

## **Reviewer's report**

**Title:** Fruits and vegetables consumption among elderly people: a cross sectional study from Iran

**Version:** 1 **Date:** 15 October 2009

**Reviewer:** Heinz Freisling

### **Reviewer's report:**

#### General

Investigating determinants of fruit and vegetables (FV) consumption is an important research area to provide public health policies with latest evidence for action. Older adults, in particular, are key target groups in the prevention of dietary inadequacies and chronic diseases. The question posed by the authors is not new, but as information on these topics from lower income countries is scarce, the present study contributes to the respective knowledge. The study aims have been adequately defined.

Methods are appropriated and well described, except for assessing fruit and vegetable consumption and chronic disease status (see details below).

The discussion part may need some amendments.

The title does not entirely convey what has been found.

Writing is acceptable, but English may need extensive editing.

Some questions remain as outlined below and the following comments may help to further improve the manuscript.

- An article of importance in its field
- Unable to decide on acceptance or rejection until the authors have responded to the major compulsory revisions
- No, the manuscript does not need to be seen by a statistician.

#### Introduction

##### Minor essential revisions

1. Is there information regarding FV consumption in Iranian population groups available, and in particular in elderly? If yes, please indicate amount in g.
2. Was the data on FV intake in 21 countries you mentioned conducted at individual level or derived from food balance sheets?
3. Second paragraph on behavioral determinants of FV consumption needs rephrasing as there are a lot more determinants than knowledge, attitudes, skills and self efficacy.
4. What is the second most cause of death in Iran?
5. Specify in the study aims which determinants you are investigating.

## Methods and results

### Major compulsory revisions

1. Assessment of FV consumption: how many FV items did you ask in your questionnaire? In general, this part is not very