

Author's response to reviews

Title: Methods for conducting systematic reviews of risk factors in low- and middle-income countries

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FAO: Dr. Asbjørn Hróbjartsson, Associate Editor of BMC Medical Research Methodology

Dear Dr. Asbjørn Hróbjartsson:

Thank you very much for the encouraging response to the submission of our manuscript, "Methods for conducting systematic reviews of risk factors in low- and middle-income countries".

We thank the reviewers for their comments and feel that they have made an important positive contribution to enhancing the article. We provide responses to all the comments (below in bold) and hope the article is now acceptable for publication.

As requested, the changes and additions are marked in track changes in the manuscript.

Respectfully,

Yulia Shenderovich and Joseph Murray

On behalf of Yulia Shenderovich, MPhil; Manuel Eisner, BA, PhD; Christopher Mikton, BA, MPhil, PhD; Frances Gardner, PhD; Jianghong Liu, RN, MS, PhD; Joseph Murray, BA, MPhil, PhD

Responses to the reviewer reports:

Reviewer #1:

The issue of the efficiency of search and citation screening is important, and is a key weakness in the wider use of systematic review. This article discusses methodological issues in systematic reviews aiming to include evidence from low- and middle- income countries. The study focuses on an interesting issue and uses bibliometric data from several article databases. I have some observations that should receive the attention of the authors.

1. Introduction, The findings of this paper are related to identifying relevant studies through main article databases compared to national databases. However, the introduction section covers mainly the literature examining risk factors for conduct problems, crime and violence. Please help your reader and clarify in the introduction section that there are coverage problems in the available medical-publication databases. You may cite articles which have shown that the source journals for Medline have a considerable bias in favor of US and other English language journals (for example, see Nieminen and Isohanni: Lancet 353, 1592, 1999).

This is a valuable clarification, and we have now added this citation to refer to the medical literature more generally.

2. Discussion, page 14, lines 287-290. This is very important point. Consider including a note that further studies also need to study the power of meta-analysis, not only the possible bias introduced by omitting articles published in non-English journals.

We have added as the following text, as suggested: “Further research is required concerning potential impact of the articles from non-English journals on the power of the meta-analyses as well as regarding the potential systematic bias introduced by only searching in English.”

Reviewer #2:

This is an interesting paper - but given the huge amount of work that has gone into this paper - I think it is missing some information which could make it more useful.

1. 15% papers are from non-English publications, which whilst interesting, doesn't tell us how these papers change the results. It would be more useful to know whether they changed the estimates for the risk factors - and hence the importance of capturing these studies. Its not clear whether you have completed the systematic review and whether adding this information would require a minor change or substantially more work.

We have completed the searches and screening of studies for the review but unfortunately the coding and analyses of the eligible studies will still take some time, and it is not possible to include this in this paper. We have added a relevant clarification to the paper (lines 305-307).

2. It would also be interesting to know whether these extra non-english studies improved the coverage of countries represented in the review.

That's an excellent point. We have examined this question and observe that most of the studies from non-English databases have added to the publications from countries already represented in the review, such as China and Brazil (lines 37-42). However, the additional searches led to

poorly covered regions/countries being included, that would otherwise have been excluded – although only a few reports.

3. From my experience, the snowball searches such as ref list checking and contacts have been a crucial aspect of locating to difficult to find papers. Again it would be useful how these 9 papers would have changed the results of the review or not.

As we explain above, unfortunately we are not currently able to draw conclusions about how result change on this basis. However, we have highlighted in the revised paper that most of the studies identified through contacts and reference list checking came from regions and countries already represented in the study pool.

4. The sources of the included studies, not just whether they were English/non-English language would be useful to show in the flow diagram.

The challenge is that a very large share of the studies were identified through more than one database (as the screening was performed after de-duplication of the study titles). However, we did examine all the source databases for each of the non-English-language studies. In the manuscript, lines 231-237 clarify how many papers were uniquely identified by non-English databases and how many were also present in the large international databases.

5. Overall, my concern is that carrying out foreign language sources requires considerable resources, but this paper misses the opportunity to assess whether the effort is worth it.

Thank you for this observation, which points to future work that could be done with this review. Indeed, we think that the added value of the additional searches can be assessed in two ways:

- How many more studies were included (and coverage of additional countries, as you have suggested) – as we have done in the revised manuscript.

- Whether the results (effect sizes, as well as precision) have changed – this we will not be able to do until all the studies are coded and analysed, and this will not be possible for some time.

6. Quality assurance:

It would be helpful to say whether screening was performed in duplicate / if quality checks were built in.

Unfortunately, given the enormous number of studies in this review, and the limited resources available, we were only able to perform the study screening by one author, with consultations with the primary investigator when questions arose. We have added a relevant clarification into the manuscript.

7. Conclusions:

I'd be careful about concluding "Based on our findings, it appears that many studies in the areas of child psychology, psychiatry and criminology in LMICs are reported in English, Chinese, Spanish and Portuguese etc" in the abstract. The review only look at aspects of these areas, so its quite a leap to make to state this claim.

Thank you for pointing this out, we have qualified this statement in the study abstract (line 61) to read "studies of child conduct problems and youth violence".

8. It strikes me that because of the difficulties in screening all results in some foreign language papers means that you could be underestimating the proportion of foreign language papers identified - and this might be worth highlighting.

This is a valuable observation, and we have added a relevant note to the paper (lines 171-172).