From Theory to Practice: Getting Started with Scoping Reviews

EVIDENCE SYNTHESIS
IRELAND

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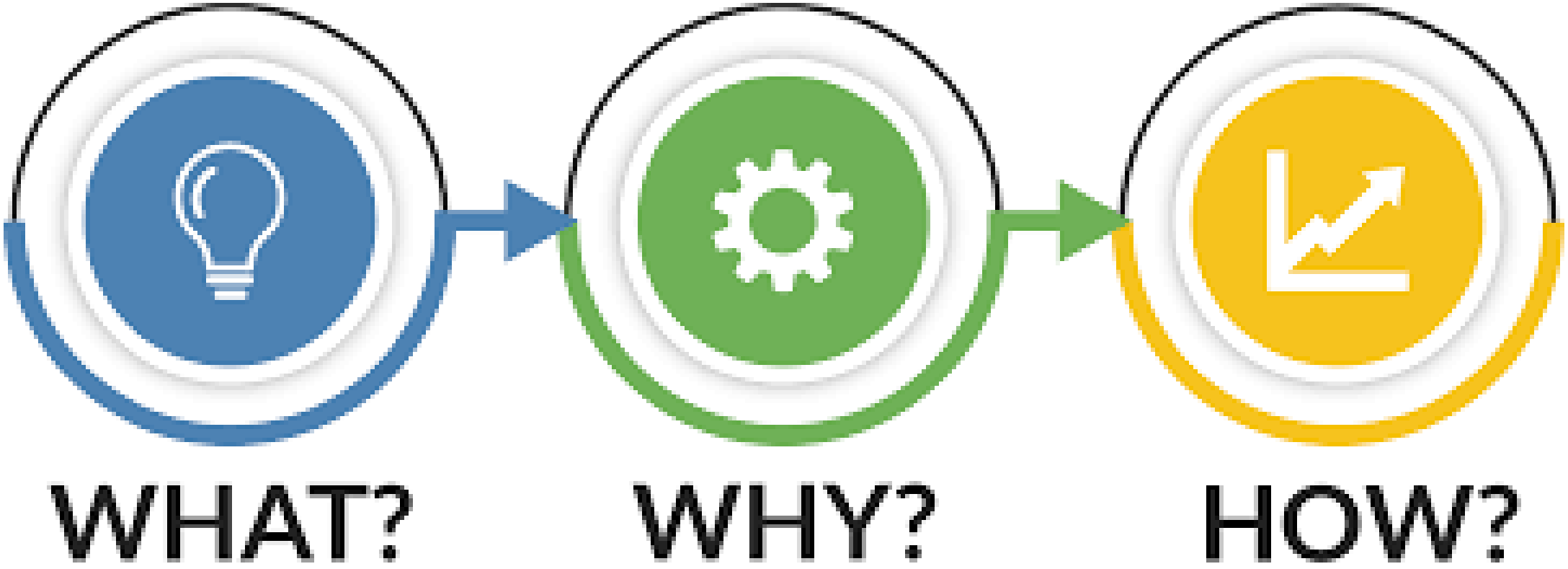
Disclaimer – we are the Co-Leads of the Qualitative Evidence Synthesis (QES) Stream of ESI!
And not necessarily advocating one specific review methodology

Scoping Reviews: Webinar Overview

- **Understanding scoping review fundamentals and their unique purpose**
- **Developing focused research questions and robust search strategies**
- **Tools to organize and streamline your review process**
- **Applying PRISMA-ScR guidelines for standardised reporting**

Scoping reviews

- What are they?
- Why would you do one?
- How would you do one?



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Review article

There is room for improvement in the use of scoping reviews in dentistry

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ARTICLE INFO

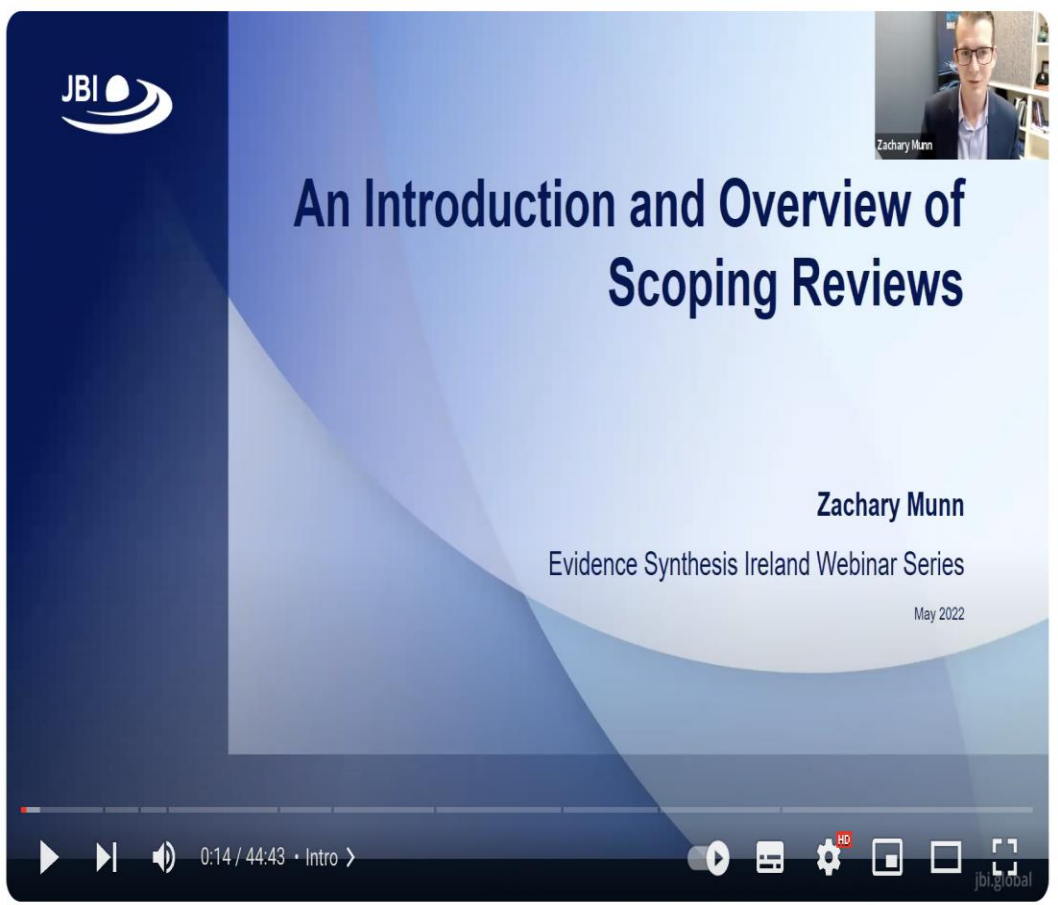
Keywords:
Scoping reviews
Methodology
Report

ABSTRACT

Objective: To evaluate the reporting of authors' justifications for choosing the scoping review methodology in oral health.
Study selection, data and source: : This is a meta-research study about scoping reviews in dentistry. This study searched for reviews in PubMed and Scopus without year restrictions and restricted to English-language publications. Study selection was undertaken by two reviewers independently. Each of these reviewers extracted data from half of the included studies considering general study characteristics and scoping reviews objectives, as well as data about whether or not the authors clearly explained why they chose the scoping review framework.
Results: We included 184 articles. Ninety-seven of the reports did not provide a rationale as to why they chose the scoping review method (52.7%). Regarding the reported aims of the studies, 29.9% (n = 29/87) of the scoping reviews presented more than one. When comparing studies reporting the use of the PRISMA-ScR to those not reporting the PRISMA-ScR, there is no difference in the reporting of a clear explanation of why the authors used a scoping review method.
Conclusion: There is room for improvement in how authors report their justifications for choosing the scoping review method.
Clinical significance: Scoping reviews may be used by researchers who are unaware of this method. Educational initiatives should thus be encouraged

Resources that have guided and informed today include – (please see next 2 slides)

Webinars available via Evidence Synthesis Ireland



An Introduction and Overview of Scoping Reviews - Assoc. Professor Zachary Munn

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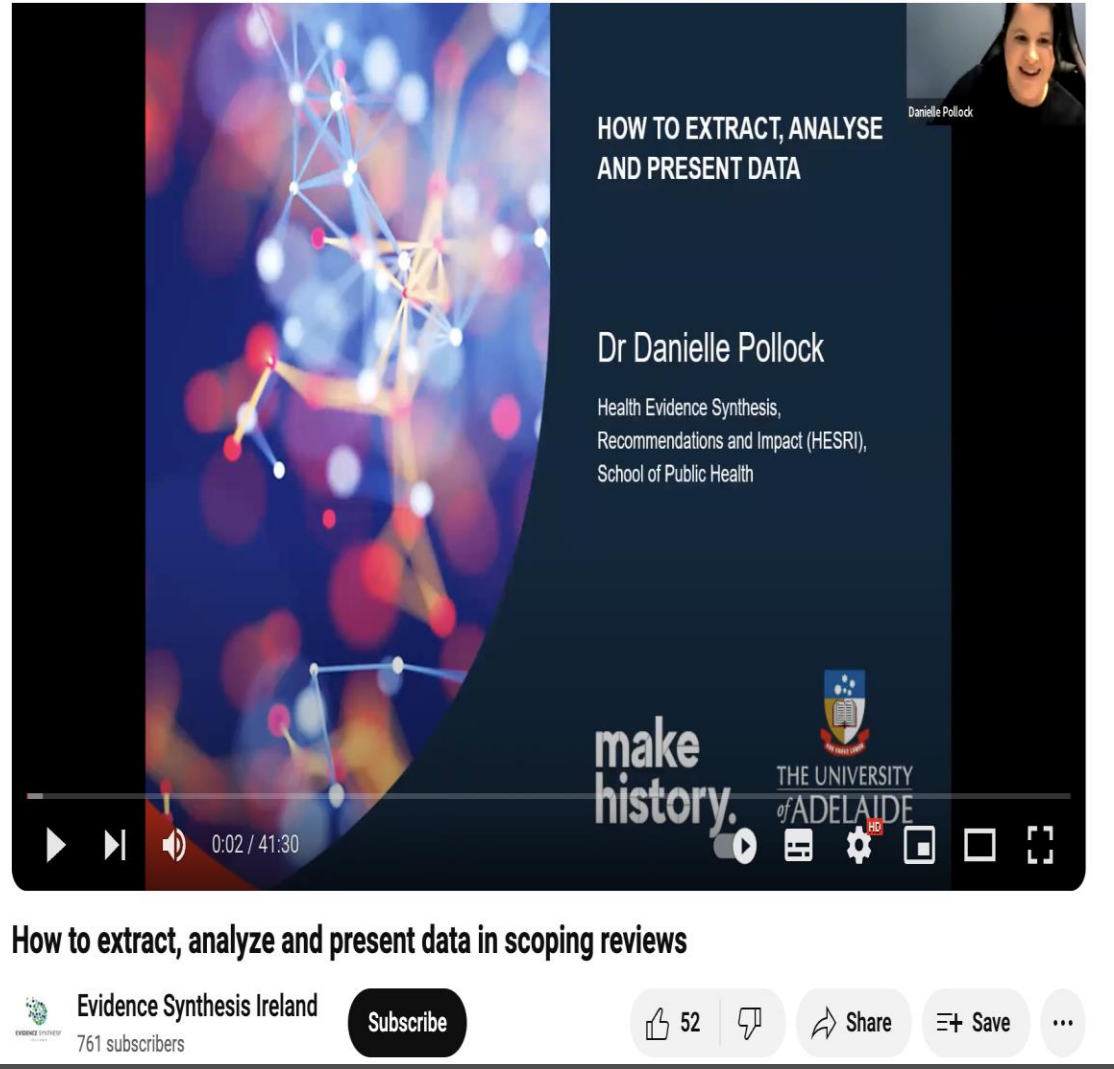

