Research Brief

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A scoping review reveals poor operationalization of methodological steps for integrating qualitative and quantitative data

Summary

The objectives of this scoping review were to examine the operational steps for integrating qualitative and quantitative evidence in healthcare and to compare the expertise required, the similarities/ differences (relative to SRs) and the strengths/limitations of these synthesis methods. We identified 121 articles reporting on 7 knowledge synthesis methods. Guidance was provided for all steps of the review process for some methods, including integrative review and realist review, while meta-summary had guidance on the fewest number of steps. Other methods were missing guidance on the entire synthesis process.

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?

- Although systematic reviews (SRs) can be used to inform decision-making in healthcare, there are inherent challenges with this method, including a lack of rich contextual detail(s).

- To address these challenges, novel synthesis methods have emerged, which can be used to integrate qualitative and quantitative data.

What is the objective?

To describe how emerging knowledge synthesis methods integrating qualitative and quantitative evidence are applied (i.e. the expertise required, the similarities and differences between these methods and SRs, their strengths and limitations and their operational steps).

How was the review conducted?

- Ten electronic databases were searched from inception onwards for any type of publication that described emerging knowledge synthesis methods in healthcare (as per the WHO definition), or philosophy that could be used to integrate qualitative and quantitative data.

- Screening of the literature search results and data abstraction of included studies were completed independently by two reviewers.

- Results were summarized descriptively and common themes across the studies were analyzed using thematic analysis.

What did the review find?

- The review included 121 articles with information about 7 knowledge synthesis methods that can be used to integrate qualitative and quantitative data (integrative review, mixed studies review, realist review, meta-summary, meta-narrative review, narrative synthesis, and critical interpretive synthesis).

- In terms of expertise required, the common themes were: team characteristics and individuals' skills/knowledge/expertise.

- Guidance on all steps of the review process was not provided for meta-summary, meta-narrative review, narrative synthesis, and critical interpretive synthesis.

- The main similarities (relative to the Cochrane Collaboration's definition of a SR) related to the entire synthesis process, while common differences were related to the research question and eligibility criteria. The most common strength (as reported by the authors) was a comprehensive synthesis providing rich contextual data, while the most common weakness was a highly subjective method that was not reproducible.