Author’s response to reviews

Title: Can statistic adjustment of OR minimize the potential confounding bias for meta-analysis of case-control study: A secondary data analysis

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Responses to comments

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Editor

Thank you very much for submitting your manuscript to BMC Medical Research Methodology. Peer review of your manuscript is now complete. While the first reviewer is satisfied with the paper, the second referee has raised substantial criticisms. Therefore, my decision is “Major Revision”. Please address the second reviewer’s concerns especially the comments on insufficient discussions of the drawback of the methodology and inclusion of simulation-based comparisons. The manuscript should be edited by a native English speaker or professional language editing service.

BMC Medical Research Methodology operates a policy of open peer review, which means that you will be able to see the names of the reviewers who provided the reports via the online peer review system. We encourage you to also view the reports there, via the action links on the left-hand side of the page, to see the names of the reviewers.
RESPONSE: We sincerely thank both of the reviewers and editor for the positive and constructive comments and suggestions, which are highly beneficial for the improvement of our manuscript. We have revised our paper according to the comments and we have provided a clearly point-by-point response, which compiled with all the reviewers’ suggestions. We have invited Dr. Ali Abbas, a native English Speaker to check the English language and grammar.

Reviewer #1
Comments to the Author

I believe it is a nice piece of work, and it is worth publishing.

RESPONSE: We sincerely thank the reviewer for the approval and support to our work. It is definitely an inspiring encouragement for us.

Reviewer #2
Comments to the Author

1. It’s hard to draw conclusion just from the case of passive smoking and breast cancer and generalize to all the studies using meta-analysis. The authors might want to discuss more on the drawback of the methodology and consider revise the study to address issues for a broader spectrum.

RESPONSE: We sincerely thank the reviewer for all the suggestions on the present study. Yes, the generalization of this study is limited only based on a case of passive smoking and breast cancer. We rephrase the Discussion to explain the limitations, especially on the case with weak or medium association, which has been marked by red font. Seen in page 6 and 11-14.

2. In the author’s analysis, it’s almost impossible to know exactly how the confounding factors biased each individual case-control study, and what is the true underlying effect size. Without that it’s hard to draw conclusions. Simulation based methodology might address this drawback.

RESPONSE: Yes, unknown true effect size limits us to make a conclusive strategy on how to better deal with the potential confounding in meta-analysis of case-control study introduced by the heterogeneity of confounding adjustment strategy in original study. Thank you for your constructive suggestion on further study by simulating based methodology. Seen in page 14.
We sincerely thank the reviewers for the valuable feedback and editor for the kindly help. We are in-debt with gratitude!

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