Reviewer's report

Title: Impact of peer review on discussion of study limitations and strength of claims in randomised trial reports: a before and after study

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Reviewer: Toby Lasserson

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Very interesting and important piece of work which resonates with my own experience as an editor. It is a paper that opens up a new avenue of research into peer review, and whilst I have some concerns over the reliability of some of the results, the findings are indicative of a real effect.

I agree with the authors that the main finding of note is that the number of limitation sentences increased. However, I do question the validity of the hedging scores: They capture the right terms, but I have a concern that the hedging tool does not differentiate hedging around limitations and hedging around other appropriate description of the research study. To explore this a bit more, I read through the discussion section to see where hedging was used. I could find uses of 'may', 'could' and 'suggest' as hedging terms to describe features of the study that were listed as strengths. Perhaps hedging is prevalent in responsibly reported discussions, and not necessarily a marker that limitations are being acknowledged? In this regard the findings for the weighted and unweighted analysis are unsurprising, as it is possible that people are using terms such as 'appear', 'may' or 'possibly' throughout the discussion, and not just to highlight a limitation. I also suspect that researchers use different hedging terms as a way of maintaining reader interest in their paper. Under this assumption people end up using different terms interchangeably with the aim of bringing linguistic variety to their manuscript. These terms may well score differently, yet this does not reflect a conscious, preferential selection of terms that peer reviewers will notice and seek to change. In reading this paper I've come to the realisation that I've written different words to express similar probabilities but never thought too much about how different their meanings were from each other ('possibly', 'probably', 'may be', 'likely'). In the context of this paper and the analysis this limitation is important, but in the broader context of editorial and peer review research, I am less worried by how the authors have measured hedging and more interested in where future research efforts could be directed.
The only real comments I have really are about the implications for research which could be made more directive. To what extent does the author team agree with these research recommendations that could be added to the article?:

1. A study comparing changes to limitations in the full text and abstract reporting. Summary versions are often where people remove nuance from reporting findings, so does a limitations-rich discussion section reduce spin in the conclusions and in the abstract?

2. A qualitative study based on interviews with editors and researchers to understand better what their behaviour is around limitations reporting and editing.

3. An assessment of how reporting guidelines stress the importance of limitations & whether there is a good understanding of what these are in the context of RCTs (and systematic reviews).

I would like to see the research in this area rely less on applying automatic techniques on large datasets and instead use judgment made by researchers themselves on a smaller random sample of manuscripts. As noted above I do not have strong faith in the hedging scores, but I do think that the creative approach that the authors took here has generated an interesting and useful aspect of peer review that they should now study further.

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