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Nursing students' Health Literacy skills: a scoping review protocol for driving research

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ABSTRACT

Introduction The healthcare systems in Europe are changing rapidly due to the increased complexity of healthcare needs, specifically for the ageing population with chronic diseases. Nurses play a key role in providing care for patients with chronic diseases, encouraging patients to take care of their own health improving their Health Literacy (HL) too. Previous works have highlighted the paucity of HL content in nursing curricula, and the need to prioritise the development of HL skills in academic teaching and assessment methods. The aim of this study is to analyse HL skills nursing literature to further develop scientific knowledge in this area of research.

Methods and analysis This scoping review will be conducted following Arksey and O'Malley's framework. This study is based on the Joanna Briggs Institute manual. A systematic search will be performed by four researchers using the electronic databases of MEDLINE (via PubMed), the Education Resources Information Centre, the Cumulative Index to Nursing and Allied Health Literature, Scopus, Web of Science and Google Scholar. We will include any paper that focuses on HL skills and undergraduate nursing students. We will select every primary study (quantitative, qualitative and mixed method design) published in peer-reviewed journals up until February 2023, in both Italian and English language, without any time limit.

Ethics and dissemination This scoping review is part of a large project of the University of Catania which aims at developing higher educational standards for nursing student. This project will not involve patients/public and does not require ethical committee approval. This scoping review will be submitted to international peer-reviewed journals.

Registration details The protocol was registered with the Open Science Framework on 20 April 2023 (https://osf.io/cn8d7).

INTRODUCTION

The Europe healthcare landscape is undergoing rapid transformations, driven by the growing complexities of healthcare needs, particularly among the ageing population affected by chronic diseases. It is essential to empower patients in order to improve their quality of life, well-being, health outcomes

STRENGTHS AND LIMITATIONS OF THIS STUDY

⇒ To our knowledge, this will be the first scoping review on Health Literacy skills among nursing students.
⇒ The review will take a rigorous approach, adhering to the Joanna Briggs Institute manual.
⇒ Large searching strategies will be developed drawing on major databases and grey literature without any time limits.
⇒ A limit of this study is that articles in Italian and English only will be included and, being a scoping review, no quality of the chosen studies will be assessed.

and self-management.[1 2] In order for patient to better manage self-care and exercise a more active involvement in decision-making regarding own care, they will have to be educated by healthcare professionals.[3] Nurses play a critical role in caring for patients with chronic diseases, managing symptoms and preventing disease progression.[4–7] Their work will include promoting patients' self-care through improving Health Literacy (HL) skills.[6 7] HL means, on the part of the patient, to access, understand and use health-related information and services, enabling informed health decisions that help improve, protect and promote the quality of life for themselves, their families and communities.[8–10] Specifically, low HL is associated with adverse health outcomes, including increased emergency department visits, reduced chronic disease management, poor medication adherence, hospitalisation and elevated mortality risk.[11 12] Consequently, it is critical to prepare nurses to address the challenges posed by patients with limited HL skills.[13]

Scholars must actively engage in HL research, education and promotion to address these critical needs.[14] Previous works by McCleary-Jones[15] and Toronto and Weatherford[16] have highlighted the paucity

and inconsistency of HL content in nursing curricula, highlighting the need to prioritise the development of HL-related skills, specially teaching and assessment methods.[15 16] McCleary-Jones[15] and Toronto and Weatherford[16] stressed the urgency of rigorous research on methods and procedures to generate understanding the subject matter and develop the relevant skills. This knowledge might offer insight on existing research, at the same time identifying potential gaps and informing future investigations. Advances in this field of research could significantly benefit nursing education by adapting more effective models and strategies, ultimately ensuring that students' proficiency in HL translates into professionals capable of addressing the current healthcare needs of chronic patients.[6 7 13]

Despite the relevance of HL proficiency among nursing students, no synthesis has been conducted to summarise findings, identify gaps and guide scholars in further research. Therefore, this study aims to identify the primary sources and types of evidence available regarding HL skills in nursing students, contributing to the development of research in this critical field.

