Reviewer's report

Title: Predictors of weight change from before pregnancy to one year postpartum.

Version: 1 Date: 14 November 2010

Reviewer: Michelle Mottola

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I enjoyed reading the manuscript but found several analyses confusing. Please see below.

Major Compulsory Revisions:

1) Abstract – The abstract and the title should be rewritten to reflect which pregnancy factors and which postpartum factors were used to predict weight retention at 1 year post delivery. They are combined together and are confusing.

2) Background – On line 4, (after “postpartum”), the reference should be given for this statement.

3) Background – Par. 3. I was a bit confused as to which important factors for prediction were from pregnancy and which were from the postpartum period and this is also reflected in the hypothesis. Are the authors suggesting that other factors during pregnancy, like physical activity, sleep deprivation, etc. during pregnancy (besides the obvious one of excessive weight gain) are predictors for postpartum weight retention at one year or are these factors related to the behaviours in the postpartum period? In addition, the rationale for picking these specific predictors for either pregnancy or postpartum should be explained better in the background.

4) Methods – Page 3, description of the study sample regarding the final sample size should be moved to the results section. What did the authors do to improve the low return of the questionnaires? How were these women followed up? Why was the follow-up so small? Were the women who did not return questionnaires similar to those who did?

5) The 2 outcome measures defined should be justified in the background section. Why did the authors pick # 5 kg? Why did the authors chose pregnancy weight change and not BMI ? Should they have picked #2 kg instead so that greater than 20 % of the women came into this category? Would this be better for analysis and predicting?

6) Why were the primary outcome measures based on self-report and subject recall and not actual measurement (especially for 12 months postpartum?)

7) Methods- page 3, Last paragraph. Were these covariates also measured at 30 weeks of pregnancy? Did these covariates change from 6 weeks to 6 and 12 months postpartum? Why did the authors pool all of these together when many of these would have changed from 6 weeks to 6 months to 12 months?
8) Pg. 4, par. 1. Why did the authors choose 4 Mets as the cut off for physical activity guidelines? What do you mean by the “PA guideline was not deemed applicable 6 weeks after childbirth”? At what point would it be applicable? Why were these measures all pooled?

9) Were any of the questionnaires validated for postpartum women? Please provide the references and validations for all instruments used.

10) The “time spent sleeping” questionnaire would be different for all the time points measured because of the sleeping habits of each infant and dependent on the infants age. Was this taken into account? Were the values pooled together? If so, how would this be a predictor?

11) Pg. 5, Why did the authors use 4 months as the cut off? The WHO suggests infants should be exclusively breast fed for at least 6 months?

12) Pg. 5, par. 3. When did the participants report on their demographics? Could these have changed from pregnancy through until 1 year post delivery?

13) Results, par. 1 and Table 1. How were these prepregnancy BMI groups determined? Were they based on the WHO BMI categories? How did the authors determine excessive weight gain? Were they based on the Institute of Medicine 2009 guidelines? How did the women’s BMI change from 6 weeks to 6 months to 1 year post delivery?

14) Table 2 – Why did the authors pool all the postpartum scores together? There may be substantial changes in behaviour as the infant gets older? For example in Gunderson et al. 2008, there was a major change between 6 months and 1 year? In addition, if the authors are using these behaviours to predict what happens at one year post delivery, why is behavior at one year pooled with the other two time points? Why is 26 weeks listed when 6 months is actually 24 weeks?

15) Discussion. Should be rewritten to reflect the above changes in the results. The first 3 paragraphs are confusing.

16) Pg. 10, par. 1. If the authors used a food frequency questionnaire, why did they not report on the other food groups, like fibre intake etc.?

17) Pg. 11, why did the authors not use medical records?

18) Pg. 11, Last paragraph. The conclusions should be rewritten to reflect the above comments.

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

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:
I declare that I have no competing interests.