Reviewer's report

Title: The positive association between number of children and obesity in Iranian women and men: Results from the National Health Survey

Version: 2 Date: 11 February 2008

Reviewer: Rebecca Hardy

Reviewer's report:

- Major Compulsory Revisions
1. The unadjusted association between number of children and obesity should be presented as well as the adjusted one, so that the influence of the potential confounders included in the analysis can be observed.

2. There needs to be more discussion on the possible mechanisms relating to the association in women as well as men. The fact that similar associations were seen in both genders suggests a lifestyle, rather than a biologic, impact of having children in women. The extent of change in the association before and after adjustment for the confounding variables would be useful in informing this discussion.

3. It is unclear what is meant by â€œselecting the cluster was made systematicallyâ€ (top of p5). The correlation between couples is correctly accounted for by the GEE model, but consideration of whether the cluster sampling should also be accounted for is required.

- Minor Essential Revisions
1. Abstract: The first line of results should mention number of children first as this is the focus of the paper. Delete the first 2 sentences of the conclusions as the conclusions should relate to the findings from this specific study.


3. I think the sentence ending â€œin recentâ€ (without a full stop) (p3, line 7) should read â€œrecent years.â€

4. The sentence beginning â€œSmoking cessation,â€ (p3, start of paragraph 4) should be corrected to â€œwhich fortunately often occurs once women learn of their pregnancyâ€ rather than â€œwhich fortunately occurs when their learn of pregnancyâ€.
5. It is stated (p5) that BMI was examined using the four WHO categories, but analyses only appear to be based on a binary outcome (obese versus not obese).

6. Delete “physical activity” from the first sentence of the final paragraph on page 5 as it does not relate to the economic factors being discussed in the rest of the sentence. Physical activity should be dealt with in a separate sentence, probably in the paragraph relating to alcohol consumption.

7. The definition of active workforce should be edited for clarification purposes.

8. It is stated that “the strength of the association between number of children and obesity increased” (p7). Should this read “the odds of obesity increased with increasing number of children”?

9. Reword or delete the sentence (p8) “Patterns that could explain this association in men are not detected.”

10. Clarification of the meaning of the coefficients presented in Table 2 would aid understanding of the results. Better use of footnotes and a clearer description of the models fitted in statistical methods section and/or results are required. How the different coefficients for male and female were obtained (i.e. presumably by interaction terms) should be clarified. In particular “male vs female: active workforce” and “male vs female: nonactive workforce” are hard to interpret and the description in the footnote should be improved.

**- Discretionary Revisions**

1. I feel it would add to the paper if BMI was also analysed as a continuous measure.

2. It would be useful to highlight the advantages/disadvantages of having married couples in the analysis in comparison with studies where independent samples of men and women have been considered.

3. The recommendation that interventions to reduce the number of children to prevent obesity in men and women would be beneficial is only one option for prevention and is rather drastic considering the mean number of children in this sample is not high (mean 2.8). As a lifestyle and behavioural explanation is likely, interventions to improve lifestyle behaviours within families e.g. reduction in consumption of fast food (mentioned on page 8) should be considered.

**What next?:** Unable to decide on acceptance or rejection until the authors have responded to the major compulsory revisions

**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:** Yes, and I have assessed the statistics in my report.
Declaration of competing interests:

I declare that I have no competing interests