**

What is a scoping review?

Daniel Rodger,1,2 Aneesa Admani,1 & Mark Thomas1**

|  |
| --- |
| This is the accepted version of the article. Please cite as:Rodger D, Admani A, and Thomas M. What is a scoping review? *Evidence-Based Nursing*, forthcoming, 2024. |

1. Institute of Health and Social Care, London South Bank University

2. Department of Psychological Sciences, Birkbeck, University of London

**Abstract**

Scoping reviews are an approach to evidence synthesis used to identify and map existing and emerging evidence available in response to a typically broad research question. In this article, we explain what a scoping review is, its purpose, and the key steps required to undertake one.

**What is a scoping review?**
There are various types of literature reviews; the most appropriate review type will be determined by the research questions, aims, and objectives. Other considerations can be more pragmatic, such as time and the size of the research team. A scoping review is typically selected to investigate a broad research question that aims to identify and map all the available and emerging evidence. An example of a research question used for a scoping review is—‘What blended learning approaches are currently utilized in undergraduate nursing education?’.1
 **What is the purpose of a scoping review?**

The purpose of a scoping review is to identify the types of available evidence in a given area; summarise the existing evidence; identify gaps in the literature; and make recommendations for future research.2 In recent years, scoping reviews have become increasingly popular among nurses and other healthcare professionals. For example, a PubMed search of the term ‘scoping review’ yielded 53,309 results as of January 2024—more than double the results from just four years ago.

Unlike a systematic review, a scoping review is not intended to inform clinical guidance, policy, and practice.3 A scoping review aims to provide a descriptive summary of the sources of evidence without necessarily assessing the quality of the sources. Therefore, assessing the quality and risk of bias of the included studies is not required, however, some researchers choose to do so. Importantly, scoping reviews should be conducted systematically, transparently, and be reproducible. It is recommended that a university or hospital librarian should assist with the development of a search strategy.

**Scoping review methodology**

Whilst a scoping review differs in meaningful ways from a systematic review, it still utilises a rigorous and systematic approach to evidence synthesis. Evidence synthesis describes the process of collecting and combining data from multiple sources—usually from existing research—to provide a summary of the current evidence. Scoping reviews need to be reported according to a rigorous methodology that has been refined over the past two decades.2,4,5,6 These include the Preferred Reporting Items for Systematic Reviews and Meta-Analyses extension for scoping reviews (PRISMA-ScR) and the Joanna Briggs Institute (JBI) methodology for scoping reviews.

The PRISMA-ScR outlines a 22-item checklist—of which 20 are essential and two are optional—that researchers should follow when planning and writing up their scoping review. To aid researchers new to the scoping review methodology, PRISMA7 provides a tip sheet and examples of best practices for each item on the checklist. Additionally, JBI8 has provided a template to assist researchers in developing a scoping review protocol and scoping review. This can be useful for understanding the various steps required to undertake a scoping review.

Whilst not mandatory, it is considered best practice to register the scoping review protocol on a registry such as the Open Science Framework (OSF) or Web of Science. Some journals may expect a scoping review protocol to have been published before they will consider it for publication. A protocol is the plan for your scoping review, and it should include the following details—key definitions, aims, rationale for the review, eligibility criteria, types of literature that will be searched, and an explanation of how the data will be presented.

**Key steps of a scoping review**The key steps in a scoping review are as follows:

* Identifying clear aims, objectives and research question/s;
* Developing a protocol (e.g. including eligibility criteria, screening process, search strategy, and selecting databases to search);
* Conducting a systematic search of the literature;
* Managing results using citation management software (e.g. EndNote, Mendeley);
* Screening results that meet the eligibility criteria;
* Charting the data;
* Analysing the evidence;
* Writing up the evidence and
* Presenting findings.

