

EVALUATION OF CLINICAL COMPETENCE IN UNDERGRADUATE NURSING STUDENTS: SCOPING REVIEW PROTOCOL

EVALUACIÓN DE LA COMPETENCIA CLÍNICA EN ESTUDIANTES DE PREGRADO EN ENFERMERÍA: PROTOCOLO DE SCOPING REVIEW

AVALIAÇÃO DA COMPETÊNCIA CLÍNICA EM ESTUDANTES DE GRADUAÇÃO EM ENFERMAGEM: PROTOCOLO DE REVISÃO DE ESCOPO

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ABSTRACT

Objective: To map what has been produced on the assessment of clinical competence of undergraduate nursing students during clinical internships. **Methods:** Scoping review protocol, structured according to the Joanna Briggs Institute methodology and the PRISMA checklist for scoping reviews. The protocol is registered with the Open Science Framework (OSF). Inclusion criteria will include primary or secondary studies that present strategies, assessment instruments, and experiences of clinical competence assessment in undergraduate nursing during clinical internships. The search will be conducted in the electronic databases of Latin American and Caribbean Literature in Health Sciences (Lilacs), Medical Literature Analysis and Retrieval System Online (PubMed/Medline), Scopus Preview (Scopus), Education Resources Information Center (ERIC), and Web of Science. Publications will be selected by two independent reviewers, and possible conflicts will be resolved by a third reviewer. The data will be mapped and presented descriptively, with a comprehensive view of the assessment of clinical competence of undergraduate nursing students in clinical internship.

Keywords: Nursing Students; Self-Assessment Programs; Clinical Competence; Self-Assessment; Clinical Internship.

RESUMEN

Objetivo: Mapear lo que se ha producido sobre la evaluación de la competencia clínica de estudiantes de enfermería de pregrado en prácticas clínicas. **Métodos:** Protocolo de revisión del alcance, estructurado de acuerdo con la metodología del Instituto Joanna Briggs y la lista de verificación PRISMA para revisiones del alcance. El protocolo está registrado en el Open Science Framework (OSF). Los criterios de inclusión incluirán estudios primarios o secundarios que presenten estrategias, instrumentos de evaluación y experiencias de evaluación de la competencia clínica en el ámbito de la enfermería de pregrado durante el internado clínico. La búsqueda se realizará en las bases de datos electrónicas de Literatura Latinoamericana y del Caribe en Ciencias de la Salud (Lilacs), Medical Literature Analysis and Retrieval System Online (PubMed/Medline), Scopus Preview (Scopus), Education Resources Information Center (ERIC) y Web of Science. Las publicaciones serán seleccionadas por dos revisores independientes y los posibles conflictos serán resueltos por un tercer revisor. Los datos serán mapeados y presentados de forma descriptiva, con una visión integral de la evaluación de la competencia clínica de los estudiantes de enfermería de pregrado en prácticas clínicas.

Palabras clave: Estudiantes de Enfermería; Programas de Autoevaluación; Competencia Clínica; Autoevaluación; Pasantía Clínica.

RESUMO

Objetivo: Mapear o que tem sido produzido sobre a avaliação de competência clínica de estudantes de graduação de enfermagem em estágio clínico. **Métodos:** Protocolo de revisão de escopo, estruturado conforme a metodologia do Instituto Joanna Briggs e o checklist PRISMA para revisões de escopo. O protocolo está registrado na Open Science Framework (OSF). Os critérios de inclusão abrangerão estudos primários ou secundários que apresentem estratégias, instrumentos de avaliação e experiências de avaliação de competência clínica no âmbito da graduação em enfermagem durante o estágio clínico. A busca será conduzida nas bases de dados eletrônicas da Literatura Latino-Americana e do Caribe em Ciências da Saúde (Lilacs), Medical Literature Analysis and Retrieval System Online (PubMed/Medline), Scopus Preview (Scopus), Education Resources Information Center (ERIC) e Web of Science. As publicações serão selecionadas por dois revisores independentes, e os possíveis conflitos serão desfeitos por um terceiro revisor. Os dados serão mapeados e apresentados de forma descritiva, com uma visão abrangente sobre a avaliação da competência clínica de estudantes de graduação de enfermagem em estágio clínico.

