Reviewer’s report

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

Version: 0 Date: 23 Jul 2015

Reviewer: Andrea Tricco

Reviewer's report:

Thank you for allowing me the opportunity to review the paper on statistical peer review. While the paper will be helpful to junior peer reviewers, there were some suggested improvements to the wording of the text, as follows:

Abstract: sentence beginning with "we consider this policy,.." delete the "a manuscript is evaluated by a statistician reviewer. Replace last 2 sentences with: "Reviewers are required to ensure that the manuscript is methodologically sound, clear, and concise. Within that context, they are expected to provide constructive feedback and opinion on the statistical design, analysis, presentation, and interpretation. If reviewers lack the appropriate background to evaluate any of the manuscript statistical aspects, they are encouraged to submit it for expert statistical review."

Introduction:

Line 9 delete the world necessarily between therefore and become

Line 14 add a period after the word necessary. Begin the next sentence with "For"

Line 17 replace have with has

Line 22, delete "it is essential for", delete "to be seen by" and replace with "should be reviewed by an expert statistician" and delete the word "adequately" and the end of the sentence "themselves in their report. Insert "manuscript's" after the "the" and in front of "statistics"

Line 29 - delete the words However, major, and insert "and they" instead of a period

Line 34 insert "in this area" after "formally qualified" and delete the rest of the sentence

Line 37 revise to : "subject reviewers may be competent in a specific range of statistical methods applicable to their area of expertise, but may not necessarily be aware of more general statistical issues or recent methodological developments and best practices. The subject reviewer the subject reviewer may be able to spot the most egregious errors but are likely to miss subtle inappropriate statistic

Line 53 - delete "some pointers"
Line 2-4 - delete the first sentence.

Line 10-11, delete "more broadly to other aspects tht the statistical expert may have a helpful view on" and replace with "but to areas such as"

Line 18 - delete the word however

Line 19 - delete the word "these"

Line 24 - delete the sentence beginning "A guiding principle should be,.."

Line 31 - sentence should read "Rather, the subject reviewer should consider expert consultation review if they are able to confirm that there are no statistical problems or issues with design, presentation of results and interpretation"

Line 36 - delete the sentence that begins "absence of evidence"

Line 44 - revise to "since statistical issues arise from time-to-time, consider some of the following indicators.

Line 56 - delete the word likely

Line 7 - replace "with no" with "without"

Line 37 - replace with "Although there might be alternative approaches to statistical analysis or presentation, this does not necessarily imply the author's methods are invalid. What is important is that the methods chosen are appropriate for the research question and have been done correctly. BMC Medicine allows comments under "discretionary revisions" where such observations can be made.

Line 45 - delete the first sentence

Begin with: "Statistical methods are many and varied, particularly in a general medical journal such as BMC Med. Thus reviewers who are not familiar with the statistical approach utilized in a manuscript or not confident in their ability to answer the validity of the statistics are encouraged to seek the assistance of an expert statistical reviewer."

Conclusion:

Reviewers are required to ensure that the manuscript is methodologically sound, clear, and concise. Within that context, they are expected to provide constructive feedback and opinion on the statistical design, analysis, presentation, and interpretation. If reviewers lack the appropriate background to evaluate any of the manuscript statistical aspects, they are encouraged to submit it for expert statistical review.
Questions from the editor:

Have the recommendations been presented and explained in a way that junior reviewers can fully understand and implement these? No, there were modifications to the text to increase the understanding and implementation.

How useful will these guidelines be to an inexperienced reviewer? After the suggested changes, the guidelines will likely be of use.

Are any additional features required to ensure clarity (e.g., Tables, checklists, etc)? None that I can think of.

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

Not suitable for publication unless extensively edited.

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

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