How to extract, analyze and present data in scoping reviews

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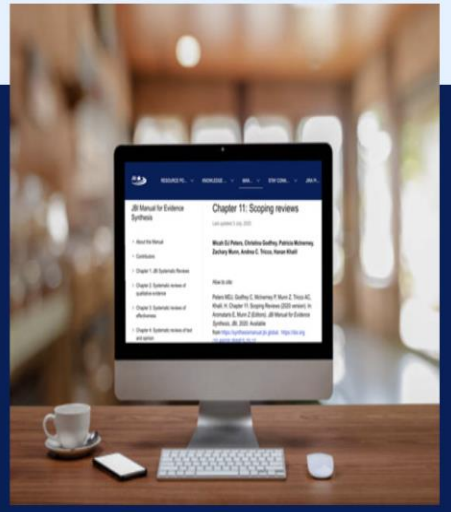
JBI MANUAL FOR EVIDENCE SYNTHESIS: SCOPING REVIEWS CHAPTER

The scoping reviews chapter in the JBI Manual for Evidence Synthesis provides a comprehensive framework for conducting a scoping review, and covers:

- why you should conduct a scoping review
- how to develop a scoping review protocol
- search strategies, data extraction and how to present the results

Go to Chapter



DIGITAL RESOURCES

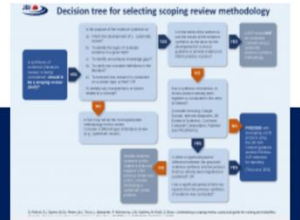
KNOWLEDGE USER ENGAGEMENT

Using JBI Guidance for Scoping Reviews

PDF Download

THE BIG PICTURE REVIEW FAMILY

Scoping Reviews, Mapping Reviews, and Evidence and Gap Maps



DECISION TREE FOR SELECTING SCOPING REVIEW METHODOLOGY

A synthesis of evidence is being considered: should it be a scoping review?

RECOMMENDATIONS FOR THE EXTRACTION, ANALYSIS AND PRESENTATION OF RESULTS IN SCOPING REVIEWS

A video abstract of the published paper

JBI SCOPING REVIEW NETWORK

WORKING TOGETHER TO DEVELOP THE BEST AVAILABLE EVIDENCE

The Scoping Review Network is supported by the JBI Scoping Review Methodology Group and is a collaboration of individuals interested in scoping reviews. The Network is for all those who are interested in scoping reviews, from first time authors to experienced methodologists and researchers. The aim is to connect with each other and share resources to improve the quality of scoping reviews. Those in the network will access our newsletter, education, training and events, the latest publications and resources about scoping reviews.

Campbell *et al. Systematic Reviews* (2023) 12:45
https://doi.org/10.1186/s13643-023-02178-5

Systematic Reviews

METHODOLOGY Open Access

Mapping reviews, scoping reviews, and evidence and gap maps (EGMs): the same but different— the "Big Picture" review family

Fiona Campbell[1*], Andrea C. Tricco[2], Zachary Munn[3], Danielle Pollock[3], Ashrita Saran[4], Anthea Sutton[5], Howard White[6] and Hanan Khalil[7]

Abstract

Scoping reviews, mapping reviews, and evidence and gap maps are evidence synthesis methodologies that address broad research questions, aiming to describe a bigger picture rather than address a specific question about intervention effectiveness. They are being increasingly used to support a range of purposes including guiding research priorities and decision making. There is however a confusing array of terminology used to describe these different approaches. In this commentary, we aim to describe where there are differences in terminology and where this equates to differences in meaning. We demonstrate the different theoretical routes that underpin these differences. We suggest ways in which the approaches of scoping and mapping reviews may differ in order to guide consistency in reporting and method. We propose that mapping and scoping reviews and evidence and gap maps have similarities that unite them as a group but also have unique differences. Understanding these similarities and differ-

What are Scoping Reviews?

Scoping reviews are a type of evidence synthesis that aims to systematically identify and map the breadth of evidence available on a particular topic, field, concept, or issue, often irrespective of source (ie, primary research, reviews, non-empirical evidence) within or across particular contexts. Scoping reviews can clarify key concepts/definitions in the literature and identify key characteristics or factors related to a concept, including those related to methodological research.

- Munn Z, Pollock D, Khalil H, Alexander L, Mclnerney P, Godfrey CM, Peters M, Tricco AC. What are scoping reviews? Providing a formal definition of scoping reviews as a type of evidence synthesis. JBI Evid Synth. 2022 Apr 1;20(4):950-952. doi: 10.11124/JBIES-21-00483

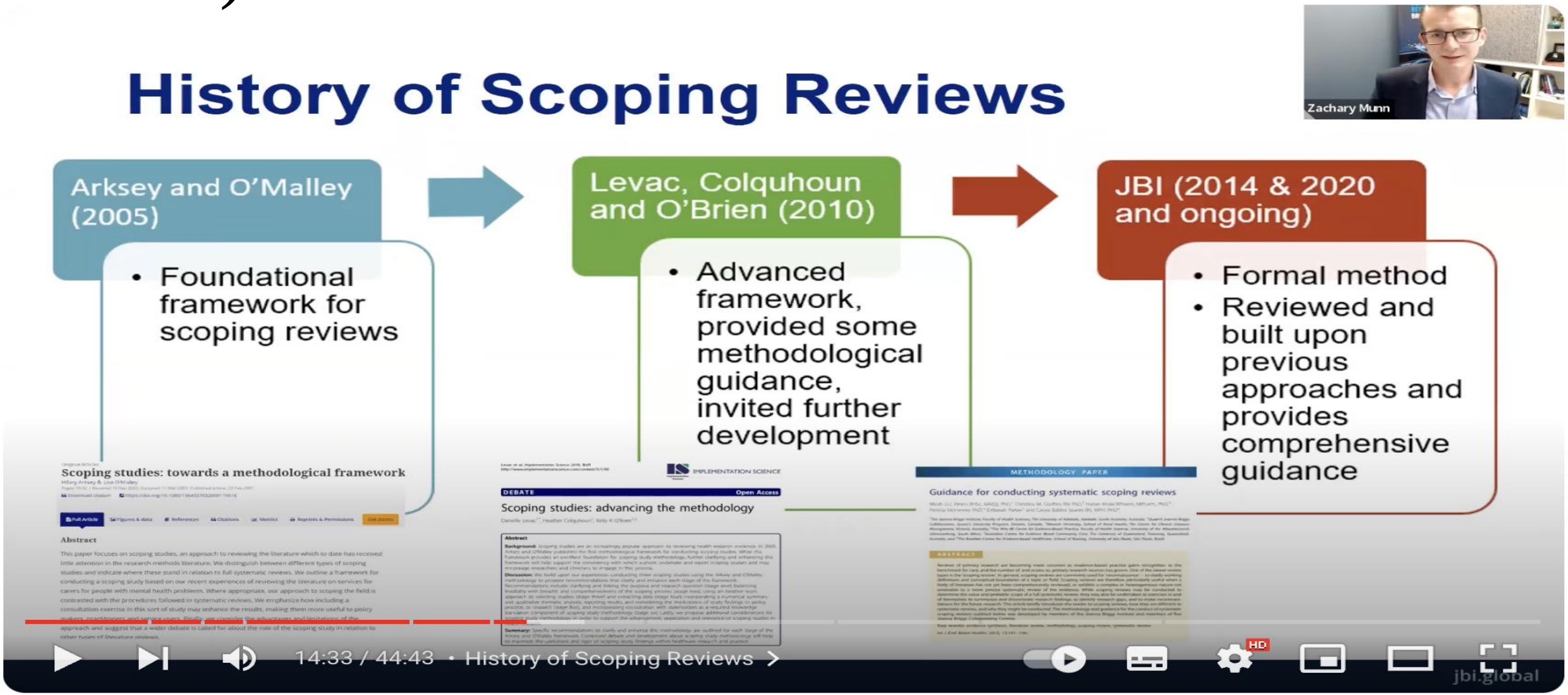
Why would you conduct a Scoping Review?

Broadly, Scoping Reviews are conducted -

- To identify the types of available evidence in a given field
- To clarify key concepts / definitions in the literature
- To examine how research is conducted on a certain topic or field
- To identify key characteristics or factors related to a concept
- As a precursor to a systematic review
- To identify and analyse knowledge gaps

Munn Z, Peters MDJ, Stern C, Tufanaru C, McArthur A, Aromataris E. Systematic review or scoping review? Guidance for authors when choosing between a systematic or scoping review approach. BMC Med Res Methodol. 2018 Nov 19;18(1):143. doi: 10.1186/s12874-018-0611-x.

