Reviewer’s report

Title: Abdominal vs. overall obesity among women in a nutrition transition context: geographic and socio-economic patterns of abdominal-only obesity in Tunisia

Version: 2 Date: 24 October 2014

Reviewer: Abla Mehio Sibai

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Abdominal vs. overall obesity among women in a nutrition transition context: geographic and socio-economic patterns of abdominal-only obesity in Tunisia

I thank the authors for their extensive response which has often been backed with evidence and contextualized to the Tunisian culture and circumstances. Also, I agree that the context in Tunis may be very different than countries not only in the West but also from countries in the Arab region and this may have resulted in seemingly contradictory findings. Also, I thank them for attending positively to a number of my comments. I have few points that I leave it up to the authors to decide upon.

1. Collinearity
I am satisfied with the authors’ response. The authors have checked collinearity between the independent variables through evaluation of variance inflation in univariate vs multivariate models and examination of the width of confidence intervals.

2. Dropping the results for the OO
Having used the multinomial logit regression model in table 4, readers would still expect to have another column for another category of the outcome. I suggest that authors indicate again as a footnote in table 4 that ‘Results for the overall only obesity are not presented owing to the small proportion of subjects (1.6%)’. Also, it may be informative to insert the percentage (1.6%) in the statement on p9 line 13 in the revised manuscript.

3. Seemingly contradictory results
In their attempt to explain the seemingly contradictory results, I tend to agree with the authors that firstly, regions have specific characteristics that are distinctive from and not necessarily in harmony with urbanization and/or socio-economic characteristics; and, secondly, associations with obesity would also appear to be highly gender-dependent in the Tunisian context, ie for a given level of household welfare, women working outside the home may benefit from additional factors such as social and intra-household roles or would be exposed to healthier style or desiring nicer body image, all of which would render them less prone to obesity. The authors may wish to mention/refer to such statements/explanations in the discussion.
4. Categories of professional activity

I am still unhappy with the categories of professional activity: would the description of the three categories in the tables as ‘not working/retired’, ‘low’ and ‘upper/intermediate’ be in harmony with the National Statistical Institute Classification. Within the same note, I would suggest dropping the sentence on p5 line 25 in the revised version (For analysis, these were recorded…profession) as it does not add much more detail info.

Finally, please add subtitle (n) to the second column in table 4.

Level of interest: An article of importance in its field

Quality of written English: Acceptable

Statistical review: Yes, but I do not feel adequately qualified to assess the statistics.

Declaration of competing interests:

'I declare that I have no competing interests'