Reviewer’s report

Title: Smoking, alcohol and dietary choices: evidences from the Portuguese national health survey

Version: 4 Date: 19 April 2007

Reviewer: Andrew Roddam

Reviewer’s report:

General

This paper reports on the association between smoking and food consumption from the Portuguese National Health Survey. I am restricting my comments here to the statistical analysis and interpretation of the data.

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Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)

1. The main problem is that the authors have failed/been unable to appropriately account for the survey design within the analysis. This is particularly problematic because it is highly likely that multiple respondents from households will have correlated measurements which have not been accounted for in the analysis. However as the authors perform all analyses separately for men and women this effect is likely to be somewhat small although their discussion of this issue is rather limited. As has been suggested at the very least this should be reformatted to talk about possible biases and potential changes to estimates of standard errors and their corresponding impact on statistical power. Furthermore the sampling strategy was a probability weighted sample and the authors should discuss the effect that not accounting for this survey design might have on the analysis.

2. Another important limitation that the authors have failed to address is the issue of reporting validity. It is well known in dietary surveys the accuracy/validity is often dependent on personal characteristics and therefore it is possible that smokers may, on average, be more likely to under or over report their consumption of a food. This was of some concern to me as the results in Table 4 seemed to suggests that the more you smoked the less likely you were to have eaten most foods the day before. Surely it would be reasonable to suggest that if you were less likely to eat certain foods you must (to maintain energy balance) be more likely to eat other foods. Is it simply that these foods were not captured by the very limited questionnaire? Or could reporting bias be a real problem here?

3. The authors should combine Table 2 with Table 4 so that it is easier for readers to see the N’s and percentages in each category.

4. In table 3 average beverage consumption is reported by sex and smoking status – but in the text there is report of associations between beverage consumption adjusting for age and education – why not report adjusted mean consumptions rather than raw consumption? Also why not include p-values for trend in the Table and make it more like Table 4?

5. I found some of the discussions – specifically relating to the health effects of fruit and vegetables etc to be inappropriate in this manuscript. This is a very complex subject in so far as smoking is a risk for chronic disease. F&V consumption might offer some protection (evidence more limited than what the authors seem to suggest) but smokers eat less F&V. I think the authors should significantly shorten this part of the discussion and stick to conclusions which they can support form their analysis – i.e. patterns of consumption of foods.

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Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

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Discretionary Revisions (which the author can choose to ignore)
What next?: Unable to decide on acceptance or rejection until the authors have responded to the major compulsory revisions

Level of interest: An article of limited interest

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 declare that I have no competing interests