Reviewer’s report

**Title:** The prevalence and correlates of behavioral risk factors for cardiovascular health among Southern Brazil adolescents: A cross-sectional study

**Version:** 1  **Date:** 26 March 2012

**Reviewer:** Juan Miguel Fernández-Alvira

Reviewer’s report:

**Overall Comments**
This report extends research done on behavioral risk factors for cardiovascular health during adolescence in Brazilian population. The paper is adequately conceived and theoretically grounded, but needs extensive edit.

**Major Compulsory Revisions**

1. **Abstract:** Results section needs to be rephrased. I suggest to move the “approximately 30% of the adolescents reported three or more…” sentence to the top of the section, before the description of the high risk groups.

Conclusions section: I think the presented conclusion is not answering the main objective of the analysis, which is to examine the prevalence and correlates of the BRBCH. I suggest to stress the high prevalence of risk factors and the simultaneous presence in a third of the sample.

2. **Methods:** in the second paragraph of the sampling procedures section, it is not clear whether all the contacted schools participated in the study. There were no refusals? Written permission of the school directors was needed?

In the third paragraph of the Sampling procedures section, it is not clear whether all children receiving an invitation to participate in the study actually participated. From the text it seems that 100% of contacted children accepted to participate. Is this the case? In any case, it should be stated.

3. **Methods:** in the fourth paragraph of the “measures and data collection procedures” section, it is stated that cases with consumptions over 7000 kcal/day or below 500 kcal/day were excluded. The reference 19 doesn’t give support to this criterium. Further, Does this cut-off criterium take into account sex, age or BMI variables? Authors should clearly state the cut-off choice criteria.

4. **Methods:** in the “possible correlates of isolated and simultaneous BRFCH” section, it is stated that economic class and the education attainment of the head of the household were assessed. Although the authors include the reference of the questionnaire, it would be of interest to expand a bit on those parameters. In the manuscript, the socio-economic correlates of the risk factors are of paramount importance. It is not clear which variables include the “economic class” (just income?) and who was considered the head of the household (parent
working outside? the father? The highest education level in the household?)

5. Discussion: in the seventh paragraph the gender differences on the BRFCH are highlighted. These differences are also of paramount importance for prevention. However, the reference 38, used at the last sentence of the paragraph makes reference only to tobacco and alcohol, but not to the rest of the included BRFCH. Other than the concept of identity, other factors such as preferences are also important. Some reference including the rest of the behaviors should be cited.

6. Discussion: in the eighth paragraph the impact of economic class on the BRFCH is discussed. However, some references to the findings in other countries are needed, specially for risk factors such as TV viewing and physical activity. It is well known the inverse relationship between economic class and such factors in Europe countries for example, and the direct relationship in other countries. As the relationship between economic class and behavioral risk factors changes depending on the country or region, it should be stated at this stage, in order to clarify the actual situation in the south of Brazil right now.

7. Discussion: as a strengh of the study the authors state that the analysis was done in a representative sample of adolescents from public schools in a major Brazilian municipality. The sample was representative of the total municipality or representative of the public schools? Were private schools intended to be included in the study? Wich is the % of private schools in the municipality, and further, could this affect the representativeness of the sample?

8. Conclusions: this part is too long and repeats the results. I suggest to shorten it, and focus just on the main findings (e.g. high prevalence of simultaneous presence of BRFCH and the impact of socio-economic variables on this prevalence) and in the need of tailored healthy lifestyle promotion strategies.

Minor revisions:

1. Background: in the second paragraph “… characterized by a high vulnerability to environmental factors, such as the media, friends, school and the community.”, please replace “high vulnerability” by “high susceptibility”.

2. Background: in the first sentence of the third paragraph, I suggest to delete “inapropriate”. You could merge this sentence with the second (e.g. “Several behaviors have been linked to cardiovascular diseases, and therefore are considered as behavioral risk factors for cardiovascular health (BRFCH)”)

3. Methods: First sentence should be rephrased carefully in order to make it clear.

4. Discussion: in the first sentence, I suggest to replace “demonstrate” by “show” or “illustrate” or “reflect”.

5. Discussion: the last sentence of the tenth paragraph should be rephrased. It is too long and difficult to understand as it is in the present form.
6. Discussion: in the eleventh paragraph, replace “feeding habits” for “eating habits”

7. Throughout the manuscript, I suggest to replace “soft drink consumption” by “soft drinks consumption”.

8. Table 2: in the first line, the symbol of % should not be there.

**Level of interest:** An article whose findings are important to those with closely related research interests

**Quality of written English:** Not suitable for publication unless extensively edited

**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