Screenshot of slide developed by Zac Munn (ESI Webinar)



An Introduction and Overview of Scoping Reviews - Assoc. Professor Zachary Munn

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The Big Picture Review Family

	Scoping Reviews	Mapping Reviews	Evidence and Gap Maps (EGMs)
Purpose	Clarifies and identifies key concepts/definitions, characteristics or factors related to a concept	Collates, describes, and catalogues the available evidence related to the question of interest	Systematic evidence synthesis product which visually displays the available evidence and identify research gaps relevant to a specific research question
Question	Narrow focus to a broad question: What are the definitions for a particular concept?	Broad question: what do we know about a topic? Or what and where does research exist on a particular area?	Very broad question Includes all relevant evidence of a specified kind for a particular sector, or sub-sector
Evidence source	Identifies and maps evidence irrespective of source Number of evidence sources included can vary	Identifies and maps evidence irrespective of source Generally >80+ studies	Identifies and maps evidence irrespective of source Generally > 80+ studies
Extraction	Extensive and detailed data extractions	High-level with pre-defined codes for extraction	High-level with pre-defined codes for extraction
Analysis	Inductive (need to be developed) or deductive (pre-determined) analysis (may include basic qualitative content analysis)	Deductive summary of high level data with pre-defined codes	Deductive summary of high-level data dependent on framework
Presentation of results	Visual summaries must be accompanied by a descriptive synthesis. With/without EGMs	Visual summaries With/without EGMs	Visual, interactive online output placed on a web-based platform, such as a funders webpage

Campbell, F., Tricco, A.C., Munn, Z. et al. Mapping reviews, scoping reviews, and evidence and gap maps (EGMs): the same but different— the "Big Picture" review family. Syst Rev 12, 45 (2023).

https://mcusercontent.com/b7a3429cdeb2d9125de40e149/images/a364bee5-3b46-4e08-f346-83a245d58445.png

Guidance for Scoping Reviews

Int. J. Social Research Methodology
Vol. 8, No. 1, February 2005, pp. 19–32

Routledge
Taylor & Francis Group

Scoping Studies: Towards a Methodological Framework

Hilary Arksey & Lisa O'Malley

Received 10 September 2002; accepted 11 March 2003

This paper focuses on scoping studies, an approach to reviewing the literature which to date has received little attention in the research methods literature. We distinguish between different types of scoping studies and indicate where these stand in relation to full systematic reviews. We outline a framework for conducting a scoping study based on our recent experiences of reviewing the literature on services for carers for people with mental health problems. Where appropriate, our approach to scoping the field is contrasted with the procedures followed in systematic reviews. We emphasize how including a consultation exercise in this sort of study may enhance the results, making them more useful to policy makers, practitioners and service users. Finally, we consider the advantages and limitations of the approach and suggest that a wider debate is called for about the role of the scoping study in relation to other types of literature reviews.

Levac *et al. Implementation Science* 2010, **5**:69
http://www.implementationscience.com/content/5/1/69

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Scoping studies: advancing the methodology

Danielle Levac[1*], Heather Colquhoun[1], Kelly K O'Brien[1,2]

Abstract

Background: Scoping studies are an increasingly popular approach to reviewing health research evidence. In 2005, Arksey and O'Malley published the first methodological framework for conducting scoping studies. While this framework provides an excellent foundation for scoping study methodology, further clarifying and enhancing this framework will help support the consistency with which authors undertake and report scoping studies and may encourage researchers and clinicians to engage in this process.

Discussion: We build upon our experiences conducting three scoping studies using the Arksey and O'Malley methodology to propose recommendations that clarify and enhance each stage of the framework. Recommendations include: clarifying and linking the purpose and research question (stage one); balancing feasibility with breadth and comprehensiveness of the scoping process (stage two); using an iterative team approach to selecting studies (stage three) and extracting data (stage four); incorporating a numerical summary and qualitative thematic analysis, reporting results, and considering the implications of study findings to policy, practice, or research (stage five); and incorporating consultation with stakeholders as a required knowledge translation component of scoping study methodology (stage six). Lastly, we propose additional considerations for scoping study methodology in order to support the advancement, application and relevance of scoping studies in health research.

Summary: Specific recommendations to clarify and enhance this methodology are outlined for each stage of the Arksey and O'Malley framework. Continued debate and development about scoping study methodology will help to maximize the usefulness and rigor of scoping study findings within healthcare research and practice.

Int. J. Social Research Methodology
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- Identify the research question
- Identify relevant studies
- Study Selection
- Charting the data
- Collating, summarizing and reporting the results
- Consultation exercise

We will come back to this in more detail in a few minutes

Table 3 Summary of challenges and recommendations for scoping studies

Framework Stage	Challenges	Recommendations for clarification or additional steps
#1 Identifying the research question	1. Scoping study questions are broad. 2. Establishing scoping study purpose is not associated with a framework stage. 3. The four purposes of scoping studies lack clarity.	1. Clearly articulate the research question that will guide the scope of inquiry. Consider the concept, target population, and health outcomes of interest to clarify the focus of the scoping study and establish an effective search strategy. 2. Mutually consider the purpose of the scoping study with the research question. Envision the intended outcome (*e.g.*, framework, list of recommendations) to help determine the purpose of the study. 3. Consider rationale for conducting the scoping study to help clarify the purpose.
#2 Identifying relevant studies	1. Balancing breadth and comprehensiveness of the scoping study with feasibility of resources can be challenging.	1a. Research question and purpose should guide decision-making around the scope of the study. 1b. Assemble a suitable team with content and methodological expertise that will ensure successful completion of the study. 1c. When limiting scope is unavoidable, justify decisions and acknowledge the potential limitations to the study.
#3 Study selection	1. The linearity of this stage is misleading. 2. The process of decision making for study selection is unclear.	1. This stage should be considered an iterative process involving searching the literature, refining the search strategy, and reviewing articles for study inclusion. 2a. At the beginning of the process, the team should meet to discuss decisions surrounding study inclusion and exclusion. At least two reviewers should independently review abstracts for inclusion. 2b. Reviewers should meet at the beginning, midpoint and final stages of the abstract review process to discuss challenges and uncertainties related to study selection and to go back and refine the search strategy if needed. 2c. Two researchers should independently review full articles for inclusion. 2d. When disagreements on study inclusion occur, a third reviewer can determine final inclusion.

Table 3 Summary of challenges and recommendations for scoping studies

Framework Stage	Challenges	Recommendations for clarification or additional steps
#4 Charting the data	1. The nature and extent of data to extract from included studies is unclear. 2. The 'descriptive analytical method' of charting data is poorly defined.	1a. The research team should collectively develop the data-charting form and determine which variables to extract in order to answer the research question. 1b. Charting should be considered an iterative process in which researchers continually extract data and update the data-charting form. 1c. Two authors should independently extract data from the first five to ten included studies using the data-charting form and meet to determine whether their approach to data extraction is consistent with the research question and purpose. 2. Process-oriented data may require extra planning for analysis. A qualitative content analysis approach is suggested.
#5 Collating, summarizing, and reporting the results	1. Little detail provided and multiple steps are summarized as one framework stage.	Researchers should break this stage into three distinct steps: 1a. Analysis (including descriptive numerical summary analysis and qualitative thematic analysis); 1b. Reporting the results and producing the outcome that refers to the overall purpose or research question; 1c. Consider the meaning of the findings as they relate to the overall study purpose; discuss implications for future research, practice and policy.
#6 Consultation	1. This stage is optional. 2. Lack of clarity exists about when, how and why to consult with stakeholders and how to integrate the information with study findings.	1. Consultation should be an essential component of scoping study methodology. 2a. Clearly establish a purpose for the consultation. 2b. Preliminary findings can be used as a foundation to inform the consultation. 2c. Clearly articulate the type of stakeholders to consult and how data will be collected, analyzed, reported and integrated within the overall study outcome. 2d. Incorporate opportunities for knowledge transfer and exchange with stakeholders in the field.

Munn *et al. BMC Medical Research Methodology* (2018) 18:143
https://doi.org/10.1186/s12874-018-0611-x

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Systematic review or scoping review? Guidance for authors when choosing between a systematic or scoping review approach

Zachary Munn*, Micah D. J. Peters, Cindy Stern, Catalin Tufanaru, Alexa McArthur and Edoardo Aroma

Abstract

Background: Scoping reviews are a relatively new approach to evidence synthesis and currently there exi guidance regarding the decision to choose between a systematic review or scoping review approach w synthesising evidence. The purpose of this article is to clearly describe the differences in indications betv scoping reviews and systematic reviews and to provide guidance for when a scoping review is (and is n appropriate.

Results: Researchers may conduct scoping reviews instead of systematic reviews where the purpose of review is to identify knowledge gaps, scope a body of literature, clarify concepts or to investigate resear conduct. While useful in their own right, scoping reviews may also be helpful precursors to systematic r and can be used to confirm the relevance of inclusion criteria and potential questions.

Conclusions: Scoping reviews are a useful tool in the ever increasing arsenal of evidence synthesis appr Although conducted for different purposes compared to systematic reviews, scoping reviews still require and transparent methods in their conduct to ensure that the results are trustworthy. Our hope is that w guidance available regarding whether to conduct a scoping review or a systematic review, there will be less s reviews being performed for inappropriate indications better served by a systematic review, and vice-versa.