Palavras-chave: Estudantes de Enfermagem; Programas de Autoavaliação; Competência Clínica; Autoavaliação; Estágio Clínico.



INTRODUCTION

Clinical competence in nursing undergraduate students has been widely investigated internationally⁽¹⁻⁷⁾.

Under Benner's perspective, clinical competence presents itself in a multifaceted way, influenced by diverse factors, among which the following are highlighted: internal and external to the individuals; organizational structure of healthcare and nursing services; ethical aspects; as well as the consolidation of knowledge that develops over time^(8,9). Therefore, it has a procedural character – it happens throughout undergraduate level education, with continuity through professional life –, thus being provenly mediated by time and experience⁽⁷⁻¹³⁾.

Benner proposes a theoretical model on the progressiveness from novice to expert regarding proficiency level throughout the professional experience, which allows for identifying the domain and condition for rapid intervention in complex clinical situations of the clientele, at key levels, such as: 1. Novice, 2. Advanced beginner, 3. Competent, 4. Proficient and 5. Expert^(8,9).

The model addresses the type of experiential learning through which one becomes able to recognize the situation as a whole, based on accumulated previous experiences, perfecting them over time. Progression from one level to another depends on successfully achieving the previous level, from which elements are improved and expanded by experiencing clinical situations in practice settings, resulting in

advancement to the highest level of competence and the evolution of clinical knowledge^(8,9).

Regarding the preponderant factors that contribute to the development of clinical competence among nursing professionals, those that maintain a connection with action in the practical scenario of nursing care, even during training, stand out. This is particularly evident when it is possible to correlate theoretical and practical knowledge through experiential learning. It is therefore considered that the clinical competence development process encompasses the period of nursing undergraduate studies and continues through the professional occupation⁽¹⁴⁾.

The assessment of clinical competence, specifically in undergraduate nursing students, has been the subject of discussion and current investigation, especially in the international context. However, in the national scope, there is a gap in scientific literature on this topic, thus implying the need for studies that strongly target the assessment of clinical competence^(15,16).

In nursing education, studies claim that achieving clinical competence is an important part of developing quality standards for the profession and patient safety⁽¹⁷⁾.

Clinical competence assessment may be considered a method that allows students to observe their progress while reflecting upon their performance. Therefore, clinical competence assessment becomes essential to the educators involved (teachers and mentors) in teaching-learning, nursing managers, and from the perspective of student self-assessment⁽¹⁷⁾.



Measuring perception of behaviors and abilities, like clinical competence, is usually not computed in nursing undergraduate studies, but, when duly assessed, such procedures can contribute to advancing students' knowledge in undergraduate studies, helping them identify gaps in theoretical and practical knowledge, to guide teaching practices, provide safe practices, which value patient safety and care, in addition to boost building and/or rebuilding Nursing Courses Pedagogic Projects^(1,13,15).

A preliminary search conducted in August 2023 in the JBI Evidence Synthesis, Open Science Framework (OSF), Cochrane Database of Systematic Reviews, PubMed, and Prospero databases did not retrieve any systematic review or scope review, either published or unpublished, on the assessment of clinical competence of undergraduate students in a clinical internship.

Due to the need to fill this gap and analyze studies on the assessment of clinical competence of undergraduate nursing students in a clinical internship, through synthesis, we propose this scope review to map what has been produced about the assessment of clinical competence of undergraduate nursing students in a clinical internship.

METHODS

Type of study

Literature scope review to be developed based on the methodological structure proposed

in the *Instituto Joanna Briggs* (JBI)⁽¹⁸⁾ manual for synthesizing evidence for scope review.

