INPLASY

Clinical reasoning and decision-making in nursing: a protocol for a systematic review of systematic reviews

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ADMINISTRATIVE INFORMATION

Support - None.

Review Stage at time of this submission - Piloting of the study selection process.

Conflicts of interest - None declared.

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Amendments - This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 21 May 2025 and was last updated on 21 May 2025.

INTRODUCTION

Review question / Objective The aim of this systematic review is to synthesize existing evidence from systematic reviews on clinical reasoning and clinical decision-making in nursing, focusing on their domains of application, theoretical models, influencing factors (individual, social, and contextual), and interventions aimed at supporting or improving these processes.

Specific Objectives:

(1) To identify the nursing domains in which clinical reasoning and clinical decision-making are applied.

(2) To identify and analyse the main theoretical models that describe clinical reasoning and clinical decision-making in nursing.

(3) To examine the factors that influence clinical reasoning and clinical decision-making in nursing, with a focus on individual, social, and contextual determinants.

(4) To identify and analyse interventions aimed at improving clinical reasoning and clinical decision-making in nursing practice and education.

(5) To identify research gaps and methodological limitations in the existing literature, in order to inform future research and enhance the applicability of evidence in practice.

PICOES framework:

(P) Population: Nurses and nursing students in various professional and educational settings (e.g., registered nurses, nursing students, advanced practice nurses) working in hospital, primary care, long-term care, and community settings.

(I) Intervention: Interventions described in the included systematic reviews, such as educational programs, training strategies, or decision support tools designed to improve clinical reasoning and decision-making.

(C) Comparator: Not applicable. This review does not include direct comparator groups as it synthesises findings from the existing literature.

(O) Outcomes: Identification of: (1) Key nursing domains where clinical reasoning and decision-making are applied; (2) Theoretical models and their application; (3) The impact of individual, social, and contextual factors on reasoning and decision-making; (4) Identification and analysis of

interventions aimed at supporting or improving clinical reasoning and decision-making in nursing practice and education; (5) Research gaps and methodological limitations in the current literature.

(E) Exposure: Individual, social, and contextual determinants such as professional experience, workload, time constraints, interpersonal dynamics, and workplace environment that influence clinical reasoning and decision-making processes.

(S) Study Design: Systematic reviews analysing clinical reasoning and decision making in nursing, including qualitative, quantitative and mixed methods approaches.

Rationale Several systematic reviews have examined specific aspects of clinical reasoning and decision-making in nursing, such as theoretical models, influencing factors, and educational strategies. However, to date, there is no comprehensive synthesis that integrates these elements within the diverse contexts of nursing practice and education.

This systematic review has been developed to address this gap by providing an integrated overview of how clinical reasoning and decision-making are conceptualised, implemented, and evaluated within the existing body of systematic reviews.

Condition being studied This systematic review focuses on clinical reasoning and clinical decision-making as key cognitive processes in nursing, explored in a variety of professional domains (defined as various professional contexts such as acute care, primary care, long-term care, community health, mental health, maternal and child health, palliative care, nursing education, and nursing leadership).

The existing literature highlights significant variability in how these processes are defined and applied, shaped by differences in theoretical models, individual, social, and contextual determinants, and by the presence or absence of interventions designed to support or enhance them.

By synthesising current evidence from systematic reviews, this study aims to provide a structured overview of existing knowledge, identify conceptual and methodological gaps, and generate insights to guide future research and inform the development of nursing practice.

METHODS

Search strategy The databases included in this review are listed in detail in the Information Sources section.

To ensure a comprehensive and reproducible search, both controlled vocabulary and text words will be used, with tailored strategies adapted to the structure and interface of each database.

The search will include studies from all available years, without date restrictions, to provide a comprehensive review, considering studies published in any setting and country. Only studies published in English will be considered.

The strategy will be rerun before the final data extraction to include the most recent studies. A PRISMA flow chart will document the search process, including the number of articles identified. Any modifications will be documented in the INPLASY record and reflected in the final review report.

Covidence systematic review software will be used for document management, including removing duplicates and blind screening.

