

## 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 (KS) methods that generate or refine theory as well as compare the similarities/differences, strengths/limitations and expertise required. Nine 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 KS methods for summarizing qualitative evidence. There is a lack of guidance on how to conduct emerging KS methods to generate or refine a theory. Results suggest that the methodological differences 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 KS approaches.

**Reference:** Tricco AC, Antony J, Soobiah C, et al. Knowledge synthesis methods for generating or refining theory: a scoping review reveals that little guidance is available. *J Clin Epidemiol.* 2016;73:36-42.

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### What is the current situation?

- The predominant KS method in healthcare is the systematic review (SR) of interventions using methods proposed by the Cochrane Collaboration. However, SRs often lack rich contextual details that can influence the effectiveness of an intervention and can be gathered using other, emerging KS 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.

### What is the objective?

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

### How was the review conducted?

- Scoping review conducted based on the Arksey and O'Malley (2005) framework.
- 10 electronic databases were searched from inception onwards for any type of publication that evaluated, used or described emerging KS methods for generating or refining theory (as reported by the authors, i.e. 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 review find?

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

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