Reviewer’s report

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

Version: 2 Date: 01 Jul 2017

Reviewer: Pattanee Winichagoon

Reviewer's report:

Thank you for responded thoroughly to the comments. There are a few remaining issues to be clarified.

1. Was there any ample size calculation in planning the study? If so, please add to the method section. Since this is the primary data collection, missing urine samples would automatically be missed out, and should not be written as it is an exclusion criteria. This should come in the method section, describing how many pairs met the inclusion criteria, but got excluded due to missing urine samples.

2. This study measured UIC using a single, casual urine sample. Authors eem to be clear that single spot urine can be used to reflect iodine status in a population. However, authors argued that UIC can reflect iodine status by referencing WHO recommendation that low UIC reflects prolonged intake of an individual. This is only valid if several or repeated spot urine samples, not a single spot, of an individual is assessed (e.g., Konig, et al, JN 2011).

3. In connection to (1), the analysis of agreement of UIC between mothers and infants become invalid, because this analysis is done using individual level data. Suggest to remove the kappa analysis, while the correlation already supports the conclusion that maternal (lactating) UIC relates infant UIC. In fact, r = 0.203 (and significant) may not be considered low as there are several factors that may affect the correlation.

4. For clarification, is the ANOVA analysis used in Table 3? Please put is as a footnote for the p-value.

5. Minor/editorial:
   a. Use of article 'the' is not appropriate in a few places in the Background section, and others. There are also a few awkward sentences and incorrect grammar (e.g., was instead of were).
   b. There are a few places which typo errors (which cannot be detected by spell check, because it is a wrong word) remain, for example,
      i. Line 69: should it be 'insufficient' not 'sufficient'
ii. Line 70: suggest to change 'prenatal' to 'pregnancy'

iii. Line 172: 'storied' should be 'stored'; suggest 'retained' may be a better word here.

iv. Line 194: arm 'circumference' not 'circumstance'; and second 'years' of life, should this be -- second 'year'.

**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.

Unable to assess

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

Yes

**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:

Needs some language corrections before being published

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