Reviewer’s report

Title: Community health workers can improve child growth of antenatally-depressed, South African mothers: A cluster randomized controlled trial

Version: 3  Date: 1 April 2015

Reviewer: Sari Ahlqvist-Björkroth

Reviewer’s report:

Dear Authors,

Thank you for your manuscript. The topic of the article is highly important, as it focuses on the effects of maternal depression on infants’ growth in low- and middle-income countries. Your finding is also important and promising. An advance of this study is that the intervention and the data analyses were carried out by independent teams. However, there are some points that can improve the manuscript further. Best wishes with updating your manuscript.

Minor Essential Revisions

Abstract:

1. In the objectives section, please define the outcomes for children. In the results part, please check if something is missing from the first sentence. The sentence is somewhat unclear. “Depressed mood was similar across the PIP and SC conditions both antenatally (35% rate).”

2. The other main finding in the study was that the intervention did not significantly moderate depression’s effect on infant nutrition in any assessment period. Should that also be integrated in the abstract?

3. In the conclusion and relevance areas, a different concept (home-visiting program) is used to refer to the intervention. The conclusion in the last sentence is misleading. The results do not prove what is stated, but the results can imply these facts.

Introduction:

4. The introduction is mostly relevant. As the introduction focuses mostly on maternal depression’s effects on child development, the used intervention (PIP), which does not focus on maternal depression, requires better rationalization. The intervention is rationalized well in the beginning of the discussion when the authors are referring to references nos. 32 and 41. I would encourage the authors similarly outline in the introduction why the PIP intervention was chosen. That could clarify the introduction. The study questions could also be more clearly stated at the end of introduction.
5. The last sentence in the introduction’s second paragraph can be elaborated regarding how the results vary.

Data collection:
6. It remains unclear when exactly the depression measures were collected. Was depression measured antenatally, at birth, at one week after birth, and at the age of 6 months? A clear presentation of the exact measurement time points here in the data collection paragraph would help many readers to follow the presentation of the results.

7. After the last sentence in the data collection section, there is a single word “all.” Is something missing, or is it there by mistake?

Methods:
8. A reference for the used cutoff in the EPDS is missing.

Results:
9. In Table 1, EPDS cut off is reported as >13, but elsewhere in the manuscript, >18 is used. When were these baseline data collected: anytime during pregnancy when mothers were identified? Did any differences exist between the mothers in the intervention and the SC groups related to the time of identification and recruitment to the study?

10. For me, it remains unclear why in Table 2 the results related to weight-for-age-z-score, height-for-age-z-score, and weight-for-height-z-score are labeled “infant nutrition.” Are the values different from the values used in Figure 2 that are labeled as “infant growth”? Based on the abbreviations, they seem to be same thing. This should be clarified.

11. Is there a typo in the end of fourth paragraph in the discussion? along # alone

Name of intervention:
12. The PIP—The Philani Intervention Program—is not a very informative name. Somewhere in the manuscript, the name The Philani Nutrition Intervention is used. That name provides more information about the type of intervention. If PIP is used, it could be clarified in the abstract in order to avoid readers confusion. It is also important to be consistent with the use of the name throughout the manuscript.

Major Compulsory Revisions

Discussion:
1. The discussion is not well-balanced. The main findings could be sated more clearly at the beginning of discussion. Both findings (ones related to Figure 2 and Table 2) should be discussed. The discussion could be combined more clearly with the findings; so that one finding is discussed at a time. I would be especially interested in the authors’ view and discussion related to the finding that the intervention did not significantly moderate depression’s effect on infant nutrition
in any assessment period. What does that mean?

2. The discussion is also missing a statement of limitations of the work.

3. As the result showed that the intervention had substantial effect on the child growth in the randomized controlled study setting, the possibilities and barriers of wider implementation of the intervention should be also discussed.

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

**Quality of written English:** Acceptable

**Statistical review:** Yes, but I do not feel adequately qualified to assess the statistics.

**Declaration of competing interests:**

I declare that I have no competing interests.