Implementation of nurse's clinical competency: A scoping review

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ABSTRACT

Background: *Nursing care provided to patients, especially in hospitals, is expected to be of high quality, and its implementation is in accordance with the nurse's clinical competence.*

Objectives: *This scoping review aimed to assess the implementation of the clinical competence of nurses in hospitals so that a clear picture of the implementation of these competencies is obtained. In addition, this study can be evidence-based and related to implementing these clinical competencies.*

Methods: *This literature review used PICO framework to develop articles questions (P: nurses, I: not applicable, C: not applicable, and O: application of clinical nursing competency). Articles search for literature review was conducted during April and May 2023.*

This study used Pubmed and ScienceDirect Databases and other sources. The keywords that used in this scoping review was "nursing competency" OR "clinical nursing competency" AND "evaluation" OR "implementation" AND "hospital".

Results: *There were 1,150 articles from the search results, but only seven were included for review. One article is a descriptive comparative study using a qualitative approach, and six articles are cross-sectional studies. The articles are publications within five years (2019-2023). In its implementation, the average clinical competency of nurses is at a low to moderate level, and only one study found was at high nurse competency. The results of the supervisor's clinical competency assessment were significantly lower than those assessed by oneself and the group. In addition, the nurse competency level was moderate, and there was no significant difference in the clinical competency of nurses before and during the COVID-19 pandemic.*

Conclusions: *The implementation of nurses' clinical competence has yet to be optimal, so hospital management needs to improve nurses' clinical competence so that nurses can provide higher quality and professional nursing care in the hospital.*

KEYWORD : *implementation; nurse's clinical competency; hospital*

INTRODUCTION

Nursing care is a series of interactions between nurses and clients and their environment to meet clients' needs and independence in caring for themselves (1) or nursing care to be quality, nurses must have knowledge, skills, and professional behavior, which is nursing competency (2). Holism are commonly recognized since nursing competency is typically seen as a complex integration of information, encompassing professional judgment, skills, beliefs, and attitudes. In nursing practice, nurses must apply their acquired information, abilities, and inborn personality qualities to every situation and be able to modify their knowledge and abilities to suit various situations. Clinical competency for nurses consists of three elements: the capacity to comprehend individuals and situations, the capacity to deliver person-centered care, and the capacity to enhance the standard of care (3).

Nurses' clinical competence in providing nursing care is essential. These clinical competencies should be maintained and continuously improved by nurses because these competencies are beneficial for ensuring patient safety, improving the quality of nursing services, and reducing incidents or errors in nursing care. Nursing competency is a major component that can influ ence not only nursing care quality but also patient safety. All nurses who provide nursing care are required to have high-quality nursing care competencies. Nurses need to increase their competencies to maintain the quality of nursing care. Therefore, nursing supervision is needed to monitor the clinical competencies of nurses in healthcare facilities, including hospitals (4-5). The findings of a qualitative study state that nurse managers need to carry out supervision to maintain nurses' clinical competence and reduce incidents of missing or delayed aspects of patient care (6-7).

Nursing services in hospitals are one of the primary services that greatly influence the quality and image of the hospital, so nurse competency is the primary key. Nurse competency is defined as knowledge, attitudes, and skills (soft and hard skills) in providing nursing services (8). Clinical nurse provides accountability and ethical values in accordance with the clinical competency authority (9). Competent nurses must be specific about the type of nursing care in accordance with statutory regulations, whether independent, collaborative, delegated, or mandated to clients safely and effectively (10).

A clinical nurse is a nurse who directly provides nursing services and care to clients, families, groups, and the community. Clinical nurse competency is

obtained through a credentialing and re-credentialing process carried out by the hospital nursing committee. Clinical nurse competency is described according to the Clinical nurse career path level, namely Clinical Nurse 1 to Clinical Nurse 5, as outlined in clinical authority and clinical assignments. Clinical authority is a term used to describe clinical interventions made by nursing professionals according to their specialty. Meanwhile, clinical assignment is the assignment of the hospital director to a clinical nurse to provide nursing care in the hospital based on his clinical authority (9).

