Reviewer's report

**Title:** Acculturation, immigration status and cardiovascular risk factors among Portuguese immigrants to Luxembourg: findings from ORISCAV-LUX study

**Version:** 1  **Date:** 13 August 2012

**Reviewer:** Anna Wilkinson

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This is manuscript presents novel findings related to the prevalence of cardio-vascular risk factors among Portuguese immigrants to Luxembourg. Overall the manuscript is well structured and written, but does need to be read closely for copy editing. I have made some such suggested changes under minor comments, but there are more. My main concerns with this manuscript relate to the results and discussion of ‘overweight/obesity-acculturation hypothesis’ among the Portuguese immigrants, which are specified in more detail in points 2, 4, 5 and 7 below.

**Major Compulsory Revisions**

1. Page 4, introduction: When the authors report on previous literature examining the relationship between acculturation and health, they note that migration may influence the prevalence of cardiovascular risk factors, and that ‘Cultural factors have been linked to poor health practices and risk of diabetes[9], hypertension[10], and obesity[11], [12].’ The literature suggests that migration may have positive effects too. If possible, please add a couple of sentences and supporting references that demonstrate these positive effects of immigration on risk factors for cardiovascular health.

2. Page 5, introduction: The first two objectives of the study as currently stated are not clear. Please clarify.

3. When the acculturation indicator measure is introduced on pages 6 and 7, it is not clear which variables are included the single summary acculturation score. On page 8, when the authors state “using the score which is the sum of the three proxy indicators” it becomes clearer which variables are included. Please clarify which variables are included in the indicator measure when it is first introduced.

4. Page 9, second paragraph: Suggest you change the sentence: “On the light of these findings, the following analyses emphasize merely on testing overweight/obesity-acculturation hypothesis among Portuguese of first and second generation, by using proxy variables of acculturation” to “In light of these findings, we focused on examining relationships between the overweight/obesity status and the acculturation among Portuguese of first and second generation, by using our proxy variables of acculturation.” I could not find earlier in the manuscript when you specify hypotheses; the original sentence seems out of place.
5. Page 11, last paragraph: Again, I am unsure where you state “overweight/obesity-acculturation hypothesis among Portuguese of first and second generation” that is mentioned in this paragraph and on page 9. Please state your hypothesis in the introduction, or change the language in this sentence and on page 9.

6. Table 2: Are the data presented in table 2 regarding hypertension correct? The proportions of Portuguese immigrant vs. Luxembourgers with hypertension are reversed after age and gender standardization (e.g. 38.22% and 42.18% respectively vs. 44.63% and 38.81% respectively). Please check as this does not occur with any of the other variables presented in the table.

7. Figure: First the figure needs to be better explained. Second, and more importantly, given that there are n=22 second generation Portuguese immigrants, how stable are the ORs presented in the figure? This in turn brings into question the validity of the interpretation of the null findings in the discussion.

Minor Essential Revisions

1. In the abstract, under Objectives, the authors first goal is to “(1) investigate the disparity of...” This suggests that there is reason to believe a disparity exists, which is not consistent with the statement made in the background. Suggest you change to ‘(1) investigate the prevalence of...”

2. In abstract, under Research design and methods: Suggest using “immigrant generation status,” rather than simply “generation” to improve clarity. This change also could be made in the introduction when the study objectives are presented.

3. Page 6: Suggest you change “Smoking status was bi-categorized as current smoker, and currently non-smoker (including former smoker and never smoked)” to “Smoking status was categorized as current smoker or non-smoker (which included former smokers and never smokers)”

4. Page 7, first sentence, third paragraph: Change “Alike to other relevant research studies...” to “Similar to other research studies...”

5. There are more examples, similar to the four noted above, in the manuscript. The manuscript will benefit greatly if it is edited for English expressions and other minor grammatical errors, both of which will serve to improve the overall readability.

Level of interest: An article of importance in its field

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

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

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