The writing will be guided by the Preferred Reporting Items for Systematic reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR) checklist⁽¹⁹⁾. This framework presents five key steps to subsidize the process of constructing scope reviews: (1) identification of research question; (2) identification of relevant studies; (3) selection of studies; (4) mapping and data analysis; and (5) grouping, synthesis, and presentation of results. To limit reporting bias and determine the quality of produced evidence, this scope review protocol was registered in the Open Science Framework (<https://osf.io/h3ety/>) platform under DOI: www.doi.org/10.17605/OSF.IO/H3ETY.

Location and period of study

This scope review will be conducted in the city of Cuiabá, Mato Grosso, Brazil, from May to August 2024.

Research question

The PCC (Population, Concept, and Context) mnemonic will be used to formulate this research question, in which P (population): undergraduate nursing students; C (concept): Clinical competence assessment; and C (context): Clinical internship. Thus, the following research question was raised: "What has been produced on the assessment of clinical competence of undergraduate nursing students during clinical internships?"



The key elements for developing clinical competence proposed by Benner⁽⁸⁻⁹⁾, will be used for understanding clinical competence. From these propositions, the results presented at the end of the review will be organized through two possible themes for analysis: (1) Productions around the assessment of clinical competence in nursing undergraduate students, (2) The use of measurement instruments to assess the clinical competence in nursing undergraduate students.

Eligibility criteria

The scope of this review will include primary and secondary studies that present strategies, assessment instruments, and experiences of assessment of clinical competence in the scope of nursing undergraduates during clinical internship, studies that have clinical competence as an object and/or assess the clinical competence of nursing students, and studies that validate instruments for assessing clinical competence. This review will exclude editorial articles, guidelines, specialist opinions, final projects, dissertations, theses, and studies that do not answer the research question.

Bibliographical survey and search strategies

Chart 1 - Vocabularies used to build the PCC strategy (Population, Concept, and Context). Cuiabá, Mato Grosso, Brazil, 2024.

Health science descriptors (DeCS)		
	Descriptors	Related terms
Population	estudantes de enfermagem	alunos de enfermagem; estudante, enfermagem; enfermeiras alunas; enfermeira, aluna; aluno enfermeiro; estudante de enfermagem; estudantes de enfermagem
Concept	programas de autoavaliação; competencia clínica; autoavaliação	programa, autoavaliação; programas de autoavaliação; programa de autoavaliação; competências clínicas

The bibliographical survey will be conducted in the electronic databases of Latin American and Caribbean Literature in Health Sciences (Lilacs), Medical Literature Analysis and Retrieval System Online (PubMed/Medline), Scopus Preview (Scopus), Education Resources Information Center (ERIC), and Web of Science. Access to databases and bibliographical index will be done through the journal portal of the Coordination for the Improvement of Higher Education Personnel (CAPES), through the Federated Academic Community (CAFe) login ID of the Mato Grosso State University (UNEMAT).

The descriptors and keywords will be combined using Boolean operators *OR* and *AND*. In compliance with each selected database, the following controlled vocabulary will be used: Medical Subject Headings (MeSH) for MEDLINE via PubMed, ERIC, Scopus, and Web of Science, and health science descriptors (*Descritores em Ciências da Saúde - DeCS*) for LILACS via BVS. Chart 1, as follows, presents the vocabulary used to build the strategies.

		competências clínicas; habilidade clínica; auto apreciação
Context	estágio clínico	estágios clínicos; aprendizagem clínica
<i>Medical Subject Headings (MeSH)</i>		
Population	students, nursing	pupil nurses; student, nursing nurses, pupil;; pupil nurse; nursing student; nursing students
Concept	classification; self-evaluation programs clinical competence	program, self-assessment; self-assessment programs; self-assessment program; clinical competencies
Context	clinical stage	clinical internships; clinical learning

Source: Elaborated by the authors (2024).