Clinical authority is an important element for clinical nurses to create a professional work environment so that it can increase patient satisfaction, reduce fatigue, and reduce the workload received(11). Clinical authority describes the competence of a clinical nurse who will work in accordance with the competence he has and is responsible for every aspect of nursing care actions carried out or given to clients (12). Granting clinical authority also has the aim of protecting client safety by ensuring that nurses who provide nursing care to clients have appropriate and clear clinical competence and authority (13).

Health service facilities in Indonesia, including hospitals, continue to strive to improve the clinical competence of health workers, including nurses, and their career levels. A preliminary study that conducted by authors, among ten clinical nurses at the Mangusada Regional Hospital-Badung Regency found that 70% stated that their clinical competency was inappropriate. Clinical nurse is not yet fully able to intervene in providing care in accordance with the competencies obtained through the credentialing process. The clinical nurse placement system is not yet optimal, causing many special actions according to the level of competency that should be carried out by clinical nurses.

Based on the description above, it is clear that the importance of nurses' clinical competence can have an impact on the quality of nursing services, patient safety, missed care, and so on. Therefore, it is crucial to do research on nurses' clinical competence to determine the level of their clinical competence, particularly for nurses working in hospitals. Therefore, a literature review is necessary to demonstrate the scope of prior research as well as the areas that have not been examined or addressed in depth by earlier researchers. For competency to be supported by evidence, this literature review is crucial. In order to identify study gaps and conduct more thorough follow-up research, clinical nurses can provide crucial findings.

MATERIALS AND METHODS

This study was a review of the literature, and the PICO framework approach (Population, Intervention, Comparison, Outcomes) was used to develop the article questions. P: nurses, I: not applicable, C: not applicable, and O: application of clinical nursing competency are the components of the PICO Method. April and May 2023 saw the completion of the literature search. The information used in this study is secondary data, gathered from earlier research rather than from direct observation. International journal papers with predetermined themes served as secondary data sources. Two databases, Pubmed and Scient Direct, as well as additional sources are used in the literature search. (1) Articles discussing the application of nurses' clinical competencies; (2) Articles discussing nurse skills related to clinical competence; (3) Articles published in English and the year of publication of the articles used ranges from 2019–2023, (4) Articles from research results with an observational study design, and (5) Articles that were available in full-text articles. These criteria were used to include sources for this article in the literature. Articles that take the form of a scoping review, literature review, or meta-analysis are excluded from

consideration. The keywords in this scoping review were "nursing competency" OR "clinical nursing competency" AND "evaluation" OR "implementation" AND "hospital".

RESULTS AND DISCUSSION
RESULTS

There were 1,150 publications found in the initial stage of the search (identification) utilizing two data-based and other sources, including 332 from Pubmed data-based, 808 from Science Direct, and 10 from other sources. Furthermore, at the screening stage, eight articles were found to be duplicates, so they had to be removed. After the duplicate articles were removed, 1,142 articles remained. The next stage was to review the article titles, and article titles that do not meet the criteria were excluded. Following selection based on the abstract, a thorough evaluation is conducted to ascertain whether the abstract actually exists and whether the content of the abstract is appropriate. Only 60 papers out of 1,082 were found to meet the criteria after the titles and abstracts were examined. The article's viability was determined at the following stage by the outcomes of the full-text review (Eligibility). 34 full-text papers were discovered at this point, and 26 articles were disregarded because they were scoping reviews, systematic

