Author's response to reviews

Title: Interactions among alcohol dependence, perinatal common mental disorders and violence in couples in rural Viet Nam: a cross-sectional study using Structural Equation Modeling

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Author's response to reviews: see over
Dear Editorial Board

MS: 5856317037362243

Title: “Interactions among alcohol dependence, perinatal common mental disorders and violence in couples in rural Viet Nam: a cross-sectional study using Structural Equation Modeling”

Thank you for the careful review of this manuscript and suggestions to improve it. We have made the following revisions and submit a copy of the revised manuscript.

**Minor compulsory revisions:**

**Abstract**

1. *Background:* Is the aim of the study described in background goes with the title of the study? Do authors interested to see the interaction of Alcohol dependency through domestic violence? (Reviewer MG)

   We have revised the title of the manuscript to reflect the aim, namely to examine the interactions among alcohol dependence and perinatal common mental disorders in couples as mediated by intimate partner violence. It now reads “Interactions among alcohol dependence, perinatal common mental disorders and violence in couples in rural Viet Nam: a cross-sectional study using Structural Equation Modeling”.

2. *Line 5-6 it is stated that* "Domestic violence increases risk of PCMDs in both women and men." *This statement is not intuitive to me, and suggests a simple oneway pattern of causality. (Reviewer MH)*

   We have changed the sentence in the Abstract to read:
   
   “Domestic violence is associated with PCMDs in both women and men”

3. *Methods:* is it possible to include the study period? Sampling techniques used to get the study subjects? How the SEM interpretation was made? (Reviewer MG)

   Some details on sampling have been provided in the Methods section of the Abstract. Details of the SEM interpretation have been added to the Methods section of in the main manuscript. Because there is a word limitation for the Abstract, we are unable to add more information to it.
4. Results: It would have been better if the authors include results of structural equation modeling output (either the model fitness indices or standard regression coefficients) showing how much the SEM is better to explore the interactions of determinants (AD, Partner Violence) to influence PCMD? in addition to the multiple logistic regression. (Reviewer MG)

The results shown in the Abstract about associations amongst variables of interest were the results of Structural Equation Modeling. We have presented the coefficient which was converted into probability in the Abstract and believe that these will be useful to most readers. Structural Equation Modeling outputs including coefficients and the model fitness indices are already listed in the Results.

5. Line 22 in the abstract seems to suggest polygamy ("... had at least one partner"), however in the text does not describe polygamy, and I have never heard of polygamy in Vietnam. Please check. Maybe it should say "In 41.2% of couples, at least one partner..." or something similar? (Reviewer MH)

We intended “at least one partner” to mean at least one member of the couple (the husband and/or the wife). We have changed that sentence to make it clearer in meaning. It reads:

“41.2% (95% CI: 35.1-47.8) of couples at least one member had a PCMD”

Introduction

6. The research problem was well defined but it could have been better if the authors describe in one sentence the use of SEM over multiple logistic regressions in investigating the co morbidity of the AD and PCMD. (Reviewer MG)

We have added a sentence at the end of the Introduction, justifying the choice of SEM rather than regression:

“This study used Structural Equation Modeling to examine direct and indirect relationships amongst variables of interest simultaneously. This cannot be achieved by conventional multiple linear or logistic regression analyses because those techniques are only able to take one dependent variable at a time into account”

Methods

7. The Intimate bond measure - please provide a reference to the Vietnamese validation, even if it is only a technical report. And please provide some justification for using this measure. (Reviewer MH)

We have added a reference for the Vietnamese validation of IBM.

We have elaborated our justification for the use of this instrument to read:
We used the 24-item Intimate Bond Measure [25] – Vietnam to assess quality of intimate partner relationship. It yields two subscales, Control and Care. The “Care” factor reflected perceived sensitivity, warmth, emotional responsiveness, trust, physical and capacity for
companionship. The other dimension, labelled "Control" reflected perceived coerciveness, exertion of power or dominance and extent of criticism. Scores on each subscale range from 0 to 36, with higher scores on the Control subscale indicating less optimal and on the Care subscale more optimal behaviours towards the intimate partner. We have shown that this Intimate Bond Measure – Vietnam is meaningful and comprehensible to Vietnamese men and women [26].

8. The SCID interview mentioned should be referenced to as the "SCID-I" since only axis I disorders were mentioned. (Reviewer MH)
   We have made this correction.

9. Authors are recommended to include how each of the study subjects was chosen from eligible population? Is there any inclusion and exclusion criteria? (Reviewer MG)
   We have provided information about the inclusion criteria under the sub-heading Participants:
   “All of the women in the selected communes who were at least 28 weeks pregnant or were mothers of 4 – 6 week old babies in the recruitment period and the husbands of the women who consented were eligible and invited to participate”.
   There were no exclusion criteria.

10. Authors are also expected to clearly show how the sample size was calculated? How did they manage the design effect of multi stage sampling techniques the used (i.e there is two stage sampling). (Reviewer MG)
    We have added the sample size calculation and justification in the sub-section headed Participants:
    “The sample size of this study was calculated to estimate the prevalence of PCMD in women and their husbands. The required sample size was equal to or more than 200 couples with the assumptions that prevalence of PCMD was 30% in women and 15% in men and a precision of 6.5%. That sample size allows including at least 20 variables into a statistical model”.
    The recruitment rate was high (93% of eligible women). Therefore, no further adjustment to the sample size calculation was required for the analyses.

Results and discussion
In Limitation of the study

11. Can the authors describe us the psychometric properties (validity and reliabilities) of their instruments they used from their data either as strength and or limitation of the study? Sometimes reader can make their own conclusion seeing the validity of instruments before going on board to the finding of the study (Reviewer MG)
    We have added a statement in Discussion. It says:
    “Another limitation was that one measure used in this study the CAGE questionnaire was not validated for local use. As is often the case in resource-constrained settings, validated tools were not always available. The tools we selected have been used and validated in Viet Nam and provided interpretable data in previous studies.”
12. How much proportion of the husband did not participate in the study? Is there any possibility of non response bias? I mean don’t we expect that those did not participate in the study can have “special characteristics” in terms of intimate partner experiences and or alcohol dependencies? (Reviewer MG)

We have acknowledged this potential limitation in the Discussion. The high percentage of husbands who were not recruited might have had an effect on the findings in either direction. However, as there were no significant differences between the socio-demographic characteristics and mental health status of the wives whose partners did or did not participate we believe that any effects would be minimal and unlikely to affect the conclusions.

Tables
13. Table 3 is called "Full structural equation model to predict perinatal common mental disorders in 230 men in Viet Nam". Yet, in the text it appears that in some places you avoid the term perinatal about the husbands. Please resolve this inconsistency. (Reviewer MH)

We have added the term 'prenatal' before 'husbands' in the text in order to make it consistent.

Discretionary revisions:
14. Please consider adding a figure 2 similar to figure 1 to describe the final model for predicting mental disorders in the men. (Reviewer MH)

We did not add another figure for data in the men because there were no significant relationships to report. However, readers can find the details of these analyses in Table 3.

15. SD can be described as mean(±SD) rather than = sign
Both ways are used commonly in the literature. However we have retained the “SD=” description in this manuscript as we believe that is the most widely accepted a correct expression. If required by the journal this could be changed.

We look forward to hearing from you about whether this paper is now suitable for publication in the BMC Psychiatry.

Yours sincerely,

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