Reviewer’s report

Title: Mapping the nomenclature, methodology and reporting of studies that review methods: A pilot methodological review

Version: 0 Date: 24 Mar 2019

Reviewer: Claire Cameron

Reviewer's report:

This paper outlines a feasibility study for a full scoping review of methodological reviews and investigates the need for guidance for methodological reviews (MRs). This seems like a very interesting and important topic as the results of these MRs are used to inform the many sets of guidelines that exist for health research (http://www.equator-network.org). I believe it is a worthwhile piece of research. Unfortunately, this paper is confusing to read.

I have a number of questions and suggestions - I am more than happy to be corrected if I have misunderstood anything:

1. Could there be a description or a flow chart or something to clarify (maybe provide an example) of how results from the MRs end up in guidelines. It seems to me that you have (1) the original articles (2) these go into an MR and (3) this information feeds into the guideline. This paper is a step between (2) and (3) where you are looking providing a framework for reviewing the MRs. There are places in the manuscript where I cannot tell what part of this process you are referring to. For example, on line 92 you mention 'studies of interest' - are these MRs or the original articles?

2. Many questions are raised for me by Table 1.
   (a) 'Determine the need for guidance'. Is this the MR authors, the original authors or the guideline writers?
   (b) Why have you used a coefficient of variation to look at the number of databases searched? It's not clear to me what its meaning is here.
   (c) Justification and calculation of a samples size. These points read as if you are checking the original papers for this, not the MRs. But are reviews of the original papers part of this review process? I thought it was a review of the MRs.
   (d) 'Is a simple random sample of studies used?'. I don't understand where this fits into this work. I have never seen a review done on a simple random sample of studies - could you explain what this is about and why you would expect to see a simple random sample? Isn't it common to use all the studies in a review - not just a sample of them?

3. There is a measure of sensitivity and specificity - a requirement that both should be >= 70% for the identification of MRs in your searches.
   (a) As far as I can tell there is no establishment of a 'gold standard' with which to compare your results (and, hence, calculate sensitivity and specificity). Usually, this is achieved by a hand search of the literature (over a period shorter than a year, presumably) - so you know which are MRs and which are not. Then you run your search and see what it brings up compared to what you know as an accurate measure. Could you explain your method?
   (b) It appears that you have done your calculations purely on the basis of the outcome of, what seems to be, a very successful search strategy so your sensitivity is 100% and your specificity is 0.99%. Actually, I'm not sure what you have done here - but it looks like you are only using your own search results for these calculations which is not the correct thing to do.
   (c) The overall results seem inconsistent with the individual search terms. Could you explain how
you combined these estimates?
(d) Doing a duplicate screen for the MRs will introduce bias (when you have not done the same for the non-MR studies).

4. There needs to be more of an explanation of Figure 2 (line 199). I do not know what it is describing. Also, I am not sure about the use of a word cloud to describe frequencies (line 195).

5. You have a section called 'Data Abstraction'. Do you mean 'Data Extraction'?

6. Line 140, you list 'abstract and methods sections (if present and kind)'. What does that mean?

7. What does a 'record' mean in this context? You have used that word in line 141, 142 and 144.

8. Why have you calculated kappa using a separate statistical package to the rest of the analysis?

9. It is not clear what Figure 4 adds to the paper. It is pointed to in the text (line 230), but not clearly explained.

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