reviews, or meta-analyses. Another reason for excluding this article was because it does not focus on nurses' clinical competency and concerns the competency test of nursing students. Finding the number of articles that fit the inclusion and exclusion standards and adhere to the goals of this scoping study was the last step. Because they all adhere to the guidelines, seven articles were included. The flow diagram below (**Figure 1**) shows the outcomes of the article selection.
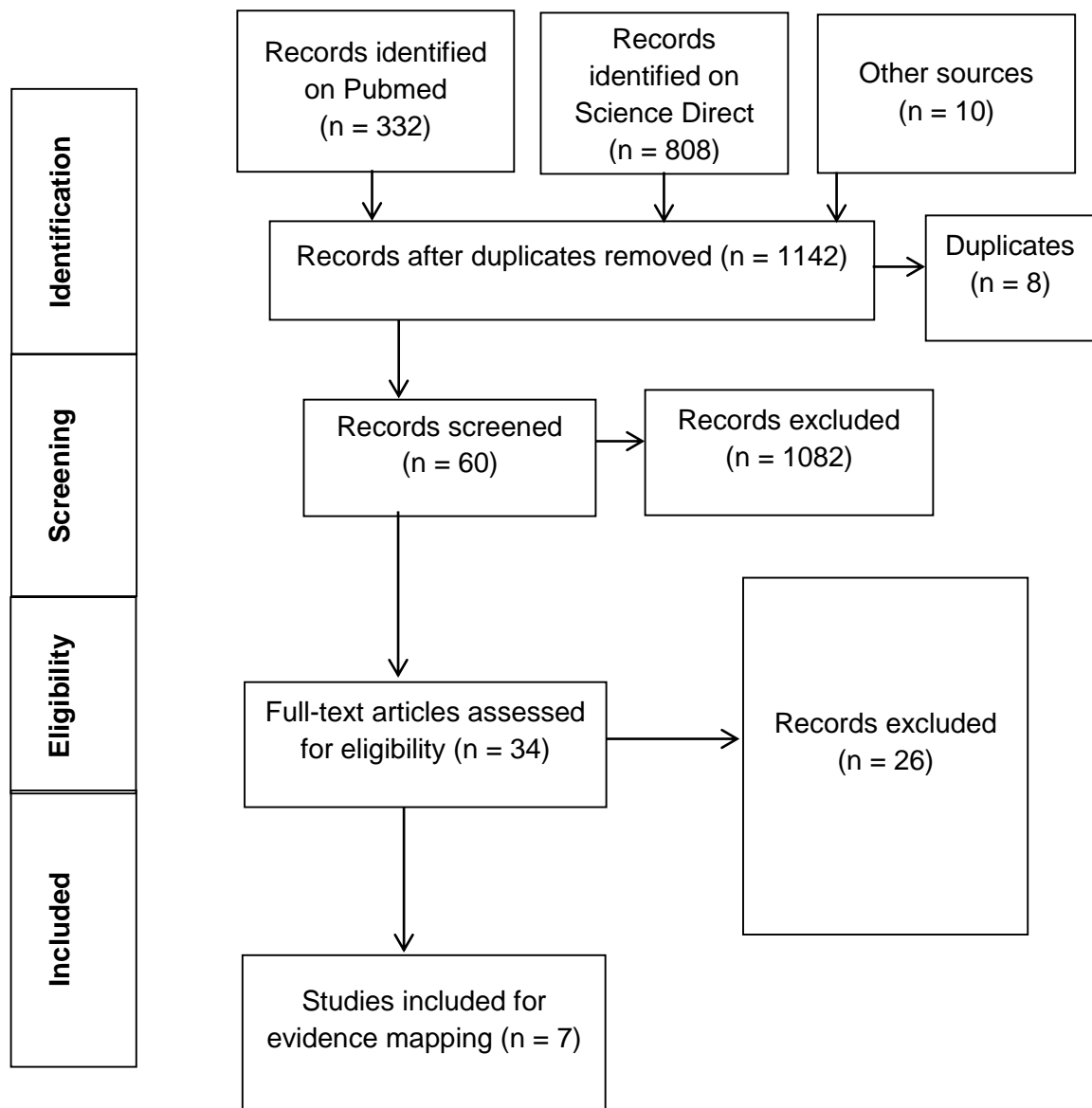
Fiqure 1. PRISMA Flow Diagram

Seven articles involved reviewing; one article was a qualitative design, and the remaining six used a cross-sectional quantitative design. In detail, the findings from this scoping review are contained in **Table 1**. Meanwhile, several important points from these findings were:

Clinical competency of nurses who have just completed their education

Nurses who had just started working or were fresh graduates did not have the competence based on the needs of health services. In general, new nurses feel confused because of the large gap between the theory they have studied and practice in health services. Another finding was the varying differences in nurse competency. Generally, those whose nursing schools have hospitals have higher competence than those whose schools do not have hospitals.

