

Research Brief

Few studies exist examining methods for selecting studies, abstracting data, and appraising quality in a systematic review

Summary

Currently, few studies exist documenting common systematic review (SR) practices. Our systematic review identified 37 studies that support the uptake of several SR methodologies. These results provide an updated evidence-base for current knowledge synthesis guidelines and identify methods requiring further research.

Implications

Health decision makers rely on the rigor of systematic reviews to make informed decisions. Our results can be used by researchers to update guidance on the conduct of both SRs and rapid reviews. In addition, SR teams can use our results to inform their SR methodological processes.

Reference: Robson RC, Pham B, Hwee J, et al. Few studies examining methods for selecting studies, abstracting data, and appraising quality in a systematic review. *J Clin Epidemiol.* 2019 Feb; 106: 102-135.

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What is the current situation?

- Systematic reviews are acknowledged as the gold standard for evidence gathering in health care research, due to their methodological rigor and transparent approach.
- While a body of research exists supporting some methodological processes, there are very few studies that examine the best methods to screen studies for inclusion, abstract study data, and appraise their risk of bias or study quality.

What is the objective?

- We aimed to identify and summarize studies assessing methodologies for study selection, data abstraction, or quality appraisal in systematic reviews.

How was the review conducted?

- A systematic review was conducted, searching MEDLINE, EMBASE, and the Cochrane library databases for relevant studies.
- A standardized form for screening studies for inclusion was developed and pilot-tested, then pairs of reviewers independently screened citations and full-text articles for inclusion.
- Quality appraisal of included studies was undertaken using a modified version of the Quality Assessment of Diagnostic Accuracy Studies (QUADAS)-2.

What did the review find?

- After screening 5,600 titles and abstracts and 245 full-text articles, 37 studies were included.
- A high proportion of studies were published between 2010 and 2014 (45.9%). The most common study designs were non-randomized controlled trials (non-RCTs; 27.0%), RCTs (21.6%), and cross-sectional studies (21.6%).
- For screening, studies supported the involvement of two independent experienced reviewers and the use of Google Translate when screening non-English articles.
- For data abstraction, studies supported involvement of experienced reviewers (especially for continuous outcomes) and two independent reviewers, use of dual monitors, graphical data extraction software, and contacting authors for additional information.
- For quality appraisal, studies supported intensive training, piloting quality assessment tools, providing decision rules for poorly reported studies, contacting authors, and using structured tools if different study designs are included.