The complete search strategy and query strings for each database are:

PubMed:

(clinical reasoning[tiab] OR clinical judgment[MeSH Terms] OR clinical judgment[tiab] OR clinical decision-making[MeSH Terms] OR clinical decision-making[tiab]) AND (nursing[MeSH Terms] OR nursing[tiab] OR nurses[MeSH Terms] OR nurses[tiab]) AND (review, systematic[MeSH Terms] OR systematic review[tiab] OR systematic literature review[tiab])

CINAHL:

(MH clinical reasoning OR TI clinical reasoning OR AB clinical reasoning OR MH clinical judgment OR TI clinical judgment OR AB clinical judgment OR MH clinical decision making OR TI clinical decision making OR AB clinical decision making) AND (MH nursing OR TI nursing OR AB nursing OR MH nurses OR TI nurses OR AB nurses) AND (MH systematic review OR TI systematic review OR AB systematic review OR MH systematic literature review OR TI systematic literature review OR AB systematic literature review)

Scopus:

TITLE-ABS-KEY (("clinical reasoning" OR "clinical judgment" OR "clinical decision-making" OR "clinical decision making") AND (nursing OR nurses) AND ("systematic review" OR "systematic literature review"))

Cochrane Library:

("clinical reasoning" OR "clinical judgment" OR "clinical decision-making" OR "clinical decision making") AND (nursing or nurses) AND ("systematic review" OR "systematic literature review") in Title Abstract Keyword.

Participant or population The review will include studies involving nurses and nursing students in all professional and educational settings, covering

various nursing domains and environments where clinical reasoning and decision-making are applied. No restrictions will be applied based on age, gender, or ethnicity.

The inclusion criteria are as follows:

(1) Studies involving registered nurses, advanced practice nurses, and nursing students.

(2) Studies conducted in various nursing domains.

The exclusion criteria are as follows:

(1) Studies focusing exclusively on other healthcare professionals without specific data on nurses or nursing students.

(2) For studies involving mixed healthcare populations, inclusion will be considered only if data specific to nurses or nursing students are reported separately and can be extracted.

Intervention This review will consider both interventions and exposures that influence clinical reasoning and decision-making in nursing.

Interventions may include, as reported in included systematic reviews, educational programs, training strategies, or decision support tools designed to enhance reasoning skills.

Exposures refer to individual, social and contextual determinants, such as professional experience, workload, time constraints, interpersonal dynamics, and the workplace environment.

Both interventions and exposures will be analysed to assess their respective roles in shaping clinical reasoning and decision-making processes in different nursing domains.

Comparator Not applicable, as this review synthesises findings from existing reviews rather than comparing specific interventions or exposure groups.

Study designs to be included This review will include systematic reviews that focus on clinical reasoning and clinical decision-making in nursing. Systematic reviews using quantitative, qualitative, or mixed methods will be considered.

Eligibility criteria The eligibility criteria for this review are structured according to the PICOES framework to ensure consistency and transparency in the selection process.

Inclusion criteria:

(1) Study type: Systematic reviews (including quantitative, qualitative, or mixed-methods designs) that follow a clear and replicable methodology.

(2) Population: Nurses and nursing students (including registered nurses, advanced practice nurses, and undergraduate or graduate nursing students).

(3) Phenomenon of interest: Reviews addressing clinical reasoning and/or clinical decision-making in nursing practice or education.

(4) Setting: Any nursing domain (defined as various professional contexts such as acute care, primary care, long-term care, community health, mental health, maternal and child health, palliative care, nursing education, and nursing leadership).

(5) Language, time, and geography: Only studies published in English will be included. No restrictions will be applied based on publication date or geographical location.

(6) Publication status: Peer-reviewed published studies.

Exclusion criteria:

(1) Studies that do not follow systematic review methodology.

(2) Reviews that do not report data specific to nurses or nursing students.

(3) Reviews that do not address clinical reasoning or decision-making processes.

In cases where reviews include mixed populations, studies will only be included if data on nurses or nursing students are reported separately and can be extracted. Any deviations from these criteria during the review process will be documented and justified in the final report.

Information sources A comprehensive search will be carried out in the following electronic databases: PubMed, CINAHL, Scopus, Cochrane Library.

In addition to these databases, the review team will conduct searches of existing protocol registries, including PROSPERO and INPLASY, to confirm the absence of ongoing or overlapping systematic reviews.