The search strategies will be structured according to the specificities of each database. The final reference list of the included studies

will be read to find important studies to be added. The synthesis of the searches is described in Chart 2.

Chart 2 - Search strategies and respective databases. Cuiabá, Mato Grosso, Brazil, 2024.

Databases	Search	Search strategies	Number of articles
PubMed/Medline	Strategy 1	((“Nursing Education Research” OR “Students, Nursing” OR “Pupil Nurses” OR “Nursing Students”) NOT (“Students, Medi*”) AND (“Clinical Competence” OR “Competency Clinical” OR “Clinical Competencies” OR “Clinical Skill” OR “Clinical Skills”) OR (“Classification” OR “Self-Evaluation Programs”) AND (“Clinical Clerkships” OR “Clinical Apprenticeship” OR “Apprenticeships, Clinical”))	00 articles
	Strategy 2	(Nursing students AND Clinical Competence AND Self-assessment)	10 articles
LILACS	Strategy 1	“Nursing students” “Clinical Competence” “Self-assessment”	02 articles
Web of Science	Strategy 1	ALL=(“Nursing students” AND “Clinical Competence” AND “Self-assessment”)	07 articles
ERIC	Strategy 1	"Undergraduate Nursing Students" AND "Competency, Clinical"	00 articles
	Strategy 2	“Nursing education” AND “Clinical nursing”	01 articles
Scopus	Strategy 1	"nursing students" AND "clinical competence " AND " self-assessment"	11 articles

Source: Elaborated by the authors (2024).

The study selection will be conducted by two independent reviewers, following the steps from the adapted 2020 Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) flowchart. At the end of this step, there will be a third reviewer to mediate any

divergences. Thus, should there be no consensus among the two reviewers regarding the inclusion of studies, a third reviewer will be called.

Screening will be done by reading the title and abstract of the studies. After applying inclusion and exclusion criteria, the eligible

studies will proceed to the next step, which will consist of a full reading of the studies selected. At the end of this step, there will be a reading of the reference list of the included studies, seeking other studies that could be included.

The results will later be exported to a Microsoft Word spreadsheet for duplicate removal and composition of the final sample of studies.

Data extraction

Chart 3 - Data extraction instrument for the scope review on the assessment of clinical competence of undergraduate nursing students in a clinical internship. Cuiabá, Mato Grosso, Brazil, 2024.

a- Bibliographical information of the studies

Study	Author (s)	Year	Journal	Publishing university	Country
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b- Information related to the method

Study	Method/Study design	Sample/Participants	n	Location/University where the study was conducted	Method or instrument used in CC assessment
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c- Information related to the result

Study	Field	Theorist/CC concept mentioned	Limitations	Gaps
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d- Information related to the detailed results

Study	Detailed results	Other related discoveries	Type of collection (Direct or interpretation)
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e- Information related to the retrieved CC assessment instruments

Study	Author/Year/Country	Instrument (Name and Acronym)	Characteristics Domains/ Dimensions/Categories/ Items/ Score
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Source: Elaborated by the authors (2024).

Analysis and presentation of results

Evidence identification will be conducted descriptively, disregarding methodological quality or possible biases from the selected studies, and without using an analytical approach

The included studies' data extraction will be done through an instrument developed by the reviewers (Chart 3). Should there be a need to add information to the instrument, this will be altered, and the information will be registered in the scope review report. Disagreements at the end of extraction will be analyzed by a third reviewer.

for the assessment. The collected information will be organized in tables, charts, and/or flowcharts, and the discussion will be elaborated narratively to encompass the assessment of clinical competence of undergraduate nursing

students in a clinical internship, following the Preferred Reporting Items for Systematic Reviews and Meta-Analyses—Extension for Scoping Reviews (PRISMA-ScR) recommendations⁽¹⁹⁾.

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Author Contributions

