

Research Brief

A scoping review of knowledge synthesis methods for generating or refining theory reveals little guidance

Summary

The objective of this scoping review was to operationalize the steps involved in emerging knowledge synthesis methods that generate or refine theory as well as compare the similarities/differences, strengths/limitations and expertise required. 9 methods were identified. Guidance was provided on all steps of the review process for integrative review, realist review, and meta-ethnography. Meta-synthesis had guidance on the fewest number of steps. Reproducibility of the methods is generally poor.

Implications

This is the first scoping review to compare numerous features of emerging knowledge synthesis methods for summarizing qualitative evidence. There is a lack of guidance on how to conduct emerging knowledge synthesis methods to generate or refine a theory. Results suggest that the differences between the methods are mainly related to analysis techniques. Further work is needed and we propose convening an international group of leaders in the field to provide more clarification about methods for emerging knowledge synthesis approaches. Outputs from this meeting could include an algorithm to select the most appropriate (or a range of appropriate) synthesis methods for particular research questions; a textbook that outlines how to conduct the various methods, and presentations and/or workshops.

For more information, please contact Dr. Sharon E. Straus: sharon.straus@utoronto.ca

What is the current situation?

- The predominant knowledge synthesis method in healthcare is the systematic review (SR) of interventions using methods proposed by the Cochrane Collaboration and others. However, SRs often lack rich contextual details (e.g. patients' expectations, compliance, preferences, values and stakeholders' perspectives) that can influence the effectiveness of an intervention and can be gathered using other, emerging knowledge synthesis methods. These emerging synthesis methods can be used to improve understanding through the development of theories and frameworks, although confusion persists about their similarities and differences and how to operationalize them.

Objective

- To compare and contrast the expertise required, the similarities and differences, strengths and limitations and operational steps of knowledge synthesis methods used to generate or refine theory, through a scoping review.

How was the review conducted?

- The methods of the review were based on the framework published by Arksey and O'Malley (2005).
- 10 electronic databases were searched from inception onwards for any type of publication that evaluated, used or described emerging knowledge synthesis methods for generating or refining theory (as reported by the authors). Theory generation or refinement was defined as a collection of ideas that aims to develop patterns of meanings.
- 2 reviewers independently screened literature search results and abstracted data from included studies. A qualitative analysis was conducted to synthesize common themes.

What did the study find?

- 287 articles with information on 9 knowledge synthesis methods were included (concept synthesis, critical interpretive synthesis, integrative review, meta-synthesis, meta-ethnography, meta-study, meta-interpretation, narrative synthesis, realist review).
- Common themes with respect to expertise were team characteristics and skills/knowledge/expertise of individuals involved.
- For similarities and differences to SRs, the themes were organized into the following categories: paradigm, process, research question, literature search, eligibility criteria, data collection, quality appraisal, and synthesis.
- Strengths of the methods included: comprehensiveness, identification of gaps in the literature, potential to inform policy, aid in clinical decisions, address complex research questions and synthesize patient preferences, beliefs, and values.
- Many of the methods were highly subjective and not reproducible. Guidance was provided on all steps of the review process for integrative review, realist review, and meta-ethnography, whereas meta-synthesis had guidance reported on the fewest number of steps.



Funded by **CIHR IRSC**
Canadian Institutes of Health Research / Institut de recherche en santé du Canada

This research was conducted by investigators affiliated with the following institutions:

St. Michael's
Inspired Care. Inspiring Science.



Authors: Andrea C. Tricco, Jesmin Antony, Charlene Soobiah, Monika Kastner, Elise Cogo, Heather MacDonald, Jennifer D'Souza, Wing Hui, Sharon E. Straus