Reviewer’s report

Title: Brazilian pregnant and lactating women do not change their food intake to meet the nutritional goals.

Version: 1 Date: 3 February 2014

Reviewer: Peter R Berti

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This is a very well done study, but limited by the tool that they should for dietary data collection.

• Major Compulsory Revisions

1. The tool for collecting the dietary data, in which the individual recorded their own diet is quite weak. It is prone to error and bias, and presumably excludes illiterate or marginally literate individuals. The records were “reviewed” by “at-home interviewers”. Does this mean that the interviewer sat down with the respondent and did a careful review of the record? What sort of review was conducted? What prompts were used? Did the interviewers have specific instructions to look for, e.g., fewer meals in a day, or unusually simple dish ingredients (e.g., if “beans” were recorded did they also question if salt, oil, or anything else was included?). Or was the interviewer simply checking for legibility? Please provide much more detail about the data recording process.

2. Then was there data cleaning carried out? Were any records excluded for being unrealistically high or low or for other reasons?

3. And then, after describing the process, a discussion of the severe limitations of the dietary tool should be included. At best the data still are weak, with all the well documented limitations of dietary data tools. This does not mean that the data should not be used. There is still a lot of worthwhile information in this data set. But it needs to be interpreted acknowledging that it is a flawed data set. Like most dietary data, there is surely underreporting here. The average requirement for an adult female with light, moderate or heavy activity is 2000, 2200 and 2550 kcal respectively. The average energy intakes reported (1757kcal for reproductive age women) are impossible low. There is at least at 10% underreporting, if not more. Would all food items be underreported equally? Or might there be more underreporting of some foods than others? The authors cannot know the answer to this with certainty, but they must discuss the consequences of it.

• Minor Essential Revisions

1. Page 5 – “All analyses were performed using SAS software”

I am curious - Does that include the adjustment of the dietary data to remove within person variance? I use PC-SIDE myself (supplied by A. Carriquiry at Iowa State U) but I would really like to have SAS code to do it. Can the SAS code be
made available as “supplementary material”.

2. It is unlikely that the iron requirements of most pregnant women in Brazil can be met through the diet alone, even with iron fortification. Daily iron supplements are usually recommended for pregnant women. Can the authors comment on the appropriateness of this recommendation in Brazil?

3. Table 1 – you present the 95% CI, which is a CI around your estimate of the mean age, schooling and income. But it would be much more useful to know the population distribution in age, schooling and income. So rather than a 95% CI, I would like to see the 5th and 95th percentiles.

• Discretionary Revisions
Page 2 – remove “or” on last line.
Page 4 – give reference for “Brazilian Institute of Geography and Statistics 2011”
Page 4 – I have not heard the method referred to previously as “[12]. The method of the National Cancer Institute (NCI)”. Can you check that that is a common name for it?
Page 7 – “recommendation once they probably were not advised to change their diets.”
I do not know what this means. Please edit.

Page 8 – The translation “The Brazilian Program for Humanization of Prenatal and Birth” sounds awkward in English. Is there a different translation that could be used?

Page 8 – “results of this paper suggest that nutritional guidelines are of concern regarding their effectiveness once we did not see an expected adaptation in the pregnant woman diet.”

Perhaps better written as:

“…results of this paper suggest that nutritional guidelines are ineffective, because there is no apparent adaptation to the higher nutrient requirements in the diet of pregnant woman.”

On page 8 the authors wrote “The very high prevalence of inadequate intake of vitamin A, calcium and sodium was observed in overall population, indicating a need for changes in the dietary pattern of Brazilians.”

The sodium intakes were actually excessive, not inadequate, as demonstrated in their tables. It should be edited accordingly.

Page 9 – “reproductive-age women also present a diet deficient in nutrients.”

Perhaps better written as:

“most reproductive-age women have inadequate intakes of various nutrients ”
(I prefer “inadequacy” for diets and only use “deficiency” for clinical or biochemical measures)

Table 3. – Change “% of inadequacy” to “% inadequacy”

Level of interest: An article of importance in its field

Quality of written English: Needs some language corrections before being published

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