Reviewer's report

Title: Women’s knowledge towards neonatal danger signs and its associated factors in Ethiopia: a systematic review and meta-analysis

Version: 0 Date: 25 Nov 2019

Reviewer: Dany Weisz

Reviewer's report:

Thank-you for the opportunity to review this manuscript.

Bizuneh et al. conducted a systematic review and meta-analysis of cross-sectional studies of the prevalence of knowledge of neonatal danger signs in Ethiopia. Overall, the Introduction is compelling and thoughtful with the potential to influence policy on the education of new mothers. There are some issues with the methodology used, though other aspects, including the random effects meta-analysis, are appropriate. Importantly, the definition of 'knowledge of neonatal danger signs' and some potential inaccuracies with data abstraction are concerns. There are many grammatical errors which detract from the overall quality of the manuscript, though the overall message of the paper does still come through. Figures and Tables are of adequate quality.

Major Comments:

1) Was there heterogeneity in the studies in regard to how 'knowledge of neonatal danger signs' was defined? This is, it seems, a critical part of determining whether the studies were evaluating the same thing and if the data from individual studies can be pooled? This evaluation and discussion should be included in the manuscript. For each included studies, I would suggest they be described as to how they defined neonatal danger signs, and maternal/paternal knowledge of neonatal danger signs. I am unclear if there is a universal definition, one specific to Ethiopia, or if each study used a different definition.

2) The use of point prevalence as the measure of 'Knowledge of Neonatal Danger Signs' suggests that the authors consider this knowledge to be binary (Yes/No) outcome. I might expect that there would be a range of understanding of danger signs, comprising no knowledge, minimal knowledge, some knowledge, moderate knowledge and high knowledge (for example). A continuous or ordinal score would be more appropriate. How this is assessed in this systematic review is largely dependent on the included studies and the authors should examine how the individual studies determined this.

For example, the study by Nigatu et al (2015) assessed 'good' working knowledge as knowledge of 3 or more danger signs. I would suggest this be explored further.

3) I would suggest a review of the data abstraction. A brief review of one of the included studies (Misgna et al, 2014) found that the only mention of Neonatal Danger Signs in the Results section of this particular paper was the following: "Study subjects are asked to their knowledge of newborn danger signs using seven newborn danger signs(Poor sucking or unable to breast feed, Fast breathing, Severe chest in drawing, Hypothermia, Fever, Difficulty
in movements or lethargy/unconsciousness, severe umbilical infection, redness of skin around the cord and foul smelling discharge) and 148(50 %) of them stated three and below. " However, the authors (of this systematic review) indicated that the prevalence of "Maternal knowledge towards newborn danger signs" (Figure 2) was 80.4%. From this paper, 80.4% was attributed to mothers' knowledge of essential care of the newborn (not danger signs). Perhaps I have erred in my review of this particular paper, but I might kindly ask the authors to verify the data abstracted from the individual papers.

Minor Comments:

Introduction:
Line 35: Please define 'NMR' and 'SDG' at first use in the manuscript

Methods:
Page 7, Line 4 to 17: Please use appropriate brackets to clarify the limits of the OR and AND relations of the search terms.
How were these search terms derived? Some terms, such as, 'cyanosis' or 'difficulty breathing' are absent. Were the neonatal danger signs standardized among studies or is there an accepted set of danger signs?
Recognizing that the intent of the paper was to evaluate the specific point prevalence of knowledge of neonatal danger signs in in Ethiopia, this is a fairly narrow focus. Did the authors consider a broader approach, such as considering studies from other countries in the region so that the results can be more broadly applicable?

Lines 47: Outcomes: Is knowledge of neonatal danger signs a binary evaluation (Yes/No)? On Line 50, the outcome is clarified by stating that they wish to estimate the pooled prevalence of 'having good knowledge of neonatal danger signs' - how was 'good knowledge' determined?

Page 10, Line 35 (figure 1): how many studies were excluded due to inaccessibility of the full text? This can usually be rectified by contacting the primary author

Page 13, Line 37: Were the subgroup analyses pre-planned? Eg. Estimating the prevalence of maternal knowledge toward danger signs

Table 1:
Line 30: The reference for Melkamu B et al does not correspond to reference # 21
Same for Tesfaye et al and reference #22
Same for Abera et al and reference #20
Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

No

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

Yes

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

No

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I am able to assess the statistics

Quality of written English
Please indicate the quality of language in the manuscript:

Not suitable for publication unless extensively edited

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