Aspects of Competency Assessment

The assessment of nurse competency was assessed from several aspects; some were three aspects, and there were also seven assessment aspects for the three aspects, namely basic competence, ability to provide nursing care, and professional development ability. Nurses who have worked in hospitals for a long time have different levels of clinical competence, ranging from very good to moderate levels. The highest competency was direct care, and the lowest was monitoring the quality of patient nursing services. Regarding the nurse competency assessment, the supervisor gave the lowest assessment compared to self-assessment and group assessment. Apart from that, other study findings found that the highest clinical competency of nurses was regarding clinical care, and the lowest was professional development. This differed from the findings of other studies, which found that the highest competency was about situation management, and the lowest was about competency in ensuring the quality of nursing care.

Clinical competency of nurses before and during the COVID-19 pandemic

Another fascinating finding was a study that measured the clinical competence of nurses who were assessed before and during the COVID-19 pandemic. The findings of this study found that the nurse competency level was moderate, and there was no significant difference in the clinical competency of nurses before and during the COVID-19 pandemic.

Table 1. Results of selected articles review

Title (author,year)	Research Design	Research Results	Research Limitations
Competency and clinical mentoring: Perceptions of newly graduated and experienced professional nurses in Lesotho.(14)	This study is a comparative descriptive study using a qualitative approach carried out in South Africa. Participants in this research were professional nurses who had just graduated and nurses who already had experience working professionally.	• Newly graduated nurses do not yet have the competencies needed in health services. • Competency of new nurses from different educational institutions have different competency levels. • Nursing schools that have hospitals have better competence than those that do not have hospitals. • Nurses who have just graduated and are new to work are confused when providing nursing care because theory and practice are very different.	• Research focuses on nursing competencies but is carried out in the public health service facilities sector. • National referral hospitals were not included in the study.
Evaluation of clinical competence and its related factors among ICU nurses in Kermanshah-Iran: A cross-sectional study.(15)	A cross-sectional study involving 155 nurses who were selected using stratified random sampling. This research was conducted in Iran.	The average score of clinical competency for nurses in the ICU is 76.14 out of a total score of 100, categorized as a very good level. Of all aspects, competencies related to situation management are the best. Statistically, there is no difference in clinical competency based on age, gender, academic level, and work experience.	• The instrument comes from the self-reporting method. • It cannot be generalized to the population.
Evaluation of Nurse Practitioners' Professional Competence and	A cross-sectional study conducted in Taiwan involving 211 participants was selected	• Nurse practitioner competency is at a moderate level.	The research was conducted in a teaching hospital with a small sample from each group so that the research results cannot be fully

Title (author,year)	Research Design	Research Results	Research Limitations
Comparison of Assessments Using Multiple Methods: Self-Assessment, Peer Assessment, and Supervisor Assessment.(16)	using purposive sampling. The methods used are self-assessment (nurse practitioners), peer assessment (doctors and nurses), and assessment from supervisors (head nurses)	• The highest competency in direct patient care • The lowest competency is monitoring the quality of care services. • The lowest professional competency of nurses comes from supervisor assessment compared to self-assessment and group assessment.	generalized to the population or to other hospitals.
Factors Affecting Clinical Nursing Competency: A Cross-Sectional Study.(2)	A cross-sectional study was conducted in Japan involving 717 nurses with a response rate of 58.3% or 418 respondents.	There are three aspects assessed (basic nurse competency, ability to provide nursing care, and professional development ability in nursing practice). Overall, the median score for frequency of implementation and degree of achievement was 3.	Bias in data analysis due to low response rate. Samples were taken from one hospital, so they cannot be generalized to other hospitals.
Is nurses' clinical competence associated with their compassion satisfaction, burnout, and secondary traumatic stress? A cross-sectional study.(17)	The cross-sectional study involved 291 nurses working in government hospitals in Southern Iran. The research sample was selected using convenience sampling.	Of the 7 aspects of clinical competency assessed, clinical care had the highest average (29.35) and the lowest was professional development (17.14).	Because the study used a cross-sectional design, researchers cannot confirm the relationship between cause and effect. The study also used two government hospitals, so it cannot be generalized to other hospitals.

