Author’s response to reviews

Title: Early maladaptive schemas as predictors of maternal bonding to the unborn child

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Version: 1 Date: 27 Feb 2019

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February 27, 2019

Resubmission of manuscript Early maladaptive schemas as predictors of maternal bonding to the unborn child, PSYO-D-18-00135

Dr. Rebecca Helen Larke
BMC Psychology
https://bmcpsychology.biomedcentral.com/

Dear Dr. Larke

Thank you for the opportunity to revise our manuscript, “Early maladaptive schemas as predictors of maternal bonding to the unborn child”. We appreciate the careful review and constructive suggestions. It is our belief that the manuscript is substantially improved after making the suggested edits.

Following this letter are the editor and reviewer comments with our response, including how and where the text was modified. Changes made in the text are marked in yellow. The revision has been done in collaboration with the coauthors, and the final version of the revision has been approved by all coauthors.

Sincerely
The submitted manuscript PSYO-D-18-00135 possess many strengths in outlining a relationship between EMSs and bonding to the fetus, and examining a mediating role of maternal depression. Over all, this work is of significant value, and will add to the literature on maternal-fetus bonding. However, there are several areas in which this manuscript could be strengthened with revision.

- The introduction would benefit with a more targeted approach, and would be strengthened by including relevant information on attachment styles and how these relate to EMS and maternal/fetal bonding.

Reply: The introduction is now divided into subsections, and we have included relevant information on the relationship of attachment and EMS to maternal-fetal bonding. Although the length of the introduction has slightly increased, we believe the introduction is stronger and more targeted than before.

- I encourage that the authors revise the methodology to control for confounding variables in the analysis, which the authors describe in the introduction, and provide descriptive information on in the results section.

Reply: The hierarchical regression analysis and the mediation analysis are now controlled for almost all the variables on which we provide descriptive information in the results section. The variables about wanting pregnancy and marital status contain little variability in scores and were therefore excluded as controlled variables. The variables for which we controlled are maternal age, parenting experience, maternal education, gross annual household income, mental health help seeking, previous experience with being depressed and previous anhedonia.

- Furthermore, the relationship between EMS subscales should be considered, and if highly correlated, the analysis should be altered accordingly.

Reply: To make the manuscript and results more readable (comment from reviewer 2), we re-organized the eighteen EMSs into four EMS domains. Indicators of multicollinearity (VIF and tolerance) for the four EMS domains did not indicate serious concerns. Therefore, we decided to retain the four EMS domains in the multiple regression analysis. We have now included a sentence about multicollinearity in the Results section and in our discussion of limitations, p. 14 and 20.
The discussion section provides context for the results, but would benefit from minor additions that reflect on research and/or clinical applications of the findings.

Reply: We have now further discussed the research and clinical applications of the findings, p. 18-19.

Reviewer reports:

Monica Pellerone (Reviewer 1): Thank you for the opportunity to review this manuscript.

This study investigates the associations between EMSs and the quality of the bonding to the fetus in 165 pregnant women. The results suggest that: 1) All EMSs except self-sacrifice correlated significantly and negatively with the MAAS quality of mother-fetus bonding scale. 2) On the other hand, only the emoziona deprivation, defectiveness/shame, subjugation, and emotional inhibition schemas correlated significantly with the MAAS preoccupation with the fetus scale.

The topic seems relevant for the Journal. The introduction, hypotheses, results and discussion are generally relevant. However, many amendments are needed, and they are listed below.

Reply: We sincerely thank the reviewer for critically reading this manuscript and for the comments, which have helped improve the manuscript.

- There is need for professional English language examination of this manuscript

Reply: The revised manuscript has undergone language editing by American Journal Experts.

Abstract

The abstract is written in a comprehensive way.

- The abstract might contain the participation rate (%) in this study, and information concerning the point in time (year(s)) when the study was conducted.

Reply: Information concerning participation rates and the recruitment period for the study has been added to the abstract. Information concerning participation rates is also included in the Methods section, p. 9.

"INTRODUCTION" Section

- The introduction is generally relevant, although I suggest You to examine the recent literature, for example:


Reply: Thank you for suggesting these articles, which we found very interesting. We have now included most of the papers in our manuscript. However, we believe that it is beyond the scope of the current investigation to include a discussion of alexithymia.

- I suggest to introduce the relationship between parenting and alexithymia, above all during young adult age. You to examine the recent literature, for example:

- The introduction is excessively long and could be confusing. The introduction does not consistently follow a logical congruence. This section needs a subdivision in subparagraphs, because only one paragraph makes the reading and the understanding of the work confusing. Therefore it is advisable to divide "Introduction" section into two sub-sections:

  1) Introduction

  2) Objectives and Hypotheses

Reply: Thank you for the good suggestions concerning subparagraphs. We have followed your suggestion with regard to dividing the Introduction into sections, p. 4-8.

"DISCUSSION" Section

- I suggest You to include practical implications of the study both research and clinical setting.
Reply: We have now added more on implications in the Discussion, p. 18-19.

Amanda Cooklin (Reviewer 2): PSYO_D_18_00135

Reply: We wish to express our appreciation for the reviewer’s in-depth comments and suggestions. To the best of our ability, we have tried to accommodate the suggestions, which we believe have improved the manuscript.

