Author’s response to reviews

Title: Sleep and weight loss in low-income overweight or obese postpartum women

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Author’s response to reviews:

Dear Editor

We greatly appreciate your review and suggestions to improve quality of the manuscript.

Editor Comments:

Although the authors have addressed several of the reviewers' comments, some responses come across somewhat sloppy, and several comments remain unanswered or need additional attention, and some responses are unclear (see below). Please address these comments as well in a revised version.

Comments that still need to be addressed:

Reviewer 1:

"The paper is about a timely subject (relation sleep and (over)weight), is concise, well written and gives a nice overview of the literature in the introduction. The paper reports about fluctuations in weight (as there is no effect of the intervention), that are related to an improvement in sleep parameters (an improvement that is hard to explain). The
authors should try to make clearer in the introduction and discussion that they in fact follow natural occurring fluctuations in sleep and weight in this target group (as there is no effect of the intervention, that not even addresses sleep)."

EDITOR: this comments is not addressed in your response.

RESPONSE:

The following sentence was added to the conclusion of the Introduction (p. 5, lines 115-117):

“Although sleep was not a target of the behavior intervention, examining such associations may still be informative for designing future interventions in this population.”

For the Discussion, the following sentence was added on p. 10, line 235-237:

“Although sleep was not targeted as a behavior for intervention in the intervention study, we used validated instruments to assess sleep duration, sleep quality, and sleep disturbance that appropriately measure these characteristics as they occur in this population.”

"Methods:

- Intervention is not about 'Sleep' at all. Please discuss in the discussion section why sleep in improved over time? Influence of season? The child growing older and sleeping better (and so the mother)?

RESPONSE. Discussion. Pages 9-10, lines: 209-216

“...the overall improvement in sleep might have been impacted by our intervention that included stress management. A recent study of pregnant women has reported that higher levels of stress were associated with poor sleep [29]. In our intervention study, we found that the intervention group had a significant reduction in stress at T2 and the positive change remained at T3. However, our results also revealed that the comparison group had a significant reduction in stress at T3 [30]. Finally, it is possible that as children grow older, they might sleep better and require less attention from their
caregivers at night.”

EDITOR: A reference is needed for the final part of this section (on sleep of the children).

RESPONSE:

The following sentences and references were added (Discussion, page 10, lines 221-223.)

“Finally, it is possible that as children grow older, they might sleep better [31] and require less attention from their caregivers at night. Also, they might sleep apart from their mothers, which was associated with better sleep in mothers [32].”

Reviewer 2:

"They measured significant changes at each timepoint in sleep duration, quality and disturbance but the lack of association with change in weight may have been largely due to the participants not losing clinically or statistically significant weight during the trial.

RESPONSE. Please see our response on the same comment above (reviewer #1)."

EDITOR: it is not clear for me which response to a comment of reviewer 1 you are referring to. Please specify / repeat your response.

RESPONSE: The response in question was the one addressed to Reviewer 1 that explained the rationale for choosing 5% (a relatively small amount of weight) as the outcome criterion. However, we have added additional clarification to the discussion of limitations on p. 11, lines 251-253:

“Finally, the mean changes in weight and sleep scores were small, even when statistically significant. It is possible that larger amounts of weight loss may be observed with larger changes in sleep behaviors.”

"The academic writing of this manuscript requires revision, whereby the interpretation of some
statements is challenging due to sentence structure. It would be helpful for the authors to ensure there are explicit statements regarding their findings and approach to this analysis to aid the reader in their interpretation of meaning. Careful revision of this manuscript may allow clearer meaning to be deciphered. I have provided extensive constructive suggestions to aid the authors in their review if this is of benefit to them.

RESPONSE. This paragraph appears to be a summary statement of review. We have addressed this reviewer’s comments (see below).

EDITOR: The reviewer indicates a problem of which she gives several examples. Please review your whole text critically for clarity in sentence structure, in addition to addressing the specific comments of the reviewer only.

RESPONSE: The specific suggestions given by this reviewer and others have been considered and addressed. The manuscript has been reviewed again by the authors, and extensive changes were made to the introduction to improve the clarity of presentation.

"COMMENTS

*Why are you suggesting that prospective studies further investigate a trend that is not existing. Perhaps be more specific, studies that achieve a greater or significant volume of weight loss should investigate the impact upon sleep duration, quality and sleep disturbance.

RESPONSE. Revised. Conclusion. Page: 11 lines: 245-247

“The study findings contribute to scientific knowledge in the association between sleep and weight loss in a group at a high risk for adverse health outcomes.”"

EDITOR: the reviewer's suggestion to more specifically indicate what future studies should look like is not addressed.
RESPONSE: The reviewer inappropriately suggests that greater weight loss should impact sleep behaviors, when it is more likely that changes in sleep will impact weight loss. The final sentences have been changed to reflect that future studies may examine this question (Discussion, page 11, lines 256-258)

“Future prospective studies of the target population may be helpful to identify mediators and moderators that affect the association between sleep and weight loss.”

"COMMENTS

*Lines 105-111 are much clearer, this is easier to read and understand. It is important
to be more explicit in earlier parts of the introduction.
RESPONSE. Thank you"

EDITOR: It is not clear whether earlier parts of the introduction were changed, as suggested.

RESPONSE: The introduction had been rewritten with additional elements, but the current revision has made more extensive changes to ensure the clarity of the thought process behind the investigation.

"COMMENTS

Results
*Line 189: please be clear in what you mean by "trend" - it is presumed this is not significant. But I think you must also consider that this trend is in a magnitude of weight loss that was not clinically relevant.
RESPONSE. In the original submission, we stated “Although there were no significant changes in mean body weight across the 3 time points, there was a trend of decreasing mean body weight over time.”
EDITOR: the suggestion of the reviewer to consider the possibility that magnitude of weight loss was not clinically relevant is not addressed.
RESPONSE: We feel that stating “there were no significant changes in mean body weight…” is clear. Since the focus of the study is not on the outcome of weight loss alone but rather the association with sleep changes, the result here is merely informative.

"COMMENTS

*It should be mentioned that this longitudinal study only covered a period of seven months which is considered short in weight loss intervention.

RESPONSE. In the original, we stated that the final data collection took place seven months from baseline (in background section). We also stated that our intervention lasted 4 months.

EDITOR: although the short follow-up duration is mentioned, the authors need to additionally acknowledge it as a limitation, and discuss the implications of this.

RESPONSE: additional explanation has been added to the discussion of limitations (p. 11, line 250-253):

“Fourth, the length of the study may have been too short to demonstrate clinically significant results. Finally, the mean changes in weight and sleep scores were small, even when statistically significant. It is possible that larger amounts of weight loss may be observed with larger changes in sleep behaviors"