Title (author,year)	Research Design	Research Results	Research Limitations
The Predictors of Clinical Competence among Hospital Nurses: A Cross-Sectional Study in Hamadan, West Iran.(18)	A cross-sectional study involving 270 nurses at a university hospital in Hamadan, West Iran	The average nurse's clinical competence value was 40.28 (range 0–100). The highest average score was situation management (56.13), and the lowest was ensuring quality (25.3). In general, Iranian nurses have a moderate level in terms of clinical competence.	• Weak in determining causality because it uses a cross-sectional study. • The research results cannot be generalized to other developing countries with different health, social, cultural, economic, and other professions.
Nurses' clinical competency and its correlates: before and during the COVID-19 outbreak.(19)	A cross-sectional study involving all nurses (260 and 246 nurses) before and during the COVID-19 pandemic	In general, nurses' clinical competency is at a moderate level. There was no significant difference in nurse competency before and during the COVID-19 pandemic.	This research was conducted in the city, so generalizations to other populations are carried out with caution due to social and cultural differences. Researchers cannot control some factors (economic, social, and cultural conditions).

DISCUSSION

Nurses have an important role in the system of providing health services to patients in hospitals. Nurses are the health profession that is dominant in providing services in hospitals. This causes nursing services to have an impact on the quality of health services. However, in order to provide quality nursing services, nurses need to have clinical competence in accordance with community needs.

Conceptually, competency is the ability possessed by every person or profession to carry out their duties or carry out certain actions. Competency is an ability obtained through experience and learning (20-21). In theory, it is stated that competence is fundamental, especially in nursing services provided to patients, and this plays an important role in determining the quality of service. Competency also refers to a body of information that includes knowledge, abilities, attitudes, and beliefs, as well as the capacity to operate more effectively and efficiently in a formal workplace (22).

The results of this scoping review found that nurses who had just completed their education did not have sufficient competency. Graduates whose educational institutions have hospital facilities tend to have better competencies. Nurses who have just completed their education are confused when providing nursing actions (14). In order for competence to become better, training

and education are needed. This is important because competency is the ability to perform certain tasks or even certain actions that require knowledge. For the nursing profession, this competency is a big challenge because it is related to many things in providing health services to patients (20-21). Competency has several important assumptions, including 1) competence as a comprehensive concept involving skills, knowledge, attitudes, adequacy, and performance; 2) competence as the capability for specialized tasks; 3) competency can be achieved through training; 4) competency is measured through specific performance measurements for nurses; and 5) competency is critical because it can be used to measure nurses' clinical abilities (21, 23-24).

Clinical competency is divided into two: general competency, which consists of management and communication skills, group performance, and the ability to provide health services. Meanwhile, special competencies consist of the quality of nursing assessments, implementation of specific processes, monitoring of nurse performance, and the ability to monitor health and disease. Nursing competency, on the other hand, is the capacity to act through the integration of information, skills, values, beliefs, and experience necessary to be a nurse (3, 25). The capacity to provide nursing care in accordance with the demands of the patient being cared for while

using critical thinking and precise nursing techniques is a nurse's primary competency. In contrast, the structural components of nursing competency are: 1) the capacity to comprehend patient requirements; 2) the capacity to deliver care; 3) the capacity to collaborate; and 4) the capacity to support decision-making.(3)

Clinical competency generally includes the quality of nursing assessments, implementation of specific processes, performance monitoring, and the ability to monitor patient health and illness. Clinical competency has several components, including helping roles, teaching-coaching, diagnostic functions, managing situations, therapeutic actions, ensuring quality, and work roles. Because nurses' clinical competence has a significant impact on the quality of health services, particularly in hospitals, it is crucial to make it a top priority and the nursing profession's major purpose (22).

Emergency rooms and intensive care units require specific clinical expertise from nurses who can operate rapidly while still paying attention to the standard of nursing services. Critical patient conditions require high nurse competency to provide appropriate nursing care. Nurses' clinical competency needs to continue to be optimally improved. Nurses need to maintain their competence well, considering that nurses are the leading health workers in providing services to patients (20-21).

