Reviewer’s report

Title: How to spot a statistical problem: advice for a non-statistical reviewer

Version: 0 Date: 14 Aug 2015

Reviewer: Jaime Peters

Reviewer's report:

This paper will be very useful to reviewers, and I agree that an opting-out of statistical review might be a better policy. The authors present clarity on what to look out for, yet make it clear that the existence of these indicators doesn't necessarily mean there is a problem with the statistical aspects of the paper. I just have a few comments/suggestions:

1. Although some of the hints in the manuscript would seem appropriate for any study design, a number refer mainly to statistical aspects of primary studies. I wonder whether this could be made clearer in the Introduction, for instance (using my own area as an example) some aspects relevant to meta-analysis aren't really covered by the manuscript.

2. There's a definite link with what is suggested in the manuscript and the purpose of reporting guidelines. Clearly, the audience here is reviewers, but perhaps there is an opportunity for highlighting the usefulness of reporting guidelines in the Introduction, especially as the first set of hints relate to "Is there sufficient detail to review the statistical aspects?"

3. Line 54-56, last page before Conclusions: Could the sentence be simplify, perhaps to "Indicators for the validity of statistical methods may also be useful to statistical reviewers"?

4. Should "mistakes" in the abstract (line 15) be replaced by "issues"? This currently sounds as though you're asking reviewers to identify the mistakes, when actually it's indicators that there might be a mistake that are of interest.

5. The first paragraph after the list of pointers (line 37) "It is not uncommon...". In this paragraph it is stated that the reviewer should be open to the use of other statistical methods that they haven't used, as long as these other methods are valid. This implies that the reviewer would know about the validity of statistical methods that they haven't use, and I'm not sure how often that might be the case if this comment is specifically for non-statistical reviewers.
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