Author's response to reviews

**Title:** Early intervention program reduces stress in parents of pre-terms during childhood; a randomized controlled trial.

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Author's response to reviews: see over
08-September-2014

To the Editor:

Trials

Resubmission of MS: 8046381861187856, Early intervention program reduces stress in parents of pre-terms during childhood; a randomized controlled trial.

Dear Editor,

Thank you for the positive comments and review-report of this paper received September 05 2014. The few editorial requests and comments from the reviewer is addressed and the article hereby resubmitted.

Authors answer to the comments from reviewers and the editor:

Editorial requests:
1. The statement about written, informed consent is included in the Methods section (page 6)
2. Figures has been uploaded as separate files
3. Figure titles and legends are placed after the reference list.

Comments from Reviewer:
1. Information about the use of computer-generated numbers in the randomization process is now included in the methods section (page 6)
2. A short paragraph addressing Clinical implications has been included at the end of the paper (page 21)

Tromsø, September, 2014

Regards
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Response to the reviewer’s comments
(authors responses are written in cursive):

Reviewer 1., major concerns:
Motivation of the study question: Preterm born children are in risk of behavior, cognitive and socio-emotional problems throughout childhood. We replicated the MITP-intervention (described in the method section) because it is relatively brief, inexpensive and the only intervention that ever has been reported to improve preterm born children’s behavioral outcomes until children’s age of nine.
Next, heightened levels of parenting stress are repeatedly reported after preterm delivery and more stress is associated with increased child behavior problems. Child behavior outcomes and the development of parenting stress are primary outcomes in the comprehensive study, which this study is a part of. Children’s behavioral outcomes until age nine is reported in an article provisionally accepted for publication in the journal Child Development (pr. May 2014) while this paper is solely focusing on the outcomes concerning parenting stress.

Which results have been reported in previous papers? Parenting stress were reported by Kaarensen et al.(2006; 2008) until children’s age of two based on a cross-sectional model. The longitudinal analyses and the cross-sectional analyses from age three to nine has not previously been reported. Results presented in this paper are based on a longitudinal model adjusting for repeated measures. (page 10 in the paper)

Introduction
(rev. 1) Call for more studies and insight about the relation between parental stress, child development and child’s attachment:
The introduction is revised and the association between stress and child behavior should be clearer. We have not collected any information about children’s attachment quality. We focus on the parental attachment to the child (parental bonding, parental caregiving system) because this has been described to be influenced by a preterm birth. Weakened parental attachment is associated with more parenting stress.

(rev. 1) The Mother Infant Transaction Program is briefly introduced (page 5).

(rev. 1) Call for more intervention studies affecting parenting stress:
The main aim of this study is to evaluate on specific interventional program. This program is primarily designed to improve early child development and the effects related to parenting stress should be seen according to this. Key components in interventions are mentioned at page 4.

Method
(rev. 2): Computer generated numbers were used in the randomization process.
(rev. 1): NICU was not written out in the previous paper, only the abbreviation: This is now done.
(rev 2): the intervention is described more in detail (page 5) and in addition it is referred to the original article where the intervention program is described in detail (Rauh, 1990).
(rev. 2) As described by the name, the 4 home visits were conducted in private homes (page 6)
(rev. 2) Concerning fidelity: the paragraph about use of logbooks are specified (page 6)
(rev. 2) Information about level of significance (p < 0.05) is included in the Analysis section
In the longitudinal analyses time represented the number of months from the first to the last assessment. When time was treated as a categorical variable it represented the actual age at the assessment.

The PSI-FF and the PSI-SF are now written out in the beginning of the section “Measures” and the main differences between them made clear.

The main aim of the intervention is presented at page 5: The intervention program was a modified version of the MITP [17] aimed at 1) enhancing parents understanding of their child’s expressions, and 2) promoting a sensitive, positive and practical transaction between parents and child.

Call for more information and insights about the relation between parental stress, children’s development and children’s attachment:

The introduction is revised and the connection between the development of parental stress and parent’s attachment bonds has been addressed.

**Results**

The language in this section is perceived as too statistical:

As this study report both longitudinal and cross-sectional analyses throughout childhood it seems important to be very specific about what we actually have found. In the longitudinal analysis the main interest is to investigate if the different group develop differently in any aspect of parental stress. Such differences has to be reported as group by age interactions even it may be perceived as statistical terms. On the other hand, the second part of the first paragraph is removed (commented on the connection between PSI-full form information analyzed until age seven and the information analyzed at age nine on PSI-short form) as this may be perceived as less interesting information among most readers.

Secondly, the report of non-significant differences (e.g. no differences in longitudinal trajectories reported by fathers) are minimized.

Too much discussion is already reported in the results section: The result section is trimmed down (from 5 pages to 4) and non-significant differences, results not clearly related to the research questions have been removed.

I suggest that authors would present the adjustments for the child’s medical factors and family characteristics:

According to the study questions this study primarily investigates if the intervention that was evaluated could affect the development of parenting stress in parents of preterm born children. The PI and PC group were made up by randomization and the only significant difference between those groups were in maternal education. The PI mothers had in average one year longer education than the PC mothers and this is controlled for in the analyses. Medical factors as e.g. SNAP-II did not influence significant differences.

**Discussion**

Authors should focus on the main finding: association between parental stress and intervention:

The paper is reviewed according to this critique and the discussion part is revised. Parenting stress is discussed strictly in accordance to the definitions offered by Abidin as our data are collected by the PSI questionnaires.
(rev. 1) The differences between mothers and fathers reports are more clearly stated, (page 14, 18).

(rev. 1) The discussion is a bit fragmented, call for more focus on clinical implications: 
The paper is revised and read/commented by several experienced researchers. In addition, the language is carefully examined by a researcher offering professional language translations. Implications related to this research are commented at the end of the discussion section and in the conclusions.

(Rev. 2) A summary of key findings are presented in the beginning of the discussion section

A track-change version, where sections with changes are marked yellow is submitted together with a clean version of the manuscript.