Reviewer's report

Title: Comparison of logistic-regression based methods for simple mediation analysis with a dichotomous outcome variable

Version: 0 Date: 29 Oct 2018

Reviewer: Reviewer 2

Reviewer's report:

PEER REVIEWER ASSESSMENTS:

OBJECTIVE - Full research articles: is there a clear objective that addresses a testable research question(s) (brief or other article types: is there a clear objective)?

Yes - there is a clear objective

DESIGN - Is the current approach (including controls and analysis protocols) appropriate for the objective?

Yes - the approach is appropriate

EXECUTION - Are the experiments and analyses performed with technical rigor to allow confidence in the results?

Yes - experiments and analyses were performed appropriately

INTERPRETATION - Is the current interpretation/discussion of the results reasonable and not overstated?

Yes - the author's interpretation is reasonable

OVERALL MANUSCRIPT POTENTIAL - Could an appropriately REVISED version of this work represent a technically sound contribution?

Probably - with minor revisions

PEER REVIEWER COMMENTS:

GENERAL COMMENTS: The study design including simulation setting, overall analysis, and interpretation were appropriate. For the introduction of the mediation models, the equation
information may be over-provided to the readers of statistician and qualitative fields. To other audiences, it may be needed.

ADDITIONAL REQUESTS/SUGGESTIONS:

1. The authors stated that "In general, the crude indirect effect estimate ab and the crude proportion mediated \(ab/(ab+c')\) seem to perform well in all situations. A similar result was observed in a previous study comparing crude estimates of the indirect effect and proportion mediated with estimates based on the standardized logistic solution [2]", since the reference paper had a similar result as this one, the authors need to provide information on why the referenced authors still proposed standardized logistic resolution?

2. The paper compared three standardized approaches. Can the authors provide some comments on the simulations of these three standardization, such as what the simulations settings, the reason that the standardization based on?

Note: This reviewer report can be downloaded - see attached pdf file.

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

Yes

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.

Yes

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.

Not relevant to this manuscript

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

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

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