

## A scoping review identifies multiple emerging knowledge synthesis methods, but few studies operationalise the methods

### Summary

The objective of this scoping review was to identify, define, and classify emerging knowledge synthesis methods used in the literature. We identified 25 methods, commonly used across journals in nursing, healthcare sciences and services, and health policy fields. Most of the methods were contemporary and are likely emerging, as 82% of the included articles were published after the year 2005. Numerous applications of the various methods were observed across the literature, yet very few (<5%) were seminal articles that operationalized the steps of these methods.

### Implications

The results of this scoping review can be used to advance the knowledge synthesis field. Using thematic analysis, 79 methods reported in the literature were amalgamated into a framework of 25 unique synthesis methods that address the entire synthesis process (12 methods) or analysis only (13 methods). Each of the 12 full synthesis methods can be used to integrate qualitative and quantitative data and/or establish or refine theory. As a next step, we propose convening an international group in the field to help clarify emerging approaches to knowledge synthesis.

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### What is the current situation?

- Emerging knowledge synthesis methods can be challenging for researchers to locate and apply, as they are employed across multiple disciplines.
- Similar terms are often used to describe different methods, and a comprehensive manual for conducting these syntheses does not exist.

### What is the objective?

To systematically identify, define, and classify emerging knowledge synthesis methods 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).
- Ten electronic databases were searched from inception onwards for any type of publication that evaluated, used, or described emerging knowledge synthesis methods in health (as per the WHO definition), and philosophy.
- Standard knowledge synthesis methods (e.g., systematic reviews of interventions, prognostic reviews, diagnostic reviews, etc.) were excluded.
- Screening of the literature search results and data abstraction of included studies was completed independently by two reviewers.
- Results were summarized descriptively and qualitative analysis was employed to chart the features of the included methods.

### What did the review find?

- After screening 17,962 titles and abstracts and 1,010 potentially relevant full-text papers, 409 articles, with information on 25 different knowledge synthesis methods were included in the review.
- Significant overlap in the terminology used to describe synthesis methods was observed.
- The majority of articles were applications of a knowledge synthesis method with <5% describing the method in detail (i.e. operationalizing the steps).
- The methods were most commonly used across the nursing, healthcare sciences and services, and health policy and services fields.
- Twelve knowledge synthesis methods were classified as methods that can be used for the entire synthesis process; while 13 were classified as methods that provide guidance on the analysis alone.
- Within the full synthesis methods, two main categories were observed: 1 - methods that can be used to integrate qualitative and quantitative data and 2 - methods that can be used to develop or refine a theory, perspective, or phenomenon.

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