METHODS AND ANALYSIS
Study design
A scoping review will be conducted following Arksey and O'Malley's[17] five-stage framework, which includes (1) identifying the research question based on the patient (P), concept (C) and context (C), (2) identifying relevant studies, (3) selecting the studies, (4) charting the data and (5) collating, summarising and reporting the results.[17] In developing this study, researchers will consult the Joanna Briggs Institute manual.[18 19] The protocol was registered with the Open Science Framework (OSF) on 20 April 2023 (LINK).

Identifying research questions
Given the aim/s of this study, our research questions are the following:

(1) What are the areas of research regarding HL skills among nursing students that have already been extensively studied? (2) Which areas require further investigation? (3) What are the methods used in the existing literature, and which of these could be more effective in future research?

The research questions will be formulated using key elements aligned with the Population, Concept and Context framework approach.[18 19] The population will be active undergraduate nursing students of every year of the programme, of any age, sex and nationality. The concept, focusing on interventions, phenomena of interest and outcomes, revolves around the development of HL skills throughout the undergraduate programme. HL skills are linked to Information Literacy, that is the ability to recognise any moment when information is needed.[8–10] The context is defined as the academic or educational setting, of every region, and cultural background they come from.

Search strategy
Four authors (GF, RM, RMSL and IZ) will undertake the article search in three sequential steps. Initially, they will review some studies on HL in nursing students to identify subject headings and keywords to narrow down the search strategy. In the second step, the researchers, under the supervision of a senior researcher (MB), will engage in discussions in order to reach a consensus on databases selection and search terms. The chosen online databases include MEDLINE (via PubMed), Education Resources Information Centre, the Cumulative Index to Nursing and Allied Health Literature, Scopus, Web of Science and Google Scholar. The search terms include "*Nursing Students*" (Mesh), "*Health Literacy*" (Mesh), "*Information Literacy*" (Mesh) and "*Clinical Competence*" (Mesh), combined using Boolean operators 'AND' and 'OR' (table 1). Each study will be imported into the RefWorks database manager to discard duplicates. In the third and final step, the reference lists of all identified reports will be analysed for additional studies.

Eligibility criteria
Papers on HL skills will be selected, especially those that focus on nursing students pursuing a nursing-degree level. The inclusion criteria consist of primary studies employing diverse research designs, including quantitative, qualitative and mixed methods. Selected studies are those already published in peer-reviewed journals up until February 2023 and will be available in either Italian or English. Letters, comments, conference abstracts, editorials, books, any form of review and doctoral theses will not be included. Where sample details lack clarity, researchers will meticulously examine the full text to ensure the inclusion of nursing students related material and information capable of providing data. No time frame limitation will be imposed (table 2).

Selection of sources of evidence
Based on the inclusion and exclusion criteria, three researchers (BG, VB and RM) will first independently screen titles, abstracts for inclusion criteria and then their full text. When a full text is not available, the researchers will contact the authors. Every researcher will structure a table in excel with title, authors, publication data, journal and notes to share information in a meeting with the senior researcher. In the case of disagreement concerning the inclusion of a study, an independent assessment will be conducted by a senior researcher (MB) (table 2).

The number of the records removed and reasons for their removal will be reported in the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) 2020 flow diagram for systematic reviews.[20]

Charting the data
After selecting the final set of studies, each researcher (BG, VB and RM) will independently extract and chart the data for the first five studies. Then the team will discuss the findings together for problems related to this process