Keywords: Systematic review, Scoping review, Evidence-based healthcare

Peters *et al. Syst Rev* (2021) 10:263
https://doi.org/10.1186/s13643-021-01821-3

Systematic Revi

COMMENTARY Open A

Scoping reviews: reinforcing and advancing the methodology and application

Micah D. J. Peters[1,2,3], Casey Marnie[1], Heather Colquhoun[4,5], Chantelle M. Garritty[6], Susanne Hempel[7], Tanya Horsley[8], Etienne V. Langlois[9], Erin Lillie[10], Kelly K. O'Brien[5,11,12], Özge Tunçalp[13], Michael G. Wilson[1] Wasifa Zarin[17] and Andrea C. Tricco[17,18,19*]

Abstract

Scoping reviews are an increasingly common approach to evidence synthesis with a growing suite of methodol guidance and resources to assist review authors with their planning, conduct and reporting. The latest guidance scoping reviews includes the JBI methodology and the Preferred Reporting Items for Systematic Reviews and M Analyses—Extension for Scoping Reviews. This paper provides readers with a brief update regarding ongoing w to enhance and improve the conduct and reporting of scoping reviews as well as information regarding the fut steps in scoping review methods development. The purpose of this paper is to provide readers with a concise s of information regarding the difference between scoping reviews and other review types, the reasons for under scoping reviews, and an update on methodological guidance for the conduct and reporting of scoping reviews

Despite available guidance, some publications use the term 'scoping review' without clear consideration of avail reporting and methodological tools. Selection of the most appropriate review type for the stated research objec tives or questions, standardised use of methodological approaches and terminology in scoping reviews, clarity a consistency of reporting and ensuring that the reporting and presentation of the results clearly addresses the re objective(s) and question(s) are critical components for improving the rigour of scoping reviews.

Rigourous, high-quality scoping reviews should clearly follow up to date methodological guidance and reportir criteria. Stakeholder engagement is one area where further work could occur to enhance integration of consulta with the results of evidence syntheses and to support effective knowledge translation. Scoping review methodc is evolving as a policy and decision-making tool. Ensuring the integrity of scoping reviews by adherence to up-t date reporting standards is integral to supporting well-informed decision-making.

Keywords: Scoping reviews, Evidence synthesis, Research methodology, Reporting guidelines, Methodologica guidance

Best practice guidance and reporting items for the development of scoping review protocols

Micah D.J. Peters[1,2,3] • Christina Godfrey[4] • Patricia McInerney[5] • Hanan Khalil[6,7] • Palle Larsen[8] • Casey Marnie[1] • Danielle Pollock[9] • Andrea C. Tricco[4,10,11] • Zachary Munn[9]

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ABSTRACT

Objective: The purpose of this article is to clearly describe how to develop a robust and detailed scoping review protocol, which is the first stage of the scoping review process. This paper provides detailed guidance and a checklist for prospective authors to ensure that their protocols adequately inform both the conduct of the ensuing review and their readership.

Introduction: Scoping reviews are a common approach to evidence synthesis for researchers, clinicians, and policymakers across a variety of fields. Scoping reviews are not concerned with making analytical comparisons based on pooling results data from multiple primary sources of evidence, but rather on collating and describing the evidence and presenting the summation in a clearly illustrated format. Methods for undertaking and reporting scoping reviews continue to be refined. Some prospective reviewers may be uncertain how to plan, structure, and report scoping review protocols, as there is little or no specific guidance for scoping review protocols yet available.

Methods: This guidance was developed by members of the JBI Scoping Review Methodology Group based on previous experience and expertise in developing scoping review and evidence synthesis methodologies, protocols, and reviews, as well as through experiences working with and guiding authors to develop scoping review protocols. Elements of a comprehensive scoping review protocol are outlined and explained in detail.

Conclusion: Knowledge users of evidence syntheses rely on clear and transparent reporting to understand and use the results of published work to drive evidence-based improvements within health care and beyond. It is hoped that readers will be able to use this guidance when developing protocols to assist them in planning future scoping reviews and to carry them out with a high degree of transparency.

Keywords: evidence synthesis; evidence-based health care; PRISMA; protocol; scoping review

JBI Evid Synth 2022; 20(4):953–968.

What are scoping reviews? Providing a formal definition of scoping reviews as a type of evidence synthesis

Zachary Munn[1] • Danielle Pollock[1] • Hanan Khalil[2] • Lyndsay Alexander[3,4] • Patricia McInerney[5] • Christina M. Godfrey[6] • Micah Peters[7,8,9] • Andrea C. Tricco[6,10,11]

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ABSTRACT

Evidence synthesis encompasses a broad range of review types, and scoping reviews are an increasingly popular approach to synthesizing evidence in a number of fields. They sit alongside other evidence synthesis methodologies, such as systematic reviews, qualitative evidence synthesis, realist synthesis, and many more. Until now, scoping reviews have been variously defined in the literature. In this article, we provide the following formal definition for scoping reviews: Scoping reviews are a type of evidence synthesis that aims to systematically identify and map the breadth of evidence available on a particular topic, field, concept, or issue, often irrespective of source (ie, primary research, reviews, non-empirical evidence) within or across particular contexts. Scoping reviews can clarify key concepts/definitions in the literature and identify key characteristics or factors related to a concept, including those related to methodological research.

JBI Evid Synth 2022; 20(4):950–952.

Discussion Point:
Not a static methodology… this can be a challenge for researchers

Decision tree for selecting scoping review methodology

A synthesis of evidence (literature review) is being considered: ***should it be a scoping review (ScR)?***

YES

Is the purpose of the evidence synthesis to:

a) Inform the development of a systematic review?

b) To identify the types of available evidence in a given field?

c) To identify and analyse knowledge gaps?

d) To clarify key concepts/ definitions in the literature?

e) To examine how research is conducted on a certain topic or field? OR

To identify key characteristics or factors related to a concept?

NO

A ScR may not be the most appropriate methodology for this review.
Consider a different type of literature review (e.g., systematic review).

YES

Is it the intent of the authors to use the results of the evidence synthesis as the basis for the development of a clinical guideline or provide evidence to inform practice or policy?

YES

A ScR should **NOT** be conducted. Consider using a systematic evidence synthesis methodology.

NO

Has a synthesis of evidence, or review protocol already been registers or conducted in this area of interest?

(Consider checking: Google Scholar, relevant databases, JBI Evidence Synthesis, Cochrane, Campbell Collaboration, PubMed and PROSPERO)

NO

PROCEED with developing a ScR protocol using the JBI ScR conduct guidance and the PRISMA-ScR extension for reporting.

(Tricco et al. 2018)

YES

Is there a significant point of difference between the proposed evidence synthesis and the protocol that has already been registered or published? OR

Has a significant period of time has lapsed since the previous synthesis of evidence was conducted?

NO

Another evidence synthesis on this subject is likely not required. If the previous review was a ScR, consider developing a systematic review protocol.

D. Pollock, E.L. Davies, M.D.J. Peters, A.C. Tricco, L. Alexander, P. McInerney, C.M. Godfrey, H. Khalil, Z. Munn. Undertaking a scoping review: a practical guide for nursing and midwifery students, clinicians, researchers, and academics. J. Adv. Nurs., 77 (2021), pp. 2102-2113, 10.1111/jan.14743

Table 11.2: Scoping review frameworks

	Arksey and O' Malley framework (2005, p. 22-23)	Enhancements proposed by Levac et al. (2010, p. 4-8)	*Enhancements proposed by Peters et al (2015, 2017, 2020).
1.	Identifying the research question	Clarifying and linking the purpose and research question	Defining and aligning the objective/s and question/s
2.	Identifying relevant studies	Balancing feasibility with breadth and comprehensiveness of the scoping process	Developing and aligning the inclusion criteria with the objective/s and question/s
3.	Study selection	Using an iterative team approach to selecting studies and extracting data	Describing the planned approach to evidence searching, selection, data extraction, and presentation of the evidence.
4.	Charting the data	Incorporating a numerical summary and qualitative thematic analysis	Searching for the evidence
5.	Collating, summarizing and reporting the results	Identifying the implications of the study findings for policy, practice or research	Selecting the evidence
6.	Consultation (optional)	Adopting consultation as a required component of scoping study methodology	Extracting the evidence
7.			Analysis of the evidence
8.			Presentation of the results
9.			Summarizing the evidence in relation to the purpose of the review, making conclusions and noting any implications of the findings

*Consultation of information scientists, stakeholders and/or experts throughout, including in the topic prioritization, planning, execution and dissemination

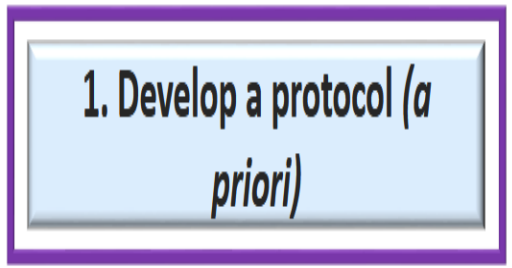
Peters MDJ, Godfrey C, McInerney P, Munn Z, Tricco AC, Khalil, H. Chapter 11: Scoping Reviews (2020 version). Aromataris E, Munn Z, editors. *JBI Manual for Evidence Synthesis*. JBI; 2020. Available from https://synthesismanual.jbi.global. https://doi.org/10.46658/JBIMES-20-12

Overview of scoping review steps by the Joanna Briggs Institute

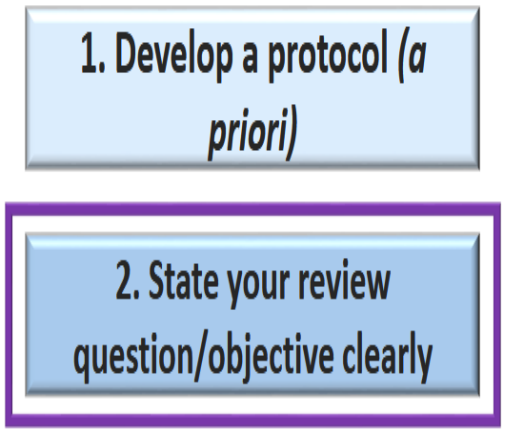
Peters et al., 2015. https://www.ncbi.nlm.nih.gov/pubmed/26134548

Scoping review steps

1. Protocol: The protocol pre-defines the objectives and methods and details the plans. It can be refined, as needed (report any changes).



2. Review question/objective: The objective can be broad, guides the scope. The review question(s) should be consistent with the title and inform the eligibility criteria.



