Reviewer's report

Title: Dietary patterns in the five Brazilian macro-regions.

Version: 3 Date: 28 April 2011

Reviewer: Cathrine Lau

Reviewer's report:

Overall:

Major concerns:
- the methodology of the paper is still hard to follow and understand
- there are several errors in reporting of the results, which also makes the discussion unimpressive

Abstract:

There is still some language errors in the last two lines of the results in the abstract (whereas should be changed to where, Mixed patterns to The mixed pattern)

Conclusion: PSU's should be deleted from first sentence of conclusion. In the last sentence of conclusion for should be deleted and HBS should be defined.

Introduction:

3rd paragraph:
Line 1: The rationale for the use of HBS is not clear. The line of thought should be clarified.
Line 3: dietary practices should be changed to dietary habits

4th paragraph: Rewrite with more full stops to make it more readable. And specify that second is the second pattern.

Objective: I guess there should be an “and” after HBS?

Page 4,

paragraph 3. Full stop after large regions and add of and for in the following sentence: “….large regions. The sampling of HBS was ……………….representative estimate for the country…….”

paragraph 4. The fish category included 900 different codes and they were aggregated into one group? If yes, please describe that.

Paragraph 6. the 2nd sentence should be corrected to: Therefore for purchases such as rice, beans, sugar and oils which usually are bought monthly the total amount was zero or many kilograms. Hence the amount ………

Page 5

Line 2: values should be food groups
2nd paragraph, the last part is unclear. Please rephrase.

4th paragraph: a cut off loading of 0.15 is very low considering how high loadings you have observed. I suggest a cut off equal to 0.4 or at least 0.3. I have noticed that it has been changed from 0.20 to 0.15 since first submission.

Results
Generally a very rough and imprecise report of the results.

Page 6, paragraph 3: Flour is not part of the pattern in North. You do not mention sugar, butter and sweetened beverages which also have a high loading on Brazilian pattern. Specify that these results can be found in table 2.

Page 6, paragraph 5 starting with “In the South…….” Here is a lot of reporting errors. They should be corrected.

Page 7, upper paragraph. The sectors are the geographic sectors I suppose.
The sentence: “An inverse relationship was observed between income and the Brazilian rice and beans pattern in all regions” is only significant in south. This should be corrected.
The sentence “The PSUs in which the household heads presented elevated mean of education years demonstrated greater adherence to the Mixed patterns characterized by the acquisition of fruits, vegetables and leafy vegetables, sweetened beverages, and diet and/or light products.” Sould be changed to “For PSUs in which the household heads had an elevated mean of education in years, a greater adherence to the Mixed patterns characterized by the acquisition of fruits, vegetables and leafy vegetables, sugar, and diet and/or light products was observed.”

Specify where the results reported in the following sentence can be found “The same relationship was observed for mean sector’s income.”

Discussion.

Page 7:
Again the resume of results is not correct as results have been described incorrectly.

There seem to be some repetitions in last paragraphs on page 7 of the discussion.

Page 8, last paragraph, last sentence should be changed to “The Brazil have taken many actions for to improve nutrition as part of their public health policies. The data of the HBS can help to recognize the different food choices in the large regions of the country.”.

Table 3:
How can the variation explained in the rural areas add up to more than 100%?
Table 4: It must be possible to name pattern 3.

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

**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 am employed by Steno Diabetes Center A/S, a research hospital working in the Danish National Health Service and owned by Novo Nordisk A/S.

I own shares in Novo Nordisk A/S.