Reviewer's report

Title: Nutritional knowledge as a determinant of vitamin and mineral supplementation during pregnancy

Version: 3 Date: 15 October 2013

Reviewer: Sofia Correia

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Minor Essential Revisions

Comment #1 - Page 12 – lines 15-22
The analysis that the authors present seems to reflect an interaction between education and prenatal care, which favors the positive effect of prenatal care particularly among low educated women. But this effect modification was not taken into consideration in the final analysis. I do not know if the interaction is statistically significant but should be tested and, if yes, the interaction term should be included in the final models.

The chi-square values do not add anything to the text.

Comment #2 - Page 11 – results
A table with sample characterization would be useful

Comment #3 - Page 11 – line 19 to 23
The authors must assume (in the methods) they use means or medians whenever appropriate and not present both, it does not make sense. And, according the parameter chosen should be presented the respective dispersion measures.

Comment #4 - Page 12 – line 5
The association between gestational age at the first prenatal check-up and the use of supplements is not positive. And for me does not make sense to say that marital status is positively associated. Please correct that.

Comment #5 - Table 1
It would be useful to change the table making it easier to read.

Eg. Instead of “less than 9 years school” and “more than 9 years school” the authors may consider:

Education (number of years)
Less than 9
More than 9
(and please clarify in which class are the women with 9 years of education. Probably would be better to use the same categories used in the next two tables)
The cutoff of 18 years of age is not probably the best considering the small number of women aged less than 18.

Discretionary Revisions

Comment #6 - Page 6 – lines 9-16
It could be useful to include the number of women with each exclusion criterion.

Comment #7 - Page 6 – lines 20-24
The sentence “Due to the lack of prior data in our region, 50% is the hypothesized frequency of outcome factor in the population (the proportion of women that used supplements during pregnancy, no matter of their type) when the expected result is unknown, but estimated to be about 50% positive and 50% negative.” is not necessary and is confusing. The authors assume they had used a frequency of 50% based on other studies and can add that it was because of the lack of data for the region. No more information is needed.

Comment #8 - Page 7 – line 20
I would substitute “content of prenatal care” by “components of prenatal care”. Assuming advice on diet and on breastfeeding as content of care seems abusive.

Comment #9 - Page 8 – line 24
Remove “was” from “(…) formal education was; (…)”

Comment #10 - Page 11 – line 13
The authors refer “Nulliparous and primiparous” as being the most represented. I suggest changing the definition since all women had already had a baby (at least the index one) and so no nulliparous women exist.

Comment #11 - Page 13 – lines 11/12
“However, socio-demographic factors were not independent determinants of the use of iron supplements, when adjusting for the number of prenatal visits”. I do not understand this. Education was independent of other characteristics, namely prenatal visits. I think the authors want to say that social factors were not the only characteristics associated of supplements use.

Comment #12 - Page 13 – lines 13-16
“Making more than four prenatal visits was also associated with iron and multivitamin supplements intake, besides folic acid, a positive association that persisted after adjusting for socio-demographic factors.” – Please revise the sentence construction.

Comment #13 - Page 18 – lines 20-23
It is not necessary to repeat all the characteristics associated with multivitamin use as they are stated in the first lines of the subsequent page. In the explanation of the associated characteristics the authors may focus on those that remained statistically significant after adjustment.
Level of interest: An article whose findings are important to those with closely related research interests

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

Statistical review: Yes, and I have assessed the statistics in my report.

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