Having clear aims, objectives, and research question/s is essential for conducting a coherent scoping review. The Population, Concept, and Context (PCC) framework can be a useful guide for developing comprehensive eligibility criteria and ensuring that the research question is clear.6 Developing a protocol will help clarify the kinds of studies that will be eligible for inclusion, the process of screening, and the search terms that will be used to identify relevant sources. A search strategy will include but is not limited to the keywords, Boolean operators (e.g. AND, OR, NOT), and the specific fields (e.g. author, title, abstract) that will be used to search for sources that meet the eligibility criteria. It is also worth searching to see if anyone has published a scoping review protocol that might have or has explored a similar research question. The databases that are searched will depend on the topic of the research question, but in healthcare, it is common to search some of the following databases:

* PubMed (includes MEDLINE)
* Cumulative Index to Nursing and Allied Health Literature (CINAHL)
* Embase
* Scopus
* ScienceDirect

Whilst there may be some overlap when searching the different databases, it is important to search more than one database. Given the broad nature of the scoping review, it is common to utilise additional search methods such as a manual search of the reference list of included studies and the grey literature. Grey literature is evidence that has not been commercially published (e.g. in a journal) and can include public policy documents, government reports, and PhD thesis.

Once the searches are complete, the results should then be reviewed, documented, and managed using citation management software. The search results will then need to be screened against the eligibility criteria. The first step will include reading the titles and abstracts and identifying sources that will require full-text screening. The second step will require reading the full text of those sources that were considered to meet the eligibility criteria following initial screening—a team approach is recommended. Following this, a decision must be made about what sources should be included in the scoping review based on the inclusion and exclusion criteria.

The next step is data charting, which describes extracting relevant information from eligible studies into a descriptive summary. This requires the use of a data charting form where appropriate information can be recorded—importantly, *only* information relevant to the objectives and research question should be charted. Some of the following information is considered key for data charting:9

* Author(s)
* Year of publication
* Origin/country of origin (where the study was published or conducted)
* Aims/purpose
* Study population and sample size (if applicable)
* Methodology/methods
* Intervention type/duration, comparator, outcome measures (if applicable)
* Key findings that relate to the scoping review question/s

Analysis of the extracted evidence should be descriptive and can be organised into categories using basic coding and frequency counting.10 Where appropriate to the objectives, basic qualitative content analysis can also be used.6 The evidence can be presented in several different ways including tables, diagrams, bubble charts, and a narrative format—many researchers use a combination of the different presentations. Tables and charts might record the distribution of the year of publication, countries where the studies were conducted, and the journals the studies were published. Finally, the last step is to present the findings by writing and reporting it according to transparent standards. An additional benefit of writing up the scoping review according to recognised criteria is that the review is unlikely to require too much additional work to format for submission to a journal.

**Conclusion**

In summary, a scoping review is a flexible and rigorous approach to evidence synthesis that can be used to address broader research questions. The method has been increasingly adopted by healthcare researchers to identify gaps in the literature, summarise the existing or emerging evidence, and make recommendations for future research.

**References**

1. Leidl DM, Ritchie L, Moslemi N. Blended learning in undergraduate nursing education - A scoping review. *Nurse Educ Today* 2020;86:104318.
2. Tricco AC, Lillie E, Zarin W, *et al*. A scoping review on the conduct and reporting of scoping reviews. *BMC Medical Research Methodology* 2016;16:1-0.
3. Munn Z, Peters MD, Stern C, et al. Systematic review or scoping review? Guidance for authors when choosing between a systematic or scoping review approach. *BMC Medical Research Methodology* 2018;18:1-7.
4. Arksey H, O'Malley L. Scoping studies: towards a methodological framework. *International Journal of Social Research Methodology* 2005;8(1):19-32.
5. Levac D, Colquhoun H, O'Brien KK. Scoping studies: advancing the methodology. *Implementation Science* 2010;5:1-9.
6. Pollock D, Peters MDJ, Khalil H, *et al*. Recommendations for the extraction, analysis, and presentation of results in scoping reviews. *JBI Evid Synth* 2023;21(3):520-532.
7. PRISMA. PRISMA for Scoping Reviews. <http://prisma-statement.org/Extensions/ScopingReviews>.
8. Joanna Briggs Institute. <https://jbi.global/scoping-review-network/resources>.
9. Joanna Briggs Institute. JBI Manual for Evidence Synthesis 2022;11.2.7 Data Extraction. [https://jbi-global-wiki.refined.site/space/MANUAL/4687700/11.2.7+Data+extraction](https://jbi-global-wiki.refined.site/space/MANUAL/4687700/11.2.7%2BData%2Bextraction) (accessed Jan 2024).
10. Pollock D, Davies EL, Peters MDJ, *et al*. Undertaking a scoping review: A practical guide for nursing and midwifery students, clinicians, researchers, and academics. *J Adv Nurs* 2021;77(4):2102-2113.