Table 1 Search strategy

Database	Mesh/keywords	Limits
MEDLINE (PubMed)	((students, nursing[MeSH Terms]) OR (Student*, Nursing[Title/Abstract] OR Nursing Student*[Title/Abstract])) AND ((health literacy[MeSH Terms]) OR (health literacy[Title/Abstract]) OR (information literacy[MeSH Terms]) OR (Information literac*[Title/Abstract]))	English, Italian and abstract available
Scopus	(nursing AND students) AND (health AND literacy OR health AND information) AND (clinical AND competence OR clinical AND skill)	English and Italian
CINAHL	((nursing students or student nurses or undergraduate student nurses or pre-licensure nurse) AND (health literacy or health education or health knowledge or health information or health understanding)) AND (clinical competence or clinical skills or clinical competency)	English, Italian and abstract available
Web of Science	nursing student AND (health literacy OR information literacy) AND (clinical competence OR clinical skill)	English and Italian
ERIC	(nursing student OR undergraduate nursing students) AND (health literacy OR information literacy) AND (clinical competence OR clinical skill)	Higher education, journal articles and undergraduate students
Google Scholar	(nursing student OR undergraduate nursing students) AND (health literacy OR information literacy)	Scientific articles

CINAHL, Cumulative Index to Nursing and Allied Health Literature; ERIC, Education Resources Information Centre; WOS, Web of Science.

and purposes of adding data to extract. The researchers then will continue the charting data independently with a final meeting in order to share their results. In the case of disagreement, an independent assessment will be conducted by a fourth author (MB) (table 2).

Data items
The researchers (BG, VB and RM) will independently abstract their data with regard to authors, year of publication, country of origin, aim, study design and sample size. In the case of studies considering non-nursing undergraduate, only the nursing students' sample size will be given. Researchers will also extract the instruments used for HL measurement as well as the author of the instrument, the concept of HL and findings related to the aim of the study. In the case of qualitative studies, the themes that will emerge will be analysed and synthesised (table 2).

Critical appraisal of individual sources of evidence
Given the intent of the review, the quality of the included studies will not be assessed.[21]

Synthesis and presentation of results
The results will be described through each of their research questions. The quantitative and qualitative results will be reported in the main text and tables. Qualitative results will be synthesised, adopting the content analysis method.[22] Content analysis as a research method is a systematic and objective way to describe and quantify phenomena; it is useful for making replicable and valid inferences from data.[22]

Specifically, the results section will consist of two parts: the first will describe the results of the search strategy and selection process, including a PRISMA flow diagram, while the second part will provide key information regarding

Table 2 Selection of sources of evidence, charting the data process

	Screening abstract based on inclusion and exclusion criteria independently	Meeting for analysis of abstract and full text inclusion	Table with data (title, authors, publication data, journal, …) of full text for the first 5 studies	Meeting for sharing information and purpose of adding data for extraction	Extraction of data for the remaining studies	Final meeting for sharing information and discussing disagreement	Data items
BG	Yes	Yes	Yes	Yes	Yes	Yes	Yes
VB	Yes	Yes	Yes	Yes	Yes	Yes	Yes
RM	Yes	Yes	Yes	Yes	Yes	Yes	Yes
MB	No	Yes (in case of disagreement about the inclusion of a study)	No	Yes (in case of disagreement)	No	Yes (in case of disagreement)	No

the characteristics of the selected studies (design of the study, country, year of publication, sample, instrument for assessing the HL skills and main finding).

ETHICS AND DISSEMINATION

This scoping review is part of a large project of the university of Catania aimed at developing higher quality educational approaches to nursing curricula. This project will not involve patients/students/public and will not require ethical committee approval. This scoping review will be submitted to international peer-reviewed journal. The protocol was registered with the OSF on 20 April 2023 (LINK).

Patient and public involvement

None. The patients and the public are not involved in this project neither in the dissemination plans.

DISCUSSION AND CONCLUSION

The aim of this scoping review is to identify the main sources and types of available evidence regarding HL skills among nursing students to further develop knowledge and understanding in this area of research.

This could pave the way for innovative strategies in higher education to significantly enhance nursing students' learning and clinical experience.

Furthermore, this scoping review will seek to both address some of the most important gaps in HL skills among nursing students and facilitate new approaches in healthcare practice, research and education.

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