Reviewer's report

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

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Reviewer: Aage Tverdal

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

Major:
I note that from the response letter that it is not possible to take dependency within household into account. This is surprising as long as household was the sampling unit. I think that this defect should be clearly stated in the Method paragraph. On the other hand, perhaps the problem is minor and not major, as participants were recruited from 21808 households. As there were 38225 participants (table 1), it was only 1.75 persons in each household, on the average. Analysing men and women separately gives only 1 person in each household?? In any case, dependencies between observations will decrease the power as compared to independent observations. The estimate of the variance will be too small and the confidence intervals too narrow. Whether the odds ratio estimates will change is dependent on the method of choice, GEE (generalized estimating equations) or random coefficient analysis. (confer for instance the discussion in Twisk JWR. Applied Longitudinal Data analysis for epidemiology, page 140). Thus the discussion part on this issue should be reformulated.

Minor:
I still think the discussion moves into topics not supported by these data. One example is the smoking relation to homocystein. It is nothing on homocystein in this study. It is probably true that there is a dose-response relationship between smoking dose and homocystein level. But I am not sure what would be the best opinion on homocystein and cardiovascular disease. The authors refer to one article from 2002 claiming that the link between hyperhomocysteinemia and cardiovascular disease has been established, but two randomised studies (HOPE-2 and NORVT) found no cardiovascular benefit from reducing homocysteine with folic acid and B vitamins. New Engl J Med, 2006 (march, I think).

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