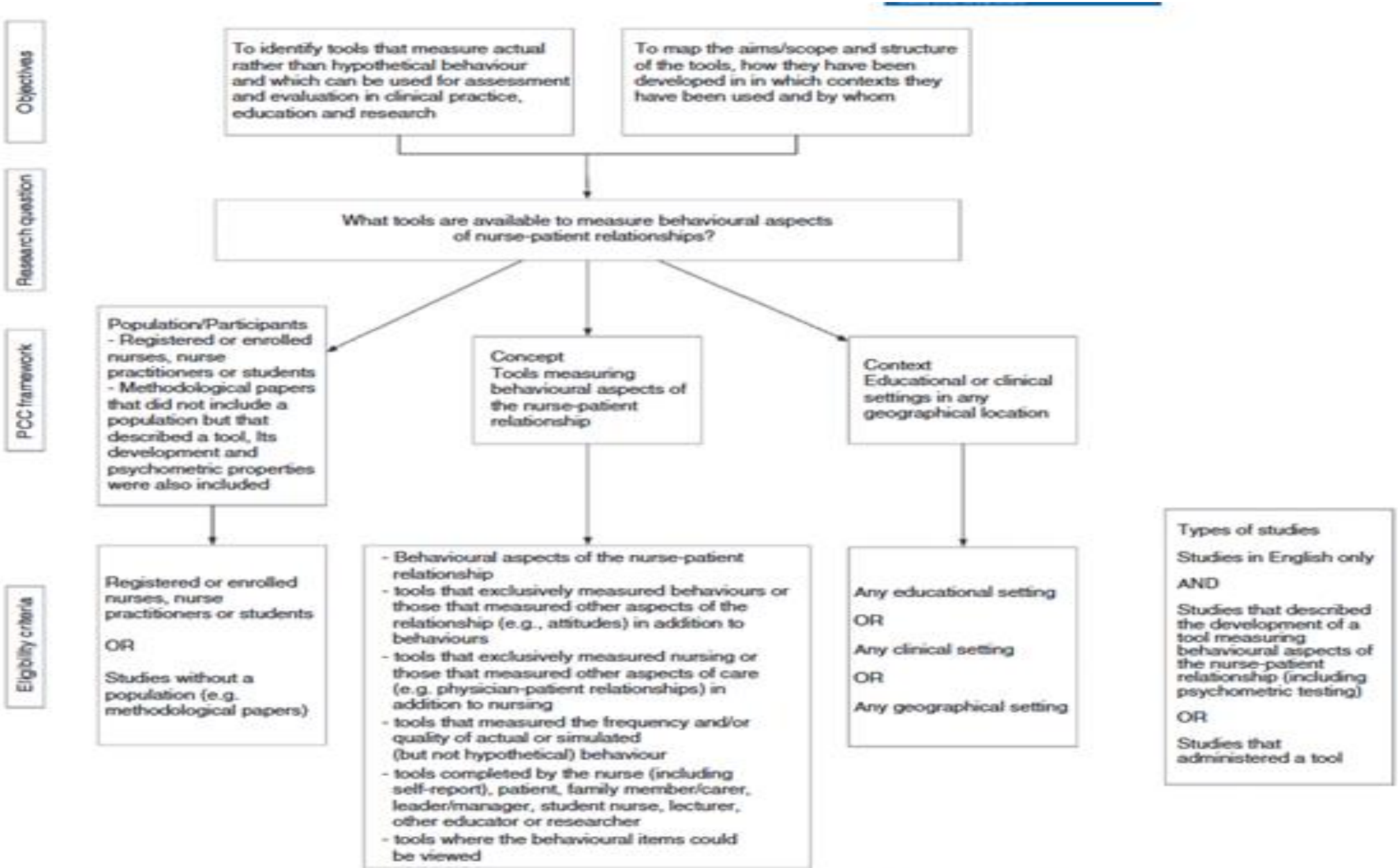


FIGURE 2 Relationship between research objectives, question(s) and eligibility criteria, Feo et al. (2020)

Identify the research question

TABLE 1 Examples of review objectives and questions from scoping review protocols

Authors (year)	Objective(s)	Review question(s)	Population/participants	Concept	Context
Kao, Peters & Ooi (2017)	To *investigate* QoL questionnaires available to paediatric patients following tonsillectomies with or without adenoidectomies for chronic infections or SDB	What QoL questionnaires are available for paediatric patients following tonsillectomies with or without adenoidectomies for chronic infections or SDB?	Paediatric patients <16 years of age Undergoing tonsillectomy ± adenoidectomy for chronic tonsillitis or sleep-disordered breathing	Questionnaires utilized to assess QoL in the target population and context	Settings where the targ population undergo the procedure of interest and where Qo questionnaires are use
Yu, Steenbeek, Macdonald, MacDonald & McKibbon (2019)	To *identify* the characteristics of Indigenous healing strategies in Canada and approaches to improving cultural relevance to local Indigenous contexts	(i) What are the characteristics (e.g., guiding principles, main components, and human resources) of Indigenous healing strategies in Canada? (ii) What approaches have been used in research process [sic] to improve the cultural relevance to local Indigenous contexts?	First nations, Inuit, and Métis Indigenous peoples of Canada who self-identify by other terms derived from their nations, traditional lands, or languages	Literature that describes an Indigenous healing strategy in Canada, including any attempt to promote health and healing	All service settings in Canada, including health, justice, child welfare, reconciliation, and education

Abbreviations: QoL, quality of life; ScR, scoping review; SDB, sleep-disordered breathing.

Pollock et al (2021:2106)

Scoping review steps

3. Eligibility criteria: guide the review, and used to make decisions on the sources to include. The rationale for each of the criteria should be clearly explained.

1. Develop a protocol *(a priori)*

2. State your review question/objective clearly

3. Establish your eligibility criteria (with a rationale)

4. Searching databases: The search strategy should be comprehensive. Detail publication date & language limitations, with a rationale.

4. Search >1 database

Identify relevant studies

Review Article

DIGITAL HEALTH

DIGITAL HEALTH
Volume 9: 1–16

DOI: 10.1177/20552076231207574
journals.sagepub.com/home/dhj
Sage

Virtual reality use and patient outcomes in palliative care: A scoping review

Mairead Moloney[1,2], Owen Doody[1,2,3], Martina O'Reilly[4], Michael Lucey[4], Joanne Callinan[4], Chris Exton[5], Simon Colreavy[5], Frances O'Mahony[4], Pauline Meskell[1,3] and Alice Coffey[1,2,3]

Table 1. Search terms.

MeSH		Open synonyms
(MM 'Terminally Ill') OR (MM 'Terminal Care+') OR (MM 'Palliative Care') OR (MM 'Palliative Medicine') OR (MM 'Hospice and Palliative Care Nursing')	OR	palliative care or terminal care or terminal illness or terminal disease or terminal cancer or end of life or end-of-life or hospice care or supportive care or life limiting illness or life limiting disease or advanced cancer or advanced illness or advanced disease
	AND	
(MM 'Augmented Reality') OR (MM 'Virtual Reality') OR (MM 'Virtual Reality Exposure Therapy')	OR	virtual reality or virtual technolog* or virtual environment or virtual world

Abstract

Objective: Virtual reality is increasingly used in healthcare settings. Potentially, it's use in palliative carecould have a positive impact; however, there is limited evidence on the scope, purpose and patient outcomes relating to virtual reality use in this context. The objective of this scoping review is to chart the literature on virtual reality use in palliative care, identifying any evidence relating to biopsychosocial patient outcomes which could support its use in practice.

Methods: A scoping review of the literature, involving . a systematic search across 10 electronic bibliographic databases in December 2021, . Eligibility criteria were primary research studies, of any research designwithin a 10-year timeframe, which reported on virtual reality use and patient outcomes in palliative care. A total of 993 papers were identified, andcomprehensive screening resulted in 10 papers for inclusion.

✓ Study Selection

Table 2. Inclusion/exclusion criteria.

Inclusion	Exclusion
Population: adults >18 years of age in receipt of palliative/hospice care Concept: virtual reality and patient outcomes Context: palliative care, terminal care, hospice care, end-of-life care Types of information sources: studies published between 01 Jan 11 and 31 Dec 21. Primary research studies include qualitative, quantitative and mixed method studies but not limited to research designs. Studies published in the English language	Population: participants < 18 years of age Concept: any concept not related to virtual reality Context: any context other than palliative care, terminal care, hospice care, end-of-life care Types of information sources: studies earlier than 2011. Non-primary research-based papers such as editorials, notes, letters, commentaries, discussion papers and opinion pieces. Non-published thesis. Not published in English

