Reviewer’s report

Title: Abstract analysis method facilitates filtering low-methodological quality and high-bias risk systematic reviews on psoriasis interventions

Version: 0 Date: 26 Aug 2017

Reviewer: Dawid Pieper

Reviewer’s report:

The authors investigated the possibility whether methodological quality and/or risk of bias is correlated with the reporting Quality of an Abstract. I very much appreciate the idea. However, I have some major concerns with the methods and drawn conclusions in this paper.

Please be more specific about the audience of this article. Do you think your method could be applied in the process of an overview (Review of Reviews)? Or is it more appropriate for busy clinicians when searching quick and dirty for a SR? In the first case, I think the loss of relevant papers might be too high in the light of your decision tree rules. Furthermore, it is not clear what was the basis for your decision tree rules? How did you derive the cut off points (e.g., 6 as shown in figure 4)? If there is not a clear rationale for this why not perform (at least) sensitivity analyses in order to find an optimal cut-off point. Such an analysis would also allow to make the results suitable to more than one audience Group (i.e., systematic reviewers that do not want to miss too much relevant studies and busy clinicians). However thinking of busy clinicians as the target audience of this Analysis I am concerned about the applicability as I think most of clinicians for whom you decision tree rule might be helpful are probably not Aware of PRISMA-A at all. Please discuss more on the applicability of your findings.

Another point of concern is that you seemed to have change your Primary Outcome. According to PROSPERO your Primary Outcome was "To compare AMSTAR and ROBIS tool for the assessment of the quality of systematic reviews published on Psoriasis". I did not found this comparison in your manuscript all. There are also subgroup analyses mentioned in PROSPERO that are not included in the paper. Your Statement "We did not add, omit, or change outcomes after our protocol was published" is misleading, in my opinion.

It is an important Limitation that the authors calculated sum scores for AMSTAR and PRISMA-A. By doing so, each item receives the same weight. This is a practical and understandable choice but it is clear Limitation as both AMSTAR and PRISMA-A were not developed to obtain sum scores. Furthermore, the authors categorized AMSTAR score to come up with high, moderate and low methodological Quality. What are the cut points for this categorization? For ROBIS, I am wondering that there is no SR that was rated to have an unclear risk of bias. This needs some explanation as this seems very unlikely to me. Or did the authors only categorize into high and low risk of bias?

PRISMA-P is mentioned several times in the manuscript. Should this read PRISMA-A? Please check. PRISMA-P is for protocols of SRs.
I am not sure where the first part of the references stem from. The authors cite reference 14, but this is about Depression and not psoriasis.

There might be differences in the results depending on publication year (before vs. after publication of PRISMA-A). A subgroup Analysis must be included for this reason. I was also missing Information on publication years in the manuscript.

Different reviewers applied PRISMA, AMSTAR and ROBIS. Please discuss whether this might have an influence on your results as there is some evidence that such Ratings much be dependent on the reviewers (i.e. they vary much depending on who is going to perform the assessment). Therefore, I think it would be interesting to state the inter-rater reliability for each Instrument (this was also mentioned in the protocol). And I would also be interested to see the results of inter-rater reliability at the item-Level. Consider providing this is supplementary material. I would expect much variability in applying PRISMA-A. This is also supported by comparing the Binga et al. with the Tsou & Treadwell study. The latter showed much higher scores that the Tsou study. The difference outweights the smaller differences in time in the Binga et al. study.

Some of the influencing factors needs more Explanation. For example, what is meant with 8-headings abstract format? What is meant with Cochrane Affiliation? How did you investigate whether the Journal is endorsing PRISMA? Please be aware that checking this in the authors instructions today does not mean whether this was also the case in the year when the manuscript was submitted to the Journal. It would also be worth knowing how many Journals were included in total. Are the IF from one year of from the corresponding year of publication?

The methodological section needs to elaborate on how do you derive your multivariate Analysis. Furthermore, is there Explanation you could think of why academic source of finding seems to be an important predictor?

In the implications of results section it is stated "the final classification determined in both decision trees is congruent with the idea that methodological quality explains only part of the risk bias of SRs", while you conclude that "that the methodological quality and the risk of bias of SRs may be captured by analysing the quality and completeness of abstract reporting, and that by applying our decision tree models, the review-filtering process may be improved through rapid abstract Analysis". This seems somehow contradictory to me. Maybe I am missing something, but I cannot follow this conclusion, while I agree with the first sentence (... that it can only be explained in part).

In the same context, please also check your conclusions section. The conclusion seems to be too strong in the light of your results. Consider diluting.

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

No

**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.

I am able to assess the statistics

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

Needs some language corrections before being published

Declaration of competing interests
Please complete a declaration of competing interests, considering the following questions:

1. Have you in the past five years received reimbursements, fees, funding, or salary from an organisation that may in any way gain or lose financially from the publication of this manuscript, either now or in the future?

2. Do you hold any stocks or shares in an organisation that may in any way gain or lose financially from the publication of this manuscript, either now or in the future?

3. Do you hold or are you currently applying for any patents relating to the content of the manuscript?

4. Have you received reimbursements, fees, funding, or salary from an organization that holds or has applied for patents relating to the content of the manuscript?

5. Do you have any other financial competing interests?

6. Do you have any non-financial competing interests in relation to this paper?

If you can answer no to all of the above, write 'I declare that I have no competing interests' below. If your reply is yes to any, please give details below.

I declare that I have no competing interests
I agree to the open peer review policy of the journal. I understand that my name will be included on my report to the authors and, if the manuscript is accepted for publication, my named report including any attachments I upload will be posted on the website along with the authors' responses. I agree for my report to be made available under an Open Access Creative Commons CC-BY license (http://creativecommons.org/licenses/by/4.0/). I understand that any comments which I do not wish to be included in my named report can be included as confidential comments to the editors, which will not be published.

I agree to the open peer review policy of the journal