Author's response to reviews

Title: Gender and socioeconomic disparities in BMI trajectories in the Seychelles using birth cohorts generated from serial population-based surveys

Authors:

Isabelle A Rossi (isabelle.rossi@chuv.ch)
Valentin Rousson (valentin.rousnon@chuv.ch)
Bharathi Viswanathan (bviswanathan@gov.sc)
Pascal Bovet (pascal.bovet@chuv.ch)

Version: 5 Date: 15 November 2011

Author's response to reviews: see over
Answers to the Reviewers' comments:

We thank the Reviewer for helpful comments and suggestions. We have addressed the issues raised as follows.

Reviewer's report

Title: Gender and socioeconomic disparities in BMI trajectories in the Seychelles using birth cohorts generated from serial population-based surveys.

Version: 4 Date: 2 November 2011

Reviewer Jessica Jones-Smith:

Thank you for the opportunity to re-review this manuscript.

The authors have adequately responded to my previous comments.

I find only minor issues, mostly editorial in nature, that I list for minor revisions.

All pages refer to the marked-up version of the MS.

1. Changing between “overweight” and “obesity” throughout the introduction is distracting. Recommend use the most appropriate term throughout or using overweight/obesity or some other combination of both.
   We have replaced the word “overweight” with “obesity”.

2. The authors introduce the concept of “direct comparison between successive cohorts” in contrast to a cohort analysis” in this version. I don’t know if “direct comparison” will be familiar or comprehensible term to most readers, so I would recommend a more straightforward term or a definition provided upon the first use, but I would also defer to the editors advice in this case.
   We agree that this word is confusing and this methodological issue needs clarification. We have reworded partially the background section and the discussion section to clarify that a same dataset from repeated cross-sectional surveys can be analysed either by comparing results across successive surveys (the focuses is on a period effect) or by modelling data using cohort analysis in order to compare data across successive birth cohorts and that we chose to present finding based on cohort analysis.

3. P3, last para, last sentence: is there a word missing such as “and” after “respectively” in this sentence.
   This paragraph has been reworded (see point 2 above).

4. P4, first para: the sentence “However, these data were based on ...” “data” should be results or findings, not data.
   We have replaced the word “data” with “findings”.

5. Same para: “which does not allow to assess” should be which does not allow assessment.
   We have replaced “to assess” with “assessing”, which we find even more appropriate than “assessment”.

6. P4, second para: the addition of the word “all” here before data just seems distracting and instead of indicating data from all individuals who had non-missing covariates, it sounds to this reader as if all variable in the survey were used. 
   We have dropped the word “all”.

7. Throughout, the authors use the word “data” when referring to “findings” or “results”. I would recommend the word “data” be reserved for information that is not processed through tabulations or models. Everything else is better described as a finding or result, rather than data.
   We have changed the word “data” with “findings” when appropriate.

8. Page 7, second paragraph. The sentence that describes the testing of interactions and the rationale for such doesn’t seem to match the later description in the text. Shouldn’t the interaction between SES and age test whether the relation between SES and BMI varies by age and the interaction between SES and cohort test whether the relation between SES and BMI varies by cohort (or over time). I see how age is a version of time, but the description as written doesn’t seem to match the interpretation in the results and is confusing to this reader.
   We have reworded the corresponding method section as follows:

   We included an interaction term between SES and age and an interaction term between SES and cohort (year of birth) to test whether the relation between SES and BMI varied by age, respectively by cohort.

9. Throughout I would recommend deleting the word “effect” or replacing it with some version of “association” or “relation” since “effect” implies causality. Occasional use for simplicity might be ok, but I would recommend a more judicious use.
   We agree with the reviewer that the use of the word “effect” may suggest causality. However, the word “effect” is commonly used in cohort analysis and we have now clarified in the introduction that:
   “We are using throughout this paper the commonly used term of “effect” without an interpretation of causality”.

10. P10, first para, last sentence: regarding the obesogenic environment as a common cause—does this encompass the secular trend towards decreasing occupational activity as more people have sedentary jobs? Or are these separate concepts?
    We have added a very recent review paper in Lancet (The global obesity pandemic: shaped by global drivers and local environments. Boyd A Swinburn, Gary Sacks, Kevin D Hall, Klim McPherson, Diane T Finegood, Marjory L Moodie, Steven L Gortmaker. Lancet 2011; 378: 804–14), that explicitly refers to, and elaborates on the interplay of global and local “obesogenic” drivers of the obesity pandemic. Central to the concept of the obesogenic environment is not so much a hypothetical decrease of physical activity over time (which is not obvious when examining trends in objectively measured physical activity in several populations, e.g. using doubly labelled water) but the main driver is rather the global food system, which is producing more processed, affordable, and effectively marketed food than ever before, and this interacts with local environment and individual factors (including SES).

11. P12, Conclusion: Again I find the term “all data” confusing here. Now that the N and the linear cohort variable are better explained, I do not think that the term “all data” adds clarity.
    We have dropped the word “all”.

12. Figures should be stand-alone. Therefore the legend should include a description of which variables were in the linear regression (ie, what was adjusted for and were the interactions included). This is in the text but it should also be listed with the figures. We have added this information in the Figures. We have also added that the choice of dates of birth of the cohorts displayed in the figures is arbitrary (i.e. other birth dates could have been selected). Of note we have slightly modified our presentation of results, with Figure 1 now displaying plots of BMI according to birth cohorts without any further adjustment for the sake of descriptive purposes (while Figure 2 plots predicted BMI trajectories adjusted to several covariates).

**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.
Reviewer’s report

**Title:** Gender and socioeconomic disparities in BMI trajectories in the Seychelles using birth cohorts generated from serial population-based surveys.

**Version:** 4 **Date:** 23 October 2011

**Reviewer (Samuel Olatunbosun):**

**Reviewer’s report:**

No further comments

**Level of interest:** An article of importance in its field

**Quality of written English:** acceptable

**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.