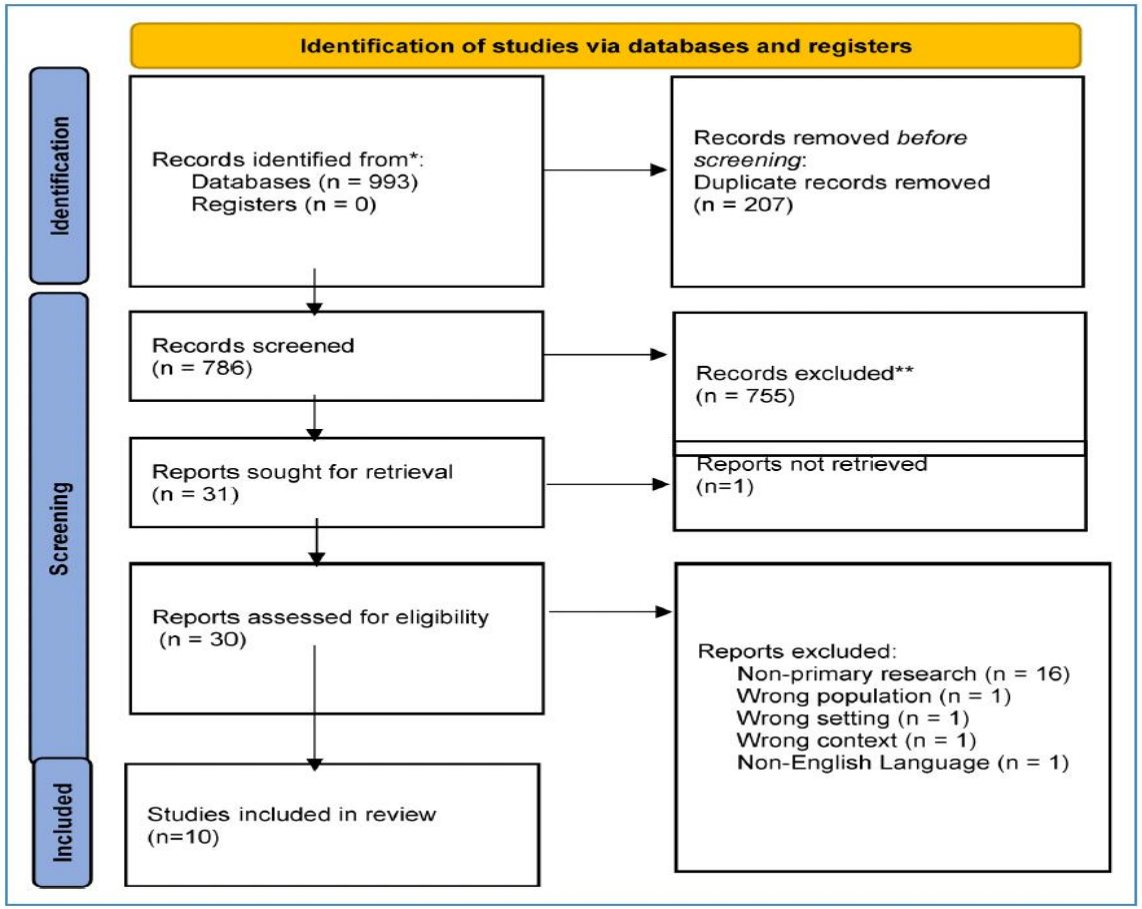
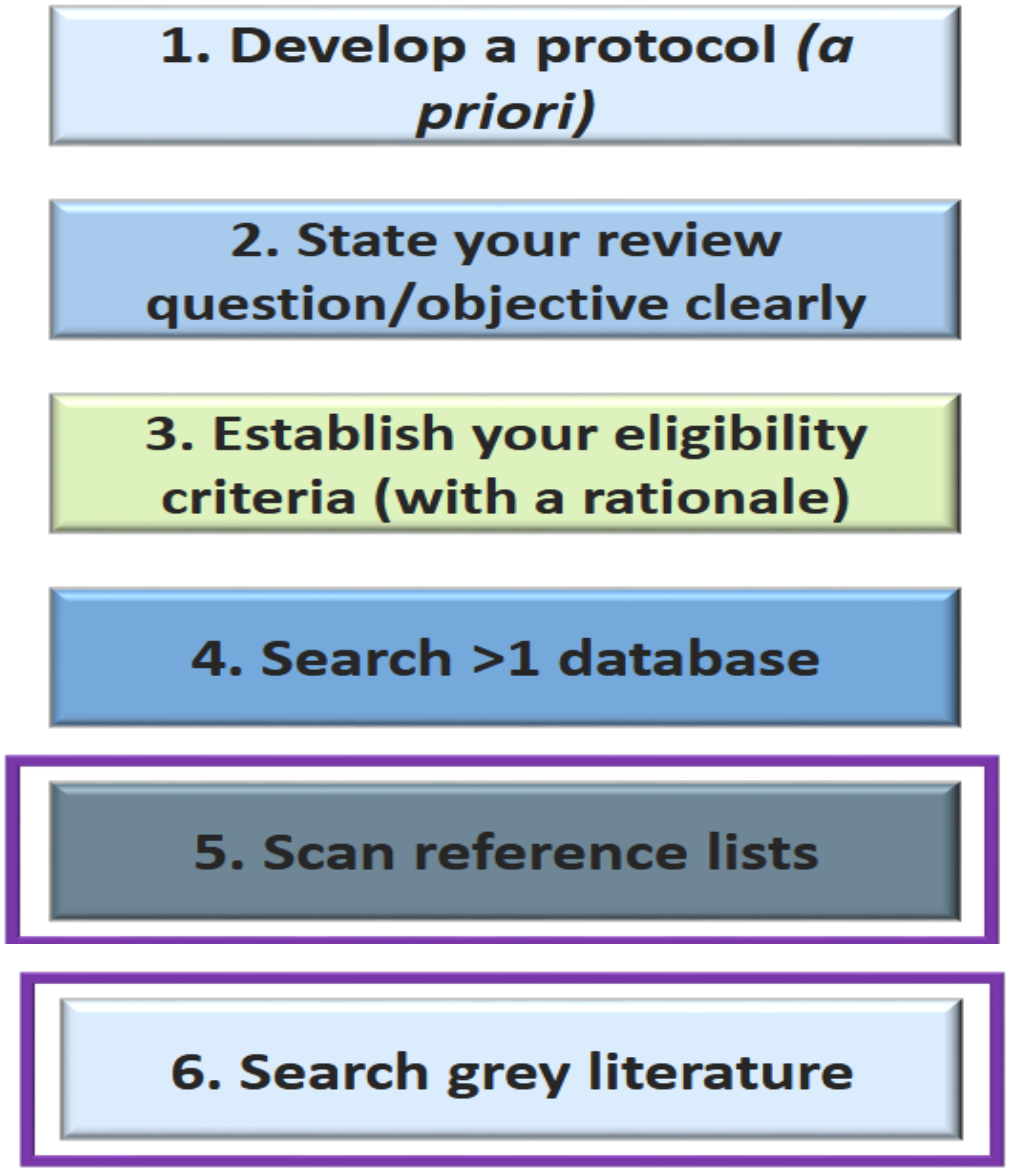


Figure 1. PRISMA flow diagram.[20]

Scoping review steps

5. Reference list scanning: The reference lists of all identified sources should be searched for additional sources.

6. Grey literature searching: If applicable to the review question/objective, include unpublished literature (grey literature) in your search strategy.



Scoping review steps

7. Level one screening:
Screen titles and abstracts of the identified sources, ideally by 2 or more reviewers (independently).

8. Level two screening:
Screen the full texts of the identified sources, ideally by 2 or more reviewers (independently).

7. Screen titles & abstracts (by ≥2 reviewers)

8. Screen full-texts (by ≥2 reviewers)

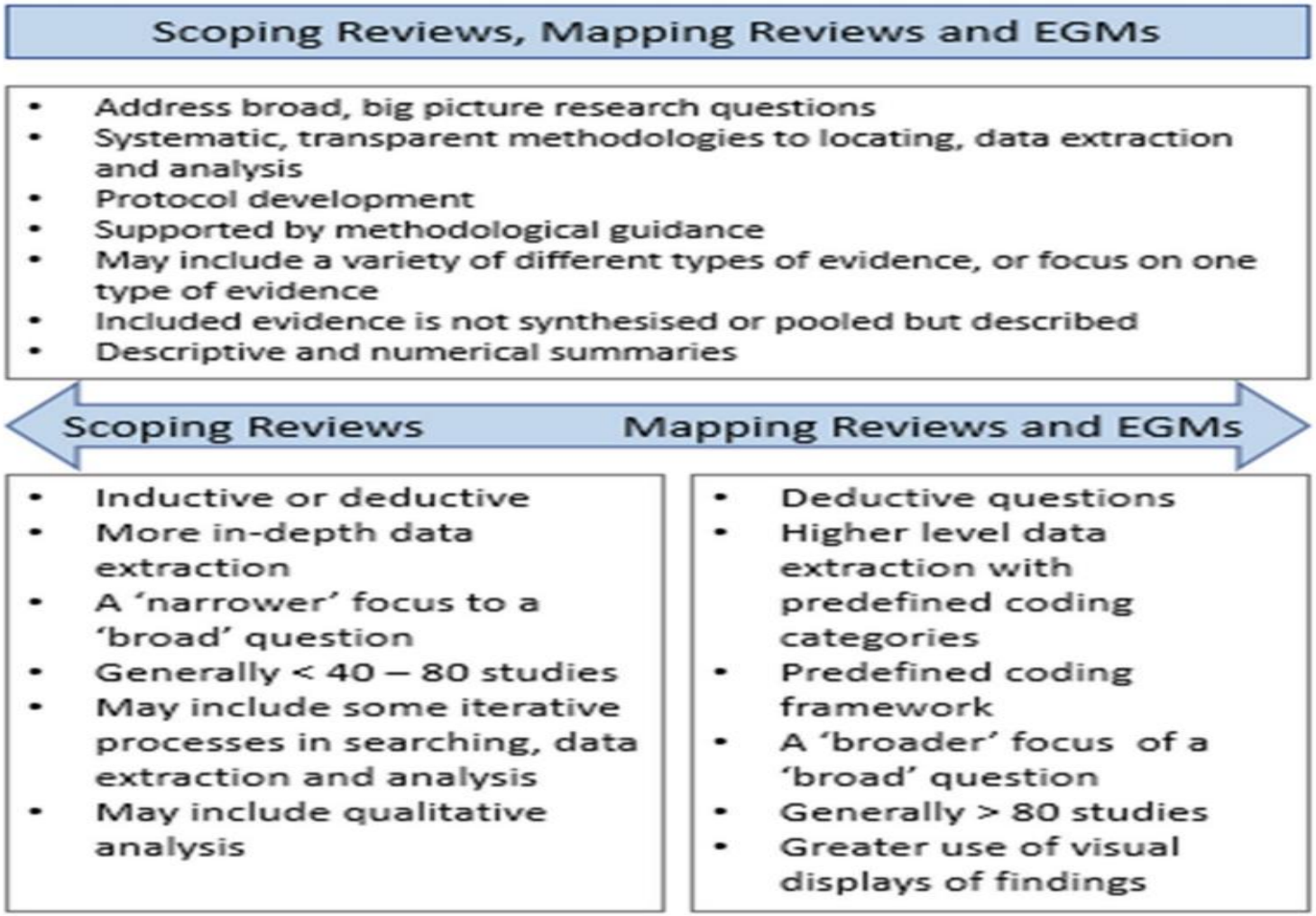


Fig. 1 The Big Picture review family (commonalities and differences in approaches)

Scoping review steps

9. Charting form: record of the characteristics of the included studies and the key information relevant to the review question(s). Can refine as needed.

10. Charting: extract relevant data from the included sources, ideally by 2 or more reviewers (independently).

9. Have a pre-defined charting form (can refine it)

10. Chart data (by ≥2 reviewers)

Charting the data

11.2.7 Data extraction

In scoping reviews, the data extraction process may be referred to as “data charting”. This process provides the reader with a logical and descriptive summary of the results that aligns with the objective/s and question/s of the scoping review.

