Reviewer’s report

Title: Adherence of pregnant women to Nordic dietary guidelines in relation to postpartum weight retention: Results from the Norwegian Mother and Child Cohort Study

Version: 1
Date: 4 November 2013

Reviewer: Jesus Vioque

Reviewer’s report:

This is a well written manuscript on a relevant topic for which existing information is still scarce. Data from the prospective mother-child study (MoBa Study) are used to conclude that women with higher adherence to Norwegian food guidelines or Nordic Nutrition Recommendations during pregnancy present lower postpartum weight retention. The study is well conducted and the analysis is well conducted although some concerns on internal and external validity should be addressed:

A general comment regarding the 6-months period used to check postpartum weight retention. It should be considered this may be a too short period to explored weight retention since 82.2% of women declared breastfeeding up to 6 months postpartum. Was the association found or still evident for women breastfeeding below 6 months postpartum?

1. Line 112. After exclusions were made, participants were 47011 women. Can the participation rate clarified? Are these women different from the 90.700 women from the initial cohort participants as stated in line 97?

2. Lines 226-232. Weight was self-reported. Is there any evidence of validity on self-reported weight among Women in Norway?

3. In order to make comparisons and external validity of weight retention after approximately 15 months (from pre-pregnancy self-reported weight to 6 months postpartum), it should be taking into account that women may increase their weight. It has been reported that mean weight gain per decade may be close 4-5 kg, i.e. mean weight gain of approximately 0.5 kg per year. Thus, are there any data from Norway to compare the mean weight gain among women around 30 years old?

4. Line 277. Please clarify on “data not tabulated” Does it mean they were not presented?

5. Regarding the two Healthy Eating Index scores, NFG and NNR. There is some concern regarding the mean scores for study participants, close to the middle range for NFG (0-70) and very close to the maximum (0-50) for NNR. Is there any explanation for these results? Have these index been validated?

This comment also relates to the sentence in lines 344-346.
6. A column for p-values should be included in table 2 for comparison purposes of HEI among categories of variables.

7. Line 311. Regarding HEI in table 1 and specific food groups presented in table 1 and 5, it would be helpful an appendix with a list of main foods of the FFQ that were included in the food groups of the NFG, particularly for those food items such as fish, fatty fish, added sugar for which some associations were found.

8. In order to generate scores in HEI-NNR nutrients were used as percentage of energy intakes. It would be of interest to see if the associations found for Fat, MUFA, etc were also present for absolute intakes either crude intakes or adjusted for total calories.

**Level of interest:** An article of importance in its field

**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