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

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

Which results have been reported in previous papers? Parenting stress was reported by Kaaresen et al.(2006; 2008, lasting) until age two and based on a cross-sectional model. The longitudinal analyses and the cross-sectional analyses from age three to nine has not previously been reported. The results presented in this paper are based on a longitudinal model adjusted for repeated measures. (page 10)

Introduction
(rev. 1) Call for more studies and insight about the relation between parental stress, child development and child’s attachment:
The introduction has been revised and the association between stress and child behavior should now be clearer. We have not collected any information about children’s attachment quality. We focus on parental attachment to the child (parental bonding, parental caregiving system) because this has been described as being influenced by 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 a specific intervention program. This program is primarily designed to improve early child development, and the effects related to parenting stress should be regarded in this light. Key components in interventions are mentioned on page 4.

Methods
(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 has now been 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) The four home visits were conducted in private homes (page 6)
(rev. 2) Concerning fidelity: the paragraph about use of logbooks is 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.

(rev. 1) The PSI-FF and the PSI-SF are now written out at the beginning of the section “Measures” and the main differences between them made clear. (page 7)

(rev. 1) 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.

(rev.1) Call for more information and insights about the relation between parental stress, children’s development and children’s attachment: The introduction has been revised and the connection between the development of parental stress and parent’s attachment bonds has been addressed (page 4).

Results
(rev. 1) The language in this section is perceived as too statistical: As this study reports both longitudinal and cross-sectional analyses throughout childhood it seems important to be very specific about what we actually found. In the longitudinal analysis the main interest was to investigate whether the groups develop differently in any aspect of parental stress. Such differences need to be reported as group by age interactions even though these may be perceived as statistical terms. On the other hand, the second part of the first paragraph has been 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 regarded as less interesting by many readers. Secondly, the report of non-significant differences (e.g. no differences in longitudinal trajectories reported by fathers) have been minimized (page 10).

(rev.2) Too much discussion is already reported in the results section: The result section has been trimmed (from 5 pages to 4) and non-significant differences, results not clearly related to the research questions have been removed.

(rev.1) 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 looked at whether the intervention that was evaluated could affect the development of parenting stress among the parents of preterm children. The PI and PC group were made up by randomization and the only significant difference between those groups was in maternal education. The PI mothers had an average of one year longer education than the PC mothers and this was controlled for in the analyses. Medical factors such as SNAP-II did not influence significant differences.

Discussion
(rev 1). Authors should focus on the main finding: association between parental stress and intervention: The paper has been reviewed in accordance with this critique and the Discussion has been revised. Parenting stress is discussed strictly in accordance with the definitions offered by Abidin, as our data were collected using the PSI questionnaires.
(rev. 1) The differences between mothers and fathers reports are more clearly stated (pages 14, 18).

(rev. 1) The discussion is a bit fragmented, call for more focus on clinical implications: The paper has been revised and commented on by several experienced researchers. In addition, the language has been carefully examined by a researcher offering professional language translations. The implications of this research have been commented on at the end of the Discussion section and in the Conclusions.

(rev. 2) A summary of key findings has been presented at the beginning of the Discussion section.

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