Reviewer’s report

Title: Maternal iodine status during lactation and infant weight and length in Henan Province, China

Version: 0 Date: 28 Feb 2016

Reviewer: Pattanee Winichagoon

Reviewer's report:

1. Abstract:
   a. Aim of study: '… evaluate impact of maternal and infant iodine… infant growth' is not correct as it implies cause-effect, which was not the case. Suggest to change to '.... association between maternal and infant UIC and…'
   b. Conclusion - the results were not conclusive on the relationship between maternal UIC and infant growth.

2. Methods:
   a. Subject: First paragraph: explanation of the sample is not consistent with the presented results. It was mentioned that 'A total of 1598 infant-mother pairs were enrolled …. and included in the analysis about relationship between infant iodine and growth.' The following sentence indicated that only exclusive breastfeeding (EBF) mothers and their infants <6 mo (n=747)….for correlation analysis. Therefore, it is better to make it clear if this paper will present analysis of data from EBF mother-infant pairs and accordingly, all tables focus on this group.
   b. Statistical analysis: it is indicated that Pearson's correlation was used. This gives the answer on whether the two variables relate, but observing the data presentation in Table 2, using kappa statistic will give additional data on the concordance/ discordant of the UIC between mother's and infant's UIC.

3. Results:
   a. Second paragraph under the 'Characteristics of mothers and infants': these data are for all children (n=1658). What is the purpose for presenting these data? What do they add to the understanding of the finding?
   b. Relationship between maternal and infant UIC (lines 148-151: see suggestion in 2(b)
c. Relationship between maternal UIC and infant growth (Lines 152-157): Please check the last two sentences which one (HAZ and WAZ) was statistically significant.

d. Line 163: '… significantly lower than those with maternal UIC ….' And refer to Table 4. Is it infant UIC which was analysed with infant growth?

e. Lines 174-178: from Table 5, is it infant UIC (not maternal) <50 µg/L … significantly lower BMI?…?

f. Table 1: footnote a there is no indication where is a in the table.

g. Table 3: please add appropriate statistical test.

h. Table 4: Title, there is no maternal UIC in this Table.

i. Table 5: What does this multiple regression address (infant's nutritional status (HAZ, WAZ, BMI) and what, while adjusted for possible confounding variables)? It is not meaningful to just analyse using multiple regression without having a specific question to be answered. Title should be modified accordingly.

4. Discussion:

a. Second paragraph: Lines 188-195: it is not clear what is the conclusion based on the current study and that in the literature - infant UIC and BMIC (pls put full words) but not maternal UIC and infant UIC?

5. Other comments:

a. Line 201 - please use full name of the country, Switzerland.

b. Please check typo errors

c. Some English editing is needed.

**Are the methods appropriate and well described?**
If not, please specify what is required in your comments to the authors.

Yes

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

No
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 recommend additional statistical review  

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