursing students' clinical practice in Malawi. *Ann Glob Health*. 2018;84(1):100. doi:10.29024/aogh.16
16. Fullerton JT, Ghérisi A, Johnson PG, Thompson JB. Competence and competency: core concepts for international midwifery practice. *Int J Childbirth*. 2011;1(1):4–12. doi:10.1891/2156-5287.1.1.4
17. Skúladóttir H, Svavarsdóttir MH. Development and validation of a clinical assessment tool for nursing education (CAT-NE). *Nurse Educ Pract*. 2016;20:31–38. doi:10.1016/j.nepr.2016.06.008
18. Flinkman M, Leino-Kilpi H, Numminen O, Jeon Y, Kuokkanen L, Meretoja R. Nurse competence scale: a systematic and psychometric review. *J Adv Nurs*. 2017;73(5):1035–1050. doi:10.1111/jan.13183
19. Fullerton JT, Thompson JB, Johnson P. Competency-based education: the essential basis of pre-service education for the professional midwifery workforce. *Midwifery*. 2013;29(10):1129–1136. doi:10.1016/j.midw.2013.07.006
20. Walker LO, Avant KC. *Strategies for Theory Construction in Nursing*. 6th ed. Upper Saddle River, NJ: Pearson/Prentice Hall; 2019.
21. Fernandez N, Dory V, Ste-Marie LG, Chaput M, Charlin B, Boucher A. Varying conceptions of competence: an analysis of how health sciences educators define competence. *Med Educ*. 2012;46(4):357–365. doi:10.1111/j.1365-2923.2011.04183.x
22. Frank JR, Snell LS, Cate OT, et al. Competency-based medical education: theory to practice. *Med Teach*. 2010;32(8):638–645. doi:10.3109/0142159X.2010.501190
23. Nabizadeh-Gharghozar Z, Alavi NM, Ajorpaz NM. Clinical competence in nursing: a hybrid concept analysis. *Nurse Educ Today*. 2021;97:104728. doi:10.1016/j.nedt.2020.104728
24. Sam G, Leong TM, Aini A. Competence-based frameworks in nursing—a concept analysis. *J Appl Learn Teach*. 2020;3(1):90–97.
25. Satu KU, Leena S, Mikko S, Riitta S, Helena LK. Competence areas of nursing students in Europe. *Nurse Educ Today*. 2013;33(6):625–632. doi:10.1016/j.nedt.2013.01.017
26. Smith SA. Nurse competence: a concept analysis. *Int J Nurs Knowl*. 2012;23(3):172–182. doi:10.1111/j.2047-3095.2012.01225.x
27. Smothers V. Performance framework - definitions - ARCHIVE - competencies working group - MedBiquitous Wiki; 2013. Available from: <http://groups.medbiq.org/medbiq/display/CWG/Performance+Framework++Definitions>. Accessed February 19, 2023.
28. Oxford Advanced Learner's Dictionary. Clinic noun - definition, pictures, pronunciation and usage notes; 2023. Available from: <https://www.oxfordlearnersdictionaries.com/definition/english/clinic?q=clinic>. Accessed February 16, 2023.
29. Rizany I, Hariyati RTS, Handayani H. Factors that affect the development of nurses' competencies: a systematic review. *Enfermeria Clin*. 2018;28:154–157. doi:10.1016/S1130-8621(18)30057-3
30. Firoozehchian F, Zareiyan A, Geranmayeh M, Behboodi Moghadam Z. Domains of competence in midwifery students: a basis for developing a competence assessment tool for Iranian undergraduate midwifery students. *BMC Med Educ*. 2022;22(1):704. doi:10.1186/s12909-022-03759-z
31. World Health Organization. *Global Competency and Outcomes Framework for Universal Health Coverage*. World Health Organization; 2022.
32. Khakbazan Z, Ebadi A, Geranmayeh M, Momenimovahed Z. Midwifery professionalism: an integrative review. *J Clin Diagn Res*. 2019;13(3):LE01–LE08.
33. Bradford H, Hines HF, Labko Y, Peasley A, Valentin-Welch M, Breedlove G. Midwives mentoring Midwives: a review of the evidence and best practice recommendations. *J Midwifery Womens Health*. 2022;67(1):21–30. doi:10.1111/jmwh.13285
34. Sweet L, Bazargan M, McKellar L, Gray J, Henderson A. Validation of the Australian Midwifery Standards Assessment Tool (AMSAT): a tool to assess midwifery competence. *Women Birth*. 2018;31(1):59–68. doi:10.1016/j.wombi.2017.06.017
35. Levett-Jones T, Gersbach J, Arthur C, Roche J. Implementing a clinical competency assessment model that promotes critical reflection and ensures nursing graduates' readiness for professional practice. *Nurse Educ Pract*. 2011;11(1):64–69. doi:10.1016/j.nepr.2010.07.004

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