Reviewer’s report

Title: Risk of bias judgments for random sequence generation in Cochrane systematic reviews were not in line with Cochrane Handbook in more than one-quarter of analysed cases

Version: 0 Date: 15 Oct 2018

Reviewer: Reviewer 2

Reviewer's report:

PEER REVIEWER ASSESSMENTS:

OBJECTIVE - Full research articles: is there a clear objective that addresses a testable research question(s) (brief or other article types: is there a clear objective)?

Yes - there is a clear objective

DESIGN - Is the current approach (including controls and analysis protocols) appropriate for the objective?

Yes - the approach is appropriate

EXECUTION - Are the experiments and analyses performed with technical rigor to allow confidence in the results?

Yes - experiments and analyses were performed appropriately

INTERPRETATION - Is the current interpretation/discussion of the results reasonable and not overstated?

No - there are minor issues

OVERALL MANUSCRIPT POTENTIAL - Could an appropriately REVISED version of this work represent a technically sound contribution?

Probably - with minor revisions
PEER REVIEWER COMMENTS:

GENERAL COMMENTS: Whilst the study focuses on one area in a fairly narrow category of research in that Cochrane systematic reviews are quite a formulaic template that suits assessment of some kinds of research, the inference is that secondary research which is conducted with the very purpose that it is to be trusted is frequently riddled with mistakes. I support the author's investigation and attempt to publish this finding as I believe it to be a true finding and a potential underestimation of a much bigger problem.

The conclusion, as it is phrased, may be a little bit inflammatory, and I'm not particularly a Cochrane advocate. But I think the point is that reviewer's judgements when conducting RoB cannot necessarily be trusted, and that if this occurs in a sample of Cochrane reviews, which are regarded by many as gold standard systematic reviews, then what are the implications for all the other systematic reviews being published? Moreover as the finding that judgements were erroneous for sequence generation and this was the only RoB domain that was assessed, what are the implications for all domains of quality assessment (some unpublished data is referred to page 5 so it would be great if this were published by the time this goes to press), and indeed all phases of the review process where those conducting systematic reviews are trusted to make objective, transparent decisions, a proportion of which should be verified for accuracy by a second reviewer (i.e., study selection and data extraction)? Therefore I think the conclusions and implications could be broadened to highlight that authors of systematic reviews may often be making incorrect judgements which compromise the reliability of the systematic reviews.

The authors use of the CSR is interesting, but its unclear whether/how many of the Cochrane reviews themselves used the CSR or just the published paper. There's an ongoing issue in RoB with the selection of either "unclear" or "high" risk of bias where a method is not described properly depending on individual reviewer's tendency to give trials the "benefit of the doubt". A more generous judgement is to give "unclear" in this instance but is often because they are relying on the published paper and the reviewer may assume it was described in more detail in the CSR, but never check. This issue could be mentioned in the introduction by way of clarifying whether this issue was encountered or dealt with in this research.

Line 6-8 of page 10 and Table 2, the N/A category isn't clearly explained. Since only reviews with RCTs or those with both RCTs and non-RCTs were included, what kind of trials would be labelled by either the Cochrane reviewer, automated process or a reviewer as "N/A" and why? Could the Cochrane author's labelling of this domain as N/A also be erroneous?

Page 6, "screening for study eligibility" I would prefer to know what proportion of titles/abstracts were verified or if all were verified. Equally what proportion of the calibrations of categorisations were verified by OB?
The English is broadly clear and understandable but there are frequently connecting words missing such as "[The] First author analysed" page 7 and "According to the Cochrane Handbook, [an] additional two categories" page 8.

REQUESTED REVISIONS:

As discussed above, whilst I appreciate the author's attempt to limit their conclusions to those studies (only the one domain and to Cochrane reviews) I think the interpretation needs to be widened. From this example it is clear that systematic reviews are being conducted and published with errors which means that as products which are regarded as trustworthy, high-quality evidence they, and the people that conduct them, need to be scrutinised more.

Note: This reviewer report can be downloaded - see attached pdf file.

Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

Yes

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

Yes

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

No

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

Not relevant to this manuscript

Quality of written English
Please indicate the quality of language in the manuscript:

Needs some language corrections before being published
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