Author's response to reviews

Title: Breastfeeding cessation and symptoms of anxiety and depression: a longitudinal cohort study

Authors:

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Author's response to reviews: see over

15 August 2011

I'm enclosing my revision of the manuscript entitled "Breastfeeding cessation and symptoms of anxiety and depression: a longitudinal cohort study".

I regret the delayed response. The reason for this is that a close family member got cancer this summer; derailing my work flow. I hope that you will still accept the manuscript for revision.

Thank you for revising my manuscript. I appreciated the thorough reviewer I received from both reviewers. I have tried to amend their suggestions into the manuscript.

Yours truly,

Eivind Ystrom

Thank you for dedicating your time to give me such a thorough and constructive review. I have tried to amend you suggestions into the manuscript.

Background
1. Is the question posed by the authors well defined?
The study aims are clear. However, the specific research questions are not described.

Thank you for bringing this to my attention I have now rewritten the research questions.

Background:
- Line 44 – 53 Add statements that address a significant impact of the breastfeeding cessation and anxiety/depression to women and infant.

I have now added a statement about this issue.

- Line 63 – 66 The research questions also need to be clearer stated. To increase the clarity on the psychological distress in this population, define the terms, anxiety and depression used in this study. Anxiety and depression are different concepts (ADDA, 2011).

Thank you for this suggestion. I have now rendered the research questions more clearer.

2. Are the methods appropriate and well described?
Study Population:
- line 71 - add number of hospitals and maternity units that participated in the study.
The number is 50. This has now been described.

- line 73 – add number of mothers who were invited to join the study
Sample:

At the time point that the data files used were made, the recruitment into the MoBa was still ongoing. The study covers almost the entire population of child bearing women in Norway. The study population and participation rate is now better described in the manuscript.

- line 90 – 91 – The statement that the sample of 5434 dyads were excluded due to missing data and several conditions was unclear and conflicted with the statement in line 72 under study population that 'there are no exclusion criteria'. Consider addressing or correcting these two sentences to increase clarity.

Yes, I agree that this was confusing. The distinction between eligibility for being a part of the MoBa and exclusion from the current analyses due to missing data is now more accurately described.

3. Are the data sound?
Measures:
- line 103 Describe the characteristics of the scale SCL-8 (i.e., type of scale, number of items, psychometric properties reported in other study, etc.) and how it's scored and interpreted.

The SCL-8 scoring is now described more thoroughly.

- Line 109 – Breastfeeding definitions are well defined with WHO classification system.

Statistics:
- Line 120 – 121 Address the rationales to the readers reasons for group comparisons between mothers who were excluded and included in the study.
Reviewer 2 also suggested that these analyses was a blind alley, since they did not relate to the research questions. These analyses and results have now been removed.

- Line 121 – 122 The statement regarding the imputation of the missing data is not clear whether this missing data referred to those in the main analysis (Multiple regression analysis).
This has now been described.

- Line 122 – 135 The description how to perform linear regression analysis is clearly described. However, the author should address the rationales and theoretical consideration for the order of each block of the predictors entered in each regression analysis.
Thank you for bringing this to my attention. The rationale for the separate blocks are now presented in a better manner.

4. Does the manuscript adhere to the relevant standards for reporting and data deposition?
Results:
- Results section adheres to the relevant standards for reporting. However, certain sentences need more clarifications (see below).

- Line 143 – 145 Add sample size next to the percentage of mothers who were still breastfeeding at six months. Add the anxiety and depression mean score of these mothers (3 groups: fully breastfeeding, partial, and bottle) at baseline (prenatal) and postnatal (at 6 months).
This has now been added to the results section.

- Line 153 – 155 Address and provide rationales for the change observed on correlation (the effect of mixed breastfeeding and bottle feeding) in block the second block.
Yes, I agree that this was not well described. This is now been amended.

- Line 157 – 163 Address and provide rationales for the interpretation of change observed in the third block in stead of pure interpretation.
A rationale is given for the observed change, and the interpretation of change is now described in a more sober manner.

- Line 268 Table 2: Add columns with R square and adjusted R square, and p values for each block entered (although CI is acceptable).
This has now been added to table 2.

5. Are the discussion and conclusions well balanced and adequately supported by the data?
- Discussion and conclusion are adequate and supported by the data.

6. Are limitations of the work clearly stated?
- Line 201 – 204 Limitation should be elaborated further about the unmeasured events that could be an underlying cause of breastfeeding cessation.
- Address steps that should have been taken to improve study data quality.
- Consider addressing the clinical significance of the findings to the clinical practice

I have now given breastfeeding pain as an example of a possible third variable / unmeasured event.
The clinical significance for women with high initial levels of anxiety and depression is now given.

6. Do the authors clearly acknowledge any work upon which they are building, both published and unpublished?
- The author needs to address what this study adds to the knowledge gaps in the field.

