Reviewer's report

Title: Correlation between mean body mass index in the population and prevalence of obesity in Brazilian capitals: empirical evidence for a population-based approach of obesity.

Version: 4 Date: 25 January 2015

Reviewer: Oscar Fernando Herran Falla

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Major Compulsory Revisions:

In my opinion there are several aspects that are very important and must be rebuilt, supplemented or better supported;

1. The first has to do with the regression model used. It is well known that there are important determinants such as socioeconomic status, age and sex (confounders), for which I think would have been required to adjust the correlations. As the authors state, these determinants or not considered, or it is assumed that they behave the same way the capital twenty studied, which is highly unlikely.

2. In the discussion, the weakness of a model is not mentioned without considering these confounders. Moreover, in discussing issues not directly related to the results, as the themes of the interventions mentioned. While this may serve as an indicator of the impact of population-based interventions, the discussion is not in that sense, but it takes another level, not related directly to what I presented.

3. Another aspect that needs to be widely discussed is the effect of modeling a dependent variable of another that gives origin to it. That also defines the magnitude and conceptually. That is, the origin of the prevalence of obesity is the BMI. I think the analysis "nonobese subjects" does not correct this situation.

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

Quality of written English: Acceptable

Statistical review: Yes, and I have assessed the statistics in my report.

Declaration of competing interests:

I declare that I have no competing interests