Author’s response to reviews

Title: Biomarker Screening for Antenatal Depression in Women Who Underwent Caesarean Section: A Matched Observational Study with Plasma Lipidomics

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Author’s response to reviews:

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BMC Psychiatry

Dear editor

I along with my co-authors would like to re-submit the manuscript entitled “Biomarker Screening for Antenatal Depression in Women Who Underwent Caesarean Section: A Matched Observational Study with Plasma Lipidomics” to BMC Psychiatry. The previous manuscript ID is BPSY-D-18-00982R1.

Thank you for the opportunity to respond to the reviewer/editorial comments and queries again. The manuscript has been carefully rechecked, and appropriate changes have been made in accordance with the reviewer/editorial comments and queries which marked by red font.

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Reviewer 2 (Reviewer 2): PEER REVIEWER ASSESSMENTS:

OBJECTIVE - Full research articles: is there a clear objective that addresses one or several testable research questions? (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 sufficient technical rigor to allow confidence in the results?
Yes - experiments and analyses were performed appropriately

STATISTICS - Is the use of statistics in the manuscript appropriate?
Yes - appropriate statistical analyses have been used in the study

INTERPRETATION - Is the current interpretation/discussion of the results reasonable and not overstated?
No - there are minor issues

OVERALL MANUSCRIPT POTENTIAL - Has the author addressed your concerns sufficiently for you to now recommend the work as a technically sound contribution? If not, can further revisions be made to make the work technically sound?
Probably - with minor revisions

PEER REVIEWER COMMENTS:

GENERAL COMMENTS: Authors have done a good job addressing prior reviewer issues. There remain a few additional issues that will strengthen the manuscript.
See notes below about the number of false positives and including the sensitivity/specificity analysis in the text.
Response: Sincerely thanks for the reviewer’s patience, thoughtful comments and suggestions regarding the manuscript. We have further revised the manuscript according to the reviewer’s suggestion.

REQUESTED REVISIONS:
The sensitivity and specificity data shown in the response to authors needs to be incorporated in the manuscript.
Response: Thanks for the reviewer’s suggestion. We have added the information regarding sensitivity, specificity and accuracy etc. in revised manuscripts. (Result section, page 21, lines 302-306).

The implications of the large rate of false positive needs to be discussed better, e.g. relationship to the other clinical predictors and how this might be useful in follow up for women screening positive using the biomarker.
Response: Thanks for the reviewer’s suggestion, which can make us better explain this part of results to readers. In the study, we identified the plasma levels of CS as a potential independent biomarker for
screening AD in primary care. Although the false-positive rate of identified biomarker was relative high, according to a meta-analysis, a multistep assessment model of each suspected case applied to routine clinical examinations can effectively manage a high false-positive rate and improve the overall accuracy of the clinician[Lancet. 2009; 374: 609-19; PMID: 19640579]. So, plasma levels of CS may be an alternative screening method for identification of suspected case compared to EPDS-10, however, it remains necessary to perform re-assessment by professional physicians for diagnosis of antenatal depression. This is a similar method of multistep assessment process applied to routine clinical examinations which are recommended by one previous study.[Lancet. 2009; 374: 609-19; PMID: 19640579].

We have added the related descriptions regarding this part of discussion in the revision manuscript. (Page 28-29, lines 423-426).

Also a couple of the tables need work. Table 1 seems to show percentages for the total sample, not within group for some of the categorical variables which is not useful. Also Table 4 needs to identify in the title the dependent variable.

Response: Thanks for the reviewer’s notification regarding the tables. We have revised the relevant data presentation in Table 1 according to the reviewer's suggestion. (Page 18) And we have added the relevant information of Table 4 according to the reviewer's suggestion. (Page 23)

We thank you and the reviewers again for your thoughtful suggestions and insights. We hope that the revised manuscript is now suitable for publication in your journal.

I look forward to your reply.

Sincerely,

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