Author's response to reviews

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

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Author's response to reviews: see over
Dear Editor,

Please find the on-line submission for a revised (revision 2) version of manuscript:

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

Please find hereafter detailed responses to reviewer’s 2 comments. In addition to modifications suggested by the reviewer (highlighted in the track changes version of the revised manuscript), regarding the language issues raised by the editor we also have made a number of minute changes regarding wording and/or sentencing (not highlighted for readability purposes). We also have included a clean version of the manuscript.

The submission represents original work that has not been published previously and is not currently being considered by another journal. The authors declare no conflict of interest regarding the content of the manuscript. Each author has seen and approved the contents of the revised manuscript.

We would be pleased that this revised version would be accepted for publication in *Population Health Metrics*.

Yours sincerely,

Pierre TRAISSAC
Response to reviewer Abla Mehio Sibai

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's report:

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.

Author's response

We thank again the reviewer for her appraisal of the revised version of the paper. Cf. below for our detailed answers to her remaining comments.

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.

Author’s response

This has been changed accordingly.

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.

Author’s response

As a matter of fact we entirely agree with the reviewer regarding this explanation as for obese vs. not obese: as discussed by some of the same co-authors in some of the references pertaining to Tunisia but also observed in Morocco, that could be among the factors of why women working outside the home would indeed be overall rather less obesity-prone (all the more for higher level jobs). From our point of view, and from the data analyzed in the present paper, the association of professional activity with abdominal-only obese status (i.e. being a “non-concordant”
subject vs. being a “concordant” subject, which is the main focus of the second section of the discussion) would appear to be a somewhat different issue: indeed as we observed in the present study, only those with “worker/employee” type of job would appear to be somewhat less prone to non-concordance of the two types of obesities, (i.e. less prone to abdominal only obesity) than non-working women, while it was not so for the “upper/intermediate” category (cf. discussion section for interpretation of that finding).

We nevertheless thank the reviewer for the opportunity to elaborate on this issue: the discussion has been enhanced and one reference has been added to underline this specific point.

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.

Author’s response

The three categories were recoded for analysis (as the questionnaire used much more detailed coding of profession based on jobs classification of the Tunisian National Statistical Institute).

Changes have been made accordingly.

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'