A draft charting table or form should be developed and piloted at the protocol stage to record the key information of the source, such as author, reference, and results or findings relevant to the review question/s. This may be further refined at the review stage and the charting table updated accordingly. Some key information that reviewers might choose to chart are:

1. Author(s)
2. Year of publication
3. Origin/country of origin (where the source was published or conducted)
4. Aims/purpose
5. Population and sample size within the source of evidence (if applicable)
6. Methodology / methods
7. Intervention type, comparator and details of these (e.g. duration of the intervention) (if applicable). Duration of the intervention (if applicable)
8. Outcomes and details of these (e.g. how measured) (if applicable)
9. Key findings that relate to the scoping review question/s.

Cochrane Library

Cochrane Database of Systematic Reviews

Care bundles for improving outcomes in patients with COVID-19 or related conditions in intensive care – a rapid scoping review (Review)

Smith V, Devane D, Nichol A, Roche D

Smith V, Devane D, Nichol A, Roche D.
Care bundles for improving outcomes in patients with COVID-19 or related conditions in intensive care – a rapid scoping review.
Cochrane Database of Systematic Reviews 2020, Issue 12. Art. No.: CD013819.
DOI: 10.1002/14651858.CD013819.

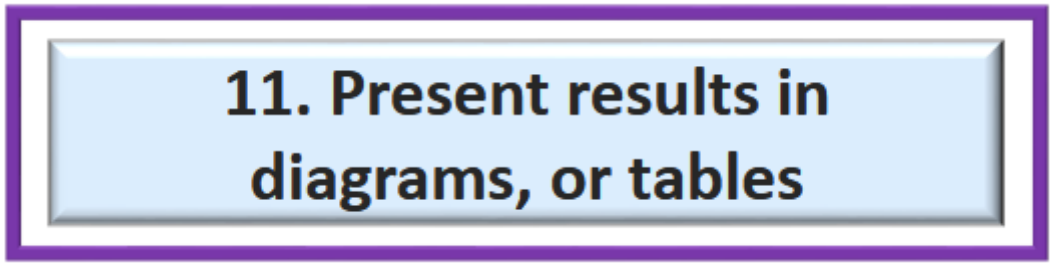
As per scoping review guidance (Godfrey 2020), we mapped the extracted data in tabular form and have provided a descriptive summary of the findings from the included studies. We mapped and reported the results as follows.

1. Description of included studies: summary descriptions and tabular presentation of the characteristics of the included studies are presented in the Characteristics of included studiestables. These details are also presented in aggregated format by patient condition (i.e. patients with suspected or confirmed COVID-19, patients with ARDS, patients with other influenza or pneumonia, patients with severe respiratory failure and patients with mixed conditions) (see Appendix 4). Details described include study aim, study design, dates studies were conducted, description of study settings, including country, description of study population, and funding sources (if any). A narrative summary of these details is also provided.
2. Description of the care bundles and comparators, where relevant: summary descriptions of the components of the care bundles described in the studies are provided in this section. We categorised the tabular details by type of patient condition for which the bundle was applied, by care bundle component, that is, the discrete practices involved across the care bundles, and by study design. An Additional File (osf.io/mfc6z), which provides the complete descriptions of the care bundles used in each included study has been provided to the WHO for purposes of completeness.
3. Descriptive summary and tabular presentation of results: this section maps the number of studies that reported each of the review's prespecified outcome measures, and presents this in tabular format. We categorised the results reported in the included studies and presented them according to the type of patient condition for which the care bundle was applied and by outcome. Detailed results, that is, data from numerical/statistical results, are provided in an Additional File to the WHO (osf.io/mfc6z). We did not apply GRADE assessments to the results and the numerical/statistical results do not form part of this scoping review to avoid the risk of interpretations of 'effectiveness'. A subsequent effectiveness review to formally synthesis the results and to explore these in-depth is required.

Scoping review steps

11. Present results: use diagrams, tables, and/or a descriptive format that aligns with the objective/review question(s).

12. Flow diagram: shows the decision process, including search results, selection process results, additions from reference searching, etc. and the final number of included sources



Collating, summarizing and reporting the results

11.3.7.4 Analysis and Presentation of results

The authors should clearly articulate the method(s) used to present the results of the review. These may be a map of the data extracted from the included papers in a diagrammatic or tabular form, and/or in a descriptive format that responds to the questions of the review.

The tables and charts may also show results as: distribution of sources of evidence by year or period of publication (depends on each case), countries of origin, area of intervention (clinical, policy, educational, etc.) and research methods. A descriptive summary should accompany the tabulated and/or charted results and should describe how the results relate to the review objective/s and question/s.

The results can also be classified under main conceptual categories, such as: “intervention type”, “population” (and sample size, if it is the case), “duration of intervention”, “aims”, “methodology adopted”, “key findings” (evidence established), and “gaps in the research”. For each category reported, a clear explanation should be provided.

Stage 6. Expert consultation

Expert consultation - the optional, but recommended stage of the methodological framework by Arksey and O'Malley (Daudt *et al.*, 2013) is going to be embedded throughout the whole review process. Professional stakeholders (i.e., health and social care professionals, managers) were consulted to identify priorities and consequently to help guide the research question and design. Throughout the course of the scoping review, expert stakeholders will be engaged in consultation to obtain recommendations for the types of data extracted and the presentation of findings, in order to shape the direction of the scoping review so it will support the research project as closely as possible.

How to cite: Torok Z, O'Keeffe A, Darley A and Carroll Á. A protocol for a scoping review of methodologies used to explore patient experience in post-acute rehabilitation settings [version 2; peer review: 2 approved with reservations]. *HRB Open Res* 2024, 6:5 (https://doi.org/10.12688/hrbopenres.13672.2)

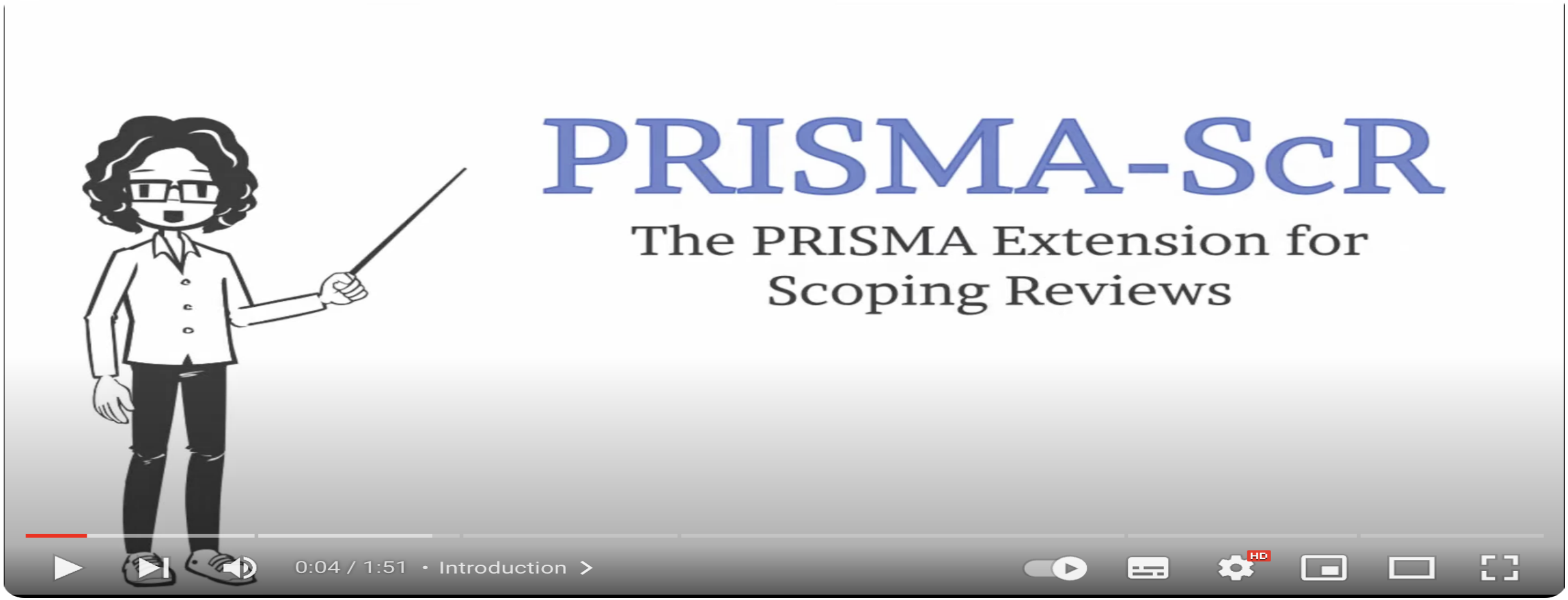
First published: 16 Jan 2023, 6:5 (https://doi.org/10.12688/hrbopenres.13672.1)
Latest published: 26 Feb 2024, 6:5 (https://doi.org/10.12688/hrbopenres.13672.2)

Reporting a Scoping Review

Preferred Reporting Items for Systematic reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR) Checklist