It is described that earlier studies have looked at anxiety and depression as the cause of breastfeeding cessation, and breastfeeding cessation as the cause of increase in anxiety and depression. Since the current study finds that these two possible pathways were about equally important, it adds knowledge to the field.

7. Do the title and abstract accurately convey what has been found?
The title is appropriate with some comments below.
Abstract
Background: Add a statement that addresses a significant impact of the problems (breastfeeding cessation and anxiety/depression). The research questions also need to be clearer stated.

Such a statement has been added.
The research questions is now more clearly stated..

Methods: Include type of study design, sampling, and data collection method. Describe variables used in the regression analysis including the interaction terms and interaction effects.

This has now been amended.

Results: - Using the word 'breastfeeding' and 'nursing' interchangeably. Recommend to use the term 'breastfeeding' consistently.
- Add significant level, correlation coefficient to indicate the positive relationship between pre-partum level of anxiety and depression and breastfeeding cessation.
- Keep the result concise and address research questions to the point.

Breastfeeding is now consistently used throughout.
Effect sizes and confidence intervals has been added.
The results are now more concise.

Conclusion: Consider changing the word 'for' to 'associated with'
Yes, this has now been changed.

Reviewer 2:

The aim of the study in the abstract was not consistent with the aim inside the manuscript.

Abstract: "We aimed to investigate whether breastfeeding cessation is related to greater postpartum symptoms of anxiety and depression than found prepartum. We also investigated whether there is an additional effect of breastfeeding cessation on postpartum symptoms of anxiety and depression when an individual had high levels of prepartum anxiety and depression."

Manuscript: The current study aims to evaluate the relationship between maternal symptoms of anxiety and depression and early breastfeeding cessation by examining data from a large prospective pregnancy cohort study.
Need to be consistent in the aims of the study throughout the manuscript. Results and conclusion should answer these aims. Conclusion in the abstract just answered one of the aims. Abstract results need to be supported statistically, i.e. type of statistical analysis they used and significance level.

> *Yes, this was an inconsistency. It has now been amended.*
> *The results and conclusion are now in line with the research questions.*
> *The abstract is now supported statistically, and betas and confidence intervals are given.*

Methods:
Used present tens for study already done. Need to change tense or follow the journal guidelines.
> *Thank you for seeing this. This has now been changed.*

Study design need to be clarified. Is it exploratory, prospective, co-relational, longitudinal?
> *The study is now described as a prospective pregnancy cohort study.*

In the Population paragraph, the author described the inclusion criteria for hospitals (recruitment sites) (lines 71&72), but did not mention inclusion and exclusion criteria for the mothers (subjects).
> *The exclusion criteria for the mothers are now given. There were none.*

Line 78, 79, the author said "The current study is based on version 3 of the quality-assured
79 data files released for research in 2007." The author may give brief explanation about version 3 of the quality-assured 79 data files, it was not clear to me.
> *A better description of the files are now included in the methods.*

Line 81, the author mentioned "In addition to questionnaire data", Which questionnaire? this is the first time to mention questionnaire. Need to describe this questionnaire, content, type of questions, was there any score given or not.

The time points for the questionnaires and main type of questions are now given.

For the SCL-8, what was the scoring system??
This is now described.

Line 97-99, the author said "We collected information on symptoms of anxiety and depression, breastfeeding, introduction of solids, and daily smoking from the questionnaires." Again it is not clear what this questionnaire is measuring, Is it measuring anxiety and depression or just demographic and feeding pattern, need to clarify.
Yes, this is now clarified.

Sample; need to explain more about type of the sample, characteristics of sample, inclusion and exclusion criteria.
The sample is now described more in detail, and inclusion and exclusion criteria are given.

Statistics:
The statistics paragraph started with "To compare mothers excluded from the study to those included", what is the reason for comparing excluded and included mothers? Need clarification. Does it answer the research question?
Yes, these analyses were a sidetrack. They have now been removed.

Linear regression attempts to model the relationship between two variables, how the author add more than two variables in each block? needs clarification
It has now been described that mixed breastfeeding and bottle feeding, together with predominant breastfeeding, comprise infant feeding. Furthermore, that the dummy variables for the two alternatives to predominant breastfeeding were added in the same step.

Results: Did not describe participants, need to give summary of the participant characteristics, even if it is published in previous study.
Yes. The participants are now described in the results.

Results need to be supported with level of significance inside results paragraph e.g. How was the cessation of breastfeeding associated with an increase in symptoms of anxiety and depression?
Betas and confidence intervals are now given in the text.

Lines 145-148 are repeated from statistics paragraph.
These lines have been removed.

Discussion: need in depth critical analysis of the results and use of new references that support or oppose the study results.
The discussion and conclusion now includes new references that also oppose the results.
The interpretations on stress vulnerability is now more sober.