The results of the scoping review found that nurses have different clinical competencies. Some of them have very good competence, but there are also those whose competence is still far below society's and professional's expectations (20-21). The research results show that the competence of nurses, especially nurses who have just completed their education or nurses who have just started working, is less competence. Meanwhile, nurses who have sufficient experience have competency at a moderate level, and there are also those who have a very good level (14). Apart from that, the competency level of nurses can also be seen from the competency aspect scores. Some nurses have high competency scores on certain components, but there are also low scores on other components. Previous research results show that the highest competencies include direct care, clinical care, and situation management. Meanwhile, the lowest score in competency measurement is related to monitoring service quality, professional development, and ensuring the quality of nursing services to patients (17-18). A low competency score can indicate a low quality of nursing care provided to the hospital's patients. Meanwhile, the low clinical competencies and quality of nursing care may impact patient satisfaction and safety (26). Patients are always looking for high-quality nursing care that is provided by nurses. Therefore, all professional nurses should be focused on

maintaining and improving the quality of nursing care by increasing their clinical nursing competencies (27).

In addition, a very interesting finding from this scooping review is the clinical competency of nurses measured before and during the COVID-19 pandemic. These findings found that statistically, there was no difference in nurse competency before or during the COVID-19 pandemic. This shows that nurses' clinical competence must be maintained and continuously improved, whatever the situation or health conditions they face. Nurses must always strive to provide nursing care based on established competencies. Thus, all nursing interventions carried out and provided to patients are in accordance with competency standards continuously (19).

In general, the results of this scoping review show that the averages of clinical nursing competencies are low to moderate. This finding means good clinical nursing care could be provided to patients better. Nurses are expected to have good quality and high nursing standards. The quality of nursing care can actually be seen from patient satisfaction, and the satisfaction can be influenced by appropriate nursing care that is delivered to the patients. In addition, the excellent quality of nursing care and high satisfaction impact the patient's decision to get healthy services in the previous hospital and trust in the nurses. Therefore, all nurses need to balance the quality of nursing care and the patient's satisfaction (28).

Implementing good nursing competencies and always maintaining the quality of nursing services can have a positive impact on patients, nurses, and the nursing profession and also a positive impact on the organization where the nurse works (3). The study results show that patient-focused competencies have positive consequences. Competency has many benefits, including the ability to assess or evaluate nurses' clinical abilities, the ability to prevent or reduce the frequency of medical errors, the ability to lower treatment costs, the implementation of patient safety and patient outcomes, and an increase in the clinical skills of nurses (29-30). Patient safety is influenced by nurses' compliance to the prevention of patient safety procedures and principles in the hospital. Therefore, it is essential to identify patient safety to make a good plan for quality nursing care, patient safety, and satisfaction (31-32).

Given the complexity of patient problems in hospitals, nurses and other healthcare professionals must possess the necessary competencies. Collaboration of health workers is absolutely necessary so that the competency of all health workers, including nurses, can be achieved. We are fully aware that it is impossible for a single professional to be able to meet all patient needs, including care, treatment, and so on. Therefore, interprofessional teams can be a great hope for improving the quality of service to patients while remaining focused

on the clinical competence of each profession. If this can be implemented in patient care settings, patient satisfaction can be increased because increased clinical competence can improve good clinical practice and can improve the quality of service to patients (21, 33).

CONCLUSION AND RECOMMENDATION

This scoping review focuses on examining the clinical competence of nurses hospitals. Nurses' clinical competency is very important and has an impact on the quality of patient care. These competencies at least include basic competencies, the ability to provide nursing care, and professional development. The clinical competence of nurses, especially nurses who have just completed their education or are new to work, is still low, and they are confused about providing nursing care to patients in hospitals. Hospital ownership for a nursing school plays a major role in the competency of nurses who graduate from that school. Meanwhile, nurses who have work experience have competency at a moderate to very good level. The highest competencies relate to direct care, critical care, and situation management. In contrast, the lowest competency is related to monitoring and ensuring the quality of nursing services and professional development. Apart from that, there were no differences found in nurse competency before and during the COVID-19 pandemic. In addition, as compared to self-report or peer report, the supervisor gave the lowest competency score. The author recommends that future researchers focus oexperimental studies to improve nursing clinical competencies.

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