Thank you for the opportunity to review this paper.

The authors use data from a cohort of parents recruited in pregnancy and followed until 6 months postpartum. This study focuses on data collected in pregnancy, and investigates the relationship between maternal bonding to the fetus and early maladaptive schemas (relationship / attachment styles). The authors also investigate whether this relationship is mediated by maternal depression.

This is an interesting topic of study and the authors have rich data to bring to this. However, the analyses are simple univariate, without any controls for other confounders relevant here.

The main exposure here - EMS - is a scale which comprises of 18 different schemas. This is unwieldy and makes it difficult to make sense of the various correlations presented with the main outcome (two subscales of the MAAS), attachment to developing fetus.

• I suggest some more data reduction / handling techniques would make the paper more 'digestible' and support the presentation of key findings more cleanly.

Reply: The research literature usually uses the EMSs or groups them into domains. We have now organized the eighteen EMSs into four EMS domains according to the current schema list (Bach, Lockwood & Young, 2018). We believe this will improve the readability of the Results in particular and the manuscript in general.


• Theoretically, is it anticipated that each of the EMS would have an equal negative relationship with maternal-fetal bonding - both subscales? It appears not from results reported here, so can these schemas be condensed, or grouped in some way? A theoretical approach to underpin some further analyses might help draw out the main relationships here.
Reply: Based on the new organization of the EMSs into EMS domains, we anticipated (according to schema theory) that the domain of Disconnection and Rejection would have the largest negative relationship with maternal-fetal bonding. Furthermore, we predicted that EMS domains would relate more to the quality of bonding than mothers’ level of preoccupation with the fetus would. Accordingly, we have now formulated this as a hypothesis, p. 8.

- The rationale is interesting - although lacks a little grounding in why EMS should be in focus (other than there is a gap) - some more around attachment styles and how they might then influence maternal-fetal attachment would be welcome to build a stronger rationale.

Reply: We have now incorporated attachment and its relationship to bonding and EMSs in the Introduction, p. 4-8. We believe this has improved the rationale for studying the relationship between EMSs and maternal bonding.

- The factors associated with MAAS p4 Background - please provide the direction of these relationships so the reader can have a sense of how MAAS is shaped by social circumstances.

Reply: We have now tried to provide the directions of correlation for the factors associated with maternal-fetal bonding. Due to difficulties in extracting the directional relationships between the variables from the meta-analysis that we originally referenced, we replaced it with two review articles.

- More detail about recruitment and sampling is required - who did and did not agree to participate in the study?

Reply: Thank you for this comment. Unfortunately, we do not have much information regarding those who did not agree to participate in the study. We assume that our sample is a relatively resource-rich group given the demographic information. We have included in the abstract and Methods section (p. 9) some additional information regarding the number of pregnant women agreeing to be contacted early in the recruitment process compared to the number who were ultimately included in the study. In addition, in our discussion of limitations (p. 19-20), we have further explored the possibility that our sample might not be representative of the general population.

- How were partners recruited?

Reply: We have now added a sentence to the manuscript about the recruitment of partners, p. 9.
What biases do each of these recruitment decisions bring to the sample - and what are the implications for the results. The sample are quite socio-economically advantaged, presumably this is protective (for EMS, MAAS) so this needs to be addressed.

Reply: We have now discussed this in the “Strengths and limitations” subsection, p. 19-20.

The multivariate analyses, if I have understood correctly, model all the EMS subscales - together - as 'predictors' of the two MAAS subscales. Some have lower than acceptable Alpha - why were these retained?

Reply: The organization of the EMSs into domains resolves this issue by showing acceptable alpha values for all domains (Table 3).

The authors present the correlations between EMS and main study outcomes (EPDS, MAAS etc) - but not with eachother, presumably the EMS indices are highly correlated? Is it then appropriate to use them together in a regression?

Reply: Indicators of multicollinearity (VIF and tolerance) for the four schema domains did not indicate serious concerns. Therefore, we have decided to retain the four schema domains in the multiple regression analysis. We have now included a sentence about multicollinearity in the Results section and in our discussion of limitations, p. 14 and 20.

Further - and importantly - why are analyses not controlled for other potential confounders here - the authors have these data (e.g. demographic, prior history, first parent etc..) so it is puzzling that this has been omitted.

Reply: We have now controlled for potential confounders in the multiple regression analysis and the mediation analysis. We tried to include all variables describing the sample, Table 2. Unfortunately, the variables of pregnancy wanted and marital status were removed by SPSS. These variables contain little variability in scores, which may explain their exclusion. All other potential confounders were retained: maternal age, parenting experience (first parent vs. one or more previous children), maternal education, gross annual household income, mental health help seeking, previous experience with being depressed and previous anhedonia, p. 12, 14-16, and Table 4 and 5.

Due to the 'modeling together' of the EMS - it is likely that some other notable relationships are masked, or lost - back to my earlier point about some consideration in handling the exposure more carefully.

Reply: We have now included mediation analysis for every EMS domain showing a significant correlation with maternal bonding. This is in contrast to our previous practice of running
mediation analysis only on the EMSs that are significant in the regression analysis. We believe this new approach will help us detect other notable relationships, p. 15-16.