Reviewer’s report

Title: Consumption of sweetened-beverages and poverty in Colombia: when access is not an advantage

Version: 0 Date: 10 Nov 2017

Reviewer: Wendy Wrieden

Reviewer's report:

Although the written English in this paper was good I still found this paper difficult to read and understand possibly because the majority of the statistical methods used to assess inequalities in Sugar sweetened because the majority of the statistical methods used to assess inequalities in Sugar sweetened beverages (SSBs) were unknown to me. I was particularly confused by Table 1&2 which listed a large range of so called indices of inequality of SSB consumption without any definitions except in a reference that was in Spanish. I would recommend that this paper is rewritten to make it more accessible to an English speaking audience and a more general Public Health community. Approximately half of the references were to publications in Spanish and it is therefore not possible for many potential readers to refer to these without translation.

The nutritional aspects of the study require more detail. It is not clear how the FFQ has been tested and validated and a copy of the FFQ should be accessible to readers. A comment was made that the question on SSB did not distinguish between carbonated and other soft drinks or specify the type of sweetener so it is possible that measurement included sugar free beverages as well.

The conclusion that the authors make could be easily inferred from the figures they provide so I would like to see more explanation about the value of all the various different inequality calculations.

Particular issues.

In the abstract prevalences and frequencies are given for children and men. Why exclude women from this summary? It would be better to give figures overall rather than miss out half the adult population.

Introduction. P2,I lines 57-59 the obesogenic environment could be expanded to include the food environment and food availability.
On p3, lines 57-58 or p4, lines 33-36 add a reference to any validation or testing that has been carried out on the FFQ prior to its use. Was the same FFQ used for adults and children? Has it been validated or compared with other methods in all the age groups surveyed?

P4. Lines 21, 22. if nine geodemographic units has no information on monetary poverty were they excluded. I think this needs to be said even if it seems obvious.

Lines 35-37. What was the question asked? It is not enough to say SSB (boxed, powdered, bottled). This needs to be explained for an international readership. It would also be useful to mention any Face validity results for this question if available, i.e. what did respondents understand by this question.

Lines 39-41. Was this frequency normally distributed? The data is surely ordinal and should perhaps be reported as medians.

P5. Line 10. Please write this tests in the conventional way, i.e. Chi-squared test or Pearson's chi-square test and independent sample t-test. Check journal guidelines and published articles for suitable way to do this. Also check if t-test is the most suitable statistic if the data are not normally distributed.

Lines 23-29 re Calculated inequality indices. The reference here to easily accessible texts refer to Spanish publications. Much more detail is required and an English reference to suit an English language publication.

P6 line 6. This is the first time that correlation has been mentioned. What sort of correlation was this?

P7. Discussion. I appreciate the point about not only assessing extremes and that prevalence and average frequency of SSB consumption may be higher in those with a higher monetary income but am unable to check the supporting literature as it is all for a Spanish speaking audience.

Some good points are made under limitations but they do draw attention to the fact that the study conclusions may be wrong if the item SSB includes diet drinks as well. If this is a possibility perhaps the paper should be renamed as "Consumption of sweetened beverages and poverty etc.

Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

No

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

Unable to assess
Are the conclusions drawn adequately supported by the data shown? 
If not, please explain in your comments to the authors.

No

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I recommend additional statistical review

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