At this stage, no grey literature databases or hand-searching of conference proceedings are planned.

Searches will be documented according to PRISMA 2020 guidelines.

PRISMA Flow Diagram:

(1) Records identified through database searches:

– PubMed: 161

– CINAHL: 342

– Scopus: 534

– Cochrane: 2

(2) Total records identified: 1039

(3) Duplicates removed: 291

(4) Screened (Title and Abstract): 747.

Main outcome(s) The primary outcomes of this review are:

(1) Key nursing domains in which clinical reasoning and decision-making are applied.

(2) Theoretical models used in nursing practice, identifying similarities, differences, and gaps in their application.

(3) Evaluation of the impact of individual, social, and contextual determinants on clinical reasoning and decision making in nursing.

(4) Identification and analysis of interventions aimed at supporting or improving clinical reasoning and decision-making in nursing practice and education.

This review will employ narrative synthesis and qualitative thematic analysis to extract and categorise the key outcomes reported in the included systematic reviews.

Additional outcome(s) This review will identify research gaps in existing reviews on clinical reasoning and decision-making in nursing. These gaps will be assessed through a thematic analysis of methodological limitations, inconsistencies, and underreported areas in the included reviews. Additional information will also be collected on underexplored theoretical models, limitations in study methodologies, and potential directions for future research.

Data management Two independent reviewers will screen and extract data following the PRISMA 2020 guidelines, following a two-phase process:

(1) Title and abstract screening based on pre-specified eligibility criteria.

(2) Full-text screening to determine final inclusion.

Only systematic reviews will be included. Discrepancies will be resolved by discussion or by a third reviewer. The selection process will be documented and a PRISMA flow diagram will illustrate the number of records selected, included, and excluded at each stage.

Data extraction will cover the characteristics, population, interventions, results, and key findings of the study. Covidence software will be used for data management, and Zotero will be used for reference organisation.

In cases of missing data, the study authors may be contacted for further details. If no response is received, the decision to include or exclude the study will be documented and justified. Any modifications to the extraction process will be recorded and reported.

Quality assessment / Risk of bias analysis The quality of the included systematic reviews will be assessed using the AMSTAR 2 tool, consistent with previous methodological approaches (Smith et al., 2011). Reviews rated as critically low quality according to AMSTAR 2 may be excluded from the synthesis or analysed separately to assess their potential impact on the findings.

In addition to AMSTAR 2, data extraction will include an evaluation of report quality, adherence to the PRISMA 2020 guidelines, and risk of bias within the included reviews. Two independent reviewers will conduct the risk of bias assessment at the review level, and any discrepancies will be resolved by discussion or arbitration by a third reviewer.

The results of the quality assessment will be reported in summary tables and used to inform the interpretation of the evidence.

Given that this review includes only systematic reviews and not primary studies, the GRADE approach will not be applied.

Strategy of data synthesis This review will adopt a narrative synthesis approach to summarise the findings of the included systematic reviews, in accordance with PRISMA guidelines for inclusion criteria, data synthesis, and study selection.

Within the narrative synthesis, a thematic analysis will be employed to identify recurring patterns, similarities, and discrepancies in theoretical models and influencing factors. Summary tables will be developed to compare conceptual frameworks and their application across various nursing contexts.

The synthesis results will be structured to highlight areas of convergence, divergence, and evidence gaps, with the aim of informing future systematic reviews and guiding research priorities.

Subgroup analysis A subgroup analysis will be performed based on nursing domains. Differences in clinical reasoning and decision making in various nursing contexts will be examined to identify how environmental and professional factors influence these processes.

For qualitative synthesis, a thematic analysis will be applied to compare the findings among subgroups.

Sensitivity analysis Sensitivity analyses will be conducted, when appropriate, to assess the robustness of the review findings. These analyses may involve excluding studies based on methodological quality, design type, or other predefined criteria. The purpose is to explore whether key decisions made during the review process influence the overall results and conclusions.

Language restriction Only systematic reviews published in English will be considered for inclusion.

Country(ies) involved This systematic review is being conducted in Italy.

Dissemination plans The findings of this systematic review will be disseminated through peer-reviewed publications, presentations at national and international conferences, and articles in high-impact international journals.

Contributions of each author
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