SECTION	ITEM	PRISMA-ScR CHECKLIST ITEM	REPORTED ON PAGE #
TITLE			
Title	1	Identify the report as a scoping review.	
ABSTRACT			
Structured summary	2	Provide a structured summary that includes (as applicable): background, objectives, eligibility criteria, sources of evidence, charting methods, results, and conclusions that relate to the review questions and objectives.	
INTRODUCTION			
Rationale	3	Describe the rationale for the review in the context of what is already known. Explain why the review questions/objectives lend themselves to a scoping review approach.	
Objectives	4	Provide an explicit statement of the questions and objectives being addressed with reference to their key elements (e.g., population or participants, concepts, and context) or other relevant key elements used to conceptualize the review questions and/or objectives.	
METHODS			
Protocol and registration	5	Indicate whether a review protocol exists; state if and where it can be accessed (e.g., a Web address); and if available, provide registration information, including the registration number.	
Eligibility criteria	6	Specify characteristics of the sources of evidence used as eligibility criteria (e.g., years considered, language, and publication status), and provide a rationale.	
Information sources*	7	Describe all information sources in the search (e.g., databases with dates of coverage and contact with authors to identify additional sources), as well as the date the most recent search was executed.	
Search	8	Present the full electronic search strategy for at least 1 database, including any limits used, such that it could be repeated.	
Selection of sources of evidence†	9	State the process for selecting sources of evidence (i.e., screening and eligibility) included in the scoping review.	
Data charting process‡	10	Describe the methods of charting data from the included sources of evidence (e.g., calibrated forms or forms that have been tested by the team before their use, and whether data charting was done independently or in duplicate) and any processes for obtaining and confirming data from investigators.	
Data items	11	List and define all variables for which data were sought and any assumptions and simplifications made.	
Critical appraisal of individual sources of evidence§	12	If done, provide a rationale for conducting a critical appraisal of included sources of evidence; describe the methods used and how this information was used in any data synthesis (if appropriate).	
Synthesis of results	13	Describe the methods of handling and summarizing the data that were charted.	
RESULTS			
Selection of sources of evidence	14	Give numbers of sources of evidence screened, assessed for eligibility, and included in the review, with reasons for exclusions at each stage, ideally using a flow diagram.	
Characteristics of sources of evidence	15	For each source of evidence, present characteristics for which data were charted and provide the citations.	
Critical appraisal within sources of evidence	16	If done, present data on critical appraisal of included sources of evidence (see item 12).	
Results of individual sources of evidence	17	For each included source of evidence, present the relevant data that were charted that relate to the review questions and objectives.	
Synthesis of results	18	Summarize and/or present the charting results as they relate to the review questions and objectives.	
DISCUSSION			
Summary of evidence	19	Summarize the main results (including an overview of concepts, themes, and types of evidence available), link to the review questions and objectives, and consider the relevance to key groups.	
Limitations	20	Discuss the limitations of the scoping review process.	
Conclusions	21	Provide a general interpretation of the results with respect to the review questions and objectives, as well as potential implications and/or next steps.	
FUNDING			
Funding	22	Describe sources of funding for the included sources of evidence, as well as sources of funding for the scoping review. Describe the role of the funders of the scoping	

Tricco AC, Lillie E, Zarin W, O'Brien KK, Colquhoun H, Levac D, Moher D, Peters MDJ, Horsley T, Weeks L, Hempel S, Akl EA, Chang C, McGowan J, Stewart L, Hartling L, Aldcroft A, Wilson MG, Garritty C, Lewin S, Godfrey CM, Macdonald MT, Langlois EV, Soares-Weiser K, Moriarty J, Clifford T, Tunçalp Ö, Straus SE. PRISMA Extension for Scoping Reviews (PRISMA-ScR): Checklist and Explanation. Ann Intern Med. 2018 Oct 2;169(7):467-473. doi: 10.7326/M18-0850.



PRISMA Extension for Scoping Reviews (PRISMA-ScR)

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Received: 2 November 2020 | Revised: 2 December 2020 | Accepted: 14 December 2020

DOI: 10.1111/jan.14743

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RESEARCH METHODOLOGY:
DISCUSSION PAPER – METHODOLOGY

Undertaking a scoping review: A practical guide for nursing and midwifery students, clinicians, researchers, and academics

Danielle Pollock[1] | Ellen L. Davies[2] | Micah D. J. Peters[2,3,4] | Andrea C. Tricco[5,6,7] | Lyndsay Alexander[8,9] | Patricia McInerney[10,11] | Christina M. Godfrey[7,12] | Hanan Khalil[13] | Zachary Munn[1]

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Journal of Clinical Epidemiology

Journal of Clinical Epidemiology 176 (2024) 111572

KEY CONCEPTS IN CLINICAL EPIDEMIOLOGY

"How-to": scoping review?

Danielle Pollock[a,*], Catrin Evans[b], Romy Menghao Jia[c], Lyndsay Alexander[d], Dawid Pieper[e,f], Érica Brandão de Moraes[g,h], Micah D.J. Peters[i], Andrea C. Tricco[j,k,l], Hanan Khalil[m], Christina M. Godfrey[l], Ashrita Saran[n], Fiona Campbell[o], Zachary Munn[a]

Seminars in Oncology Nursing 40 (2024) 151627

Contents lists available at ScienceDirect

Seminars in Oncology Nursing

journal homepage: https://www.journals.elsevier.com/seminars-in-oncology-nursing

Advanced Practice Nursing Titles and Roles in Cancer Care: A Scoping Review

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A B S T R A C T

Objectives: Advanced practice nursing roles in cancer care are diverse and exist across the cancer care continuum. However, the titles used and the scope of practice differ across countries. This diversity is likely to be misleading to patients and influence nurses' contribution to health care. An understanding of the current state of advanced practice nursing roles in cancer care internationally is needed to inform opportunities for future role development and enhance cancer nursing career pathways.

Methods: This scoping review included a systematic search of four databases: MEDLINE, CINAHL, PsycINFO, and Academic Search Complete. Independent screening for papers meeting the review's inclusion criteria was undertaken using online screening software. Data extraction, coding, and mapping were undertaken in NVivo 12.

Results: Of the 13,409 records identified, 108 met the review's inclusion criteria. A variety of roles in cancer care settings were described. The United States and the United Kingdom had the most titles for advanced practice nursing roles. Tumor-specific roles were described and integrated into different phases of the cancer care continuum. Trends in continuing professional development for advanced practice nurses in cancer care included the rise in Fellowship programs in the United States and practice-based education in the United Kingdom.

Conclusions: The differences in advanced practice nursing roles in cancer care allow regional and institutional variation to meet the needs of patient populations and health care system demands. However, a lack of clarity surrounding titles and roles results in confusion and underutilization of these nurses' highly specialized skill sets.

Implications for Nursing Practice: Incongruence in titles and scope of practice internationally will ultimately result in a merging of roles. There is a need for international agreement on education requirements for advanced practice nursing roles to promote career pathways.

Tricco *et al. BMC Medicine* (2024) 22:149
https://doi.org/10.1186/s12916-024-03346-7

BMC Medicine

RESEARCH ARTICLE Open Access

Interventions on gender equity in the workplace: a scoping review

Andrea C. Tricco[1*], Amanda Parker[1], Paul A. Khan[1], Vera Nincic[1], Reid Robson[1], Heather MacDonald[1], Rachel Warren[1], Olga Cleary[2], Elaine Zibrowski[3], Nancy Baxter[4], Karen E. A. Burns[5], Doug Coyle[6], Ruth Ndjaboue[7], Jocalyn P. Clark[8], Etienne V. Langlois[9], Sofia B. Ahmed[10], Holly O. Witteman[11], Ian D. Graham[12], Wafa El-Adhami[13], Becky Skidmore[14], France Légaré[11], Janet Curran[15], Gillian Hawker[16], Jennifer Watt[1], Ivy Lynn Bourgeault[17], Jeanna Parsons Leigh[18], Karen Lawford[19], Alice Aiken[20], Christopher McCabe[21], Sasha Shepperd[22], Reena Pattani[23], Natalie Leon[24], Jamie Lundine[17], Évèhouénou Lionel Adisso[25], Santa Ono[26], Linda Rabeneck[27] and Sharon E. Straus[1]

Abstract

Background Various studies have demonstrated gender disparities in workplace settings and the need for further intervention. This study identifies and examines evidence from randomized controlled trials (RCTs) on interventions examining gender equity in workplace or volunteer settings. An additional aim was to determine whether interventions considered intersection of gender and other variables, including PROGRESS-Plus equity variables (e.g., race/ethnicity).

Methods Scoping review conducted using the JBI guide. Literature was searched in MEDLINE, Embase, PsycINFO, CINAHL, Web of Science, ERIC, Index to Legal Periodicals and Books, PAIS Index, Policy Index File, and the Canadian Business & Current Affairs Database from inception to May 9, 2022, with an updated search on October 17, 2022. Results were reported using Preferred Reporting Items for Systematic Reviews and Meta-Analyses extension to scoping reviews (PRISMA-ScR), Sex and Gender Equity in Research (SAGER) guidance, Strengthening the Integration of Intersectionality Theory in Health Inequality Analysis (SIITHIA) checklist, and Guidance for Reporting Involvement of Patients and the Public (GRIPP) version 2 checklist.

All employment or volunteer sectors settings were included. Included interventions were designed to promote workplace gender equity that targeted: (a) individuals, (b) organizations, or (c) systems. Any comparator was eligible. Outcomes measures included any gender equity related outcome, whether it was measuring intervention effectiveness (as defined by included studies) or implementation. Data analyses were descriptive in nature. As recommended in the JBI guide to scoping reviews, only high-level content analysis was conducted to categorize the interventions, which were reported using a previously published framework.

Results We screened 8855 citations, 803 grey literature sources, and 663 full-text articles, resulting in 24 unique RCTs and one companion report that met inclusion criteria. Most studies (91.7%) failed to report how they established sex or gender. Twenty-three of 24 (95.8%) studies reported at least one PROGRESS-Plus variable: typically sex or gender or occupation. Two RCTs (8.3%) identified a non-binary gender identity. None of the RCTs reported on relationships between gender and other characteristics (e.g., disability, age, etc.). We identified 24 gender equity promoting interventions in the workplace that were evaluated and categorized into one or more of the following themes: (i) quantifying gender impacts; (ii) behavioural or systemic changes; (iii) career flexibility; (iv) increased visibility, recognition, and representation; (v) creating opportunities for development, mentorship, and sponsorship; and (vi) financial support. Of these interventions, 20/24 (83.3%) had positive conclusion statements for their primary outcomes (e.g., improved academic productivity, increased self-esteem) across heterogeneous outcomes.

Conclusions There is a paucity of literature on interventions to promote workplace gender equity. While some interventions elicited positive conclusions across a variety of outcomes, standardized outcome measures considering specific contexts and cultures are required. Few PROGRESS-Plus items were reported. Non-binary gender identities and issues related to intersectionality were not adequately considered. Future research should provide consistent and contemporary definitions of gender and sex.

Discussion Point:

What have we learned over the years? How do your experiences align with the guidance?