Reviewer's report

Title: Intimate Partner Abuse Before and During Pregnancy as Risk Factors for Postpartum Mental Health Problems

Version: 1 Date: 10 November 2013

Reviewer: Jodie Valpied

Reviewer's report:

GENERAL COMMENTS...

This paper focuses on a very important topic, with Intimate Partner Abuse (IPA) being a leading cause of mental and physical health issues among women of child-bearing age, including during pregnancy. The paper has potential due to its focus on types of IPA (rather than just severity of IPA) and types of mental health problems (rather than just one problem), but needs major revision in order to reach this potential. The paper as a whole tends to lack focus, causing some interesting findings to become lost within an array of less appropriate analyses. Specifically, the paper should focus on the GLM analyses performed, describing and reporting these GLM analyses in much more detail. It is recommended that the authors also consider just focusing on IPA during pregnancy, as, according to the methods section, the ‘before pregnancy’ IPA data was actually collected post-partum in the same interview as the ‘during pregnancy’ data, creating potential recall issues which have not been addressed.

Please find below specific comments for consideration.

MAJOR COMPULSORY REVISIONS...

‘BEFORE PREGNANCY’ COMPARISONS:

The data collection methods make the comparisons of IPA (measured by the Conflict Tactics Scale; CTS-2) before pregnancy and during pregnancy problematic for a number of reasons:

- Rather than collecting ‘before pregnancy’ data early on in the pregnancy, and then ‘during pregnancy’ data at the end of pregnancy, all data was collected post-partum in the one interview. It would be extremely difficult for participants to accurately recall and separate which events happened before and which during pregnancy using this method. Also, any discrepancy between time reference during pregnancy and time reference before pregnancy would influence results (this is not detailed in the methods section, so it’s not clear whether this was addressed). These issues limit the extent to which CTS responses for pre-pregnancy and during pregnancy can be meaningfully compared.

- CTS responses for before and during pregnancy are strongly correlated in this data set (with the exception of physical assault, although this relationship was
still highly significant). This is to be expected for two reasons: Firstly, IPA during pregnancy has already been shown to be correlated with IPA before pregnancy; Secondly, participants completed data for both time-periods in the one sitting... this would increase correlation between data for the two data-periods.

Hence the ‘before pregnancy’ data (actually collected after birth) isn’t really adding anything to the analysis, or to the paper as a whole. Unless there is a very strong rationale for including the retrospective ‘before pregnancy’ data, the paper would be much more parsimonious and sound without this added level of complexity.

Revisions needed in response to these issues are as follows:

1) Either omit the ‘before pregnancy’ data/analyses OR if the ‘before pregnancy’ data/analyses are included:
   - 1.1) Give further information on the time-references used in the adapted version of the CTS. I.e., how long was the ‘before pregnancy’ period used in the adapted version? If different to the ‘during pregnancy’ period (e.g. 9 months vs 3 months), how were the two different time frames balanced out?
   - 1.2) Provide a strong rationale for including the retrospective ‘before pregnancy’ data, backed up with prior literature in the background section, and related to a clear research question.
   - 1.3) Explain the choice of methods in collecting this data post-partum (e.g. as opposed to early on in the pregnancy when recall would be more accurate). Although this is probably a convenience issue, it still needs to be addressed and made explicit;
   - 1.4) Address associated methodological issues and limitations and also discuss these more explicitly in the limitations section of the discussion;
   - 1.5) Make it clear throughout the paper that the ‘before pregnancy’ data was collected retrospectively post-partum (as some sentences make it sound as though the data was collected earlier on);
   - 1.6) Include confidence intervals for the estimates in all tables/analyses (which is best practice anyhow), to capture any overlap that is likely to exist for results relating to these two retrospectively recalled time periods.

BACKGROUND:

2) If retrospective ‘before pregnancy’ data is to be included in the analysis (not recommended due to the way data was collected - see comments below), background literature and rationale justifying this, and the method used, needs to be clearly discussed.

3) The research questions posed by the authors are not well defined. Clearer, more specific, research question/s and/or hypotheses need to be presented. This would then guide a more systematic and rigorous approach to analysis to address the research question/s.
METHODS - POPULATION, MEASURES, AND PROCEDURES:

4) Clarify the use of ‘semi-structured’ interviews – does this mean participants answered scale questions verbally as part of a larger interview schedule? Please state how participants responded to the scales (i.e. pencil and paper, computerised, or verbally, etc.).

5) The term “gold-standard” needs to be removed/revised in relation to the Conflict Tactics Scale Revised (CTS-2). The CTS and CTS-2 have received much criticism regarding their use in measuring IPA, therefore, although still used for a variety of reasons, cannot be referred to as the “gold-standard” for measuring IPA.

6) Methods for classification of abuse type and severity on the CTS-2 need to be briefly outlined.

METHODS - STATISTICAL ANALYSES:

7) The paper seems to lack a strong rationale for the large number of somewhat overlapping analyses conducted. The statistical analyses are not adequately described, and in some instances do not seem appropriate. A much clearer and more systematic approach to the analyses is needed (guided by clearer research question/s).

8) The analyses should focus in on the multivariate General Linear Model (GLM) analyses – these seem the most appropriate and useful types of analysis to use for your research aim, however the step-by-step methods which should be used in GLM analyses have not been described either here or in the results section.

See results (below) for full revisions in relation to statistical analyses.

RESULTS:

9) The results section would be greatly improved if a systematic multivariate analysis plan was followed, aimed at answering one or two clearly defined research questions.

10) GLM analyses - revisions as follows:

As stated above, the GLM analyses were the most appropriate to use. However the results for these seem to be given low priority at the end of the results section, and are vaguely reported, with no associated tables, making it impossible to assess how the analyses were conducted.

- 10.1) Please include a clearer explanation of the type of GLM analyses used, steps undertaken and how these relate to the research question/s (this could be in the methods section).

- 10.2) Please include tables including the results of the GLM analyses. I would suggest using the tables to report just one or two quality GLM regressions, with and without the control variables, and aimed at answering a more clearly defined research question. A good GLM / multiple regression table will also be able to
include most of the other information needed (e.g. descriptive statistics... % / M and sd and bivariate correlations), reducing the number of other tables needed.

11) Analyses reported in Table 3 - revisions as follows:
   - 11.1) I would suggest excluding the before and after pregnancy analyses. Comparing IPA before and during pregnancy, when data for both time-periods was actually collected during the one interview after pregnancy, is very problematic, for numerous reasons including those outlined earlier. In its current form, this table could also be quite difficult for readers to follow.
   - 11.2) If the authors wish to include cross-tabulations of type and severity of IPA during pregnancy, this would be better just as a descriptive table or in text (i.e. without the Chi-square comparisons)
   - 11.3) If a cross-tabulation table of type and severity is included, cut-off scores for minor and severe abuse need to be stated, as well as for each abuse type.

12) Analyses reported in Table 4 - revisions as follows:
   - 12.1) Again I would suggest excluding the before and after pregnancy analyses for the reasons outlined earlier.
   - 12.2) If this table was still to be included (i.e. without the 'before pregnancy' data), it needs to be made clear whether the variables included are binary (I assume the analysis has used Yes/No binary variables, however this is unclear)?
   - 12.3) Descriptives for each of the variables (i.e. number of participants and percentages, assuming the variables are binary) would be useful at the start of each row.
   - 12.4) Consider finding a way to combine the information contained in Tables 3 and 4 (i.e. just for during pregnancy), or placing the information in text.

13) Analyses reported in Tables 5 and 6 - revisions as follows:
   - 13.1) t-tests are not a very appropriate type of analysis for the research question/s to be answered. The analyses presented here also seem to overlap with the GLM analyses described further on in the result section (with GLM being the more appropriate type of analysis). Tables 5 and 6 should be replaced with tables for the GLM analyses.
   - 13.2) t-tests cannot adjust for variables which could influence both IPA and mental health. Only analyses which can include these adjustments should be used (again why only the GLM analyses should be used).
   - 13.3) In text it is stated that results were only reported as significant if p<.01 to reduce risk of Type I errors, however the table has still placed an asterisk beside t-values that only meet the p<.05 criteria. It would be much more justifiable just to use the multivariate GLM analyses.

DISCUSSION:

14) Paragraph 3; Last line: This statement is problematic due to the issues with collecting 'before pregnancy' data after pregnancy, and so should be either
removed or qualified.

15) Paragraph 4; Second sentence: Again comparing these two reference periods is problematic given the data was collected at the one time-point, after pregnancy.

DISCRETIONARY REVISIONS...

BACKGROUND:

16) The background section sometimes refers to the perinatal period, and sometimes to the postpartum period. It would be clearer for readers if just one term or the other was used (e.g. postpartum, as this is the period in which data for this paper was collected). If 'perinatal' is to be used in some places, it may need to be more clearly defined for the context of this paper, given this term can vary in definition, and overlaps with the early postpartum period.

DISCUSSION:

17) Paragraph 2; Second last sentence: Add ‘and address’ (or similar) after ‘screen for’… as screening should be followed by intervention.

MINOR ISSUES NOT FOR PUBLICATION...

BACKGROUND:

18) Paragraph 1; Third sentence: Change ‘mental disorders’ to ‘mental health disorders’.

19) Paragraph 5; Fourth sentence: Meaning unclear/word missing? (‘with fewer than have reporting…’).

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Acceptable

Statistical review: Yes, and I have assessed the statistics in my report.

Declaration of competing interests:

I declare that I have no competing interests