PRISMA 2020: a reporting guideline for the next generation of systematic reviews

What better way to mark the coming of age of reporting guidance for systematic reviews than with a major update of the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) statement? Published just over 21 years ago, the Quality of Reporting of Meta-analyses (QUOROM) statement was the predecessor of PRISMA, developed to ensure that the value and rigor of the relatively new form of research known as “meta-analysis” was matched by complete and transparent reporting. Providing a complete and accurate account of the purpose, methods, and results of a systematic review is important. Doing so enables those using the review to decide if they can trust and apply the findings, and facilitates replication and updating as new evidence emerges. While the purpose of PRISMA has not changed, the content and format reflect major advances in the way we conduct reviews and improvements in our ability to communicate and disseminate research.

When PRISMA 2009 was published, the International Prospective Register of Systematic Reviews (PROSPERO) was yet to be launched, many reviews reported on “study quality” rather than “risk of bias,” formal assessments of the certainty of evidence were rarely done, and the concept of using automation and machine learning in systematic reviews was just beginning to emerge. PRISMA 2020 incorporates these advances and the most recent guidance for the conduct of systematic reviews. For example, there is more detail to help review authors report their methods for synthesis, with sub-items recommending authors describe how they decided which studies were eligible for each synthesis, how they prepared data for synthesis, the use of tabulation and visual display, meta-analytic and other synthesis methods, and methods used to explore possible causes of heterogeneity and assess the robustness of results.

PRISMA 2020 is published as a suite of three papers: a 27-item checklist and expanded checklist that details reporting recommendations for each item; an updated explanation and elaboration that includes the background and rationale for recommendations, together with examples from published reviews; and a development paper. Those familiar with PRISMA 2009 will see that the format has changed to facilitate implementation. In the explanation and elaboration, each item includes a bullet point list of essential and additional reporting elements. An abridged version of the elements is included in the expanded checklist. A checklist for reporting abstracts is included in PRISMA 2020, replacing the 2013 PRISMA for Abstracts statement.

There are hundreds of organizations and journals that formally endorse PRISMA, including JBI. With the release of the new PRISMA 2020, JBI will need to consider the implications of the updates for our educational materials, our software, our guidance, and our journal, JBI Evidence Synthesis. In particular, JBI methodology groups focused on synthesis may need to review how the changes proposed in PRISMA 2020 impact their current methods.

It is important to note that PRISMA 2020, although potentially applicable across assorted systematic review types, was designed with systematic reviews evaluating health interventions in mind. As JBI has a diverse evidence synthesis toolkit, each methodological group will need to consider the impact of PRISMA 2020 on their group’s guidance, while also considering any of the relevant PRISMA extensions (such as PRISMA ScR) or alternative reporting standards when no PRISMA extensions exist (such as ENTREQ for qualitative evidence synthesis). For the effectiveness review methods groups, it appears likely that the PRISMA 2020 can be adopted altogether into their materials and can also be used to identify gaps in current JBI guidance.

Encouragingly, many of the items included in the updated PRISMA 2020 are already discussed within JBI guidance, training materials, or in the author requirements for this journal. However, it is evident that some enhancements will be required; in particular, the reporting requirements are more comprehensive in the latest update across all areas. We know that despite our guidance and reporting standards, JBI reviews do not always comply with this...
advice or transparently report their reviews. With the PRISMA 2020 release, authors will need to explicitly consider each of these elements and report in clearer and greater detail than they have in the past. This is likely to increase the length of the systematic review manuscript and associated appendices/supplementary material. However, this should not be an operational issue for JBI, as JBI Evidence Synthesis currently does not impose word count limitations on review articles and allows for detailed appendices and supplementary materials to be presented as a part of the manuscript proper. Additionally, although it could be hypothesized that increased manuscript length may be off-putting to potential peer reviewers, any new manuscript that does adhere closely to the new reporting guidelines should facilitate the peer review process by encouraging transparent and comprehensive reporting that is readily accessible.

The new PRISMA 2020 reflects a key milestone in the ongoing evolution of evidence synthesis. In JBI’s 25 years of existence, there have been considerable leaps and advancements in the methodology, processes, and tools used to conduct systematic reviews. For many review types, JBI has been at the forefront of these methodological developments. For JBI to continue to keep speed with the broader evidence synthesis community (particularly for effectiveness reviews), in-depth consideration and full endorsement of the PRISMA 2020 is necessary and will likely be of great benefit to the JBI program of evidence synthesis.

Sue E. Brennan1, Zachary Munn2

1School of Public Health and Preventive Medicine, Monash University, Melbourne, VIC, Australia
2JBI, Faculty of Health and Medical Sciences, The University of Adelaide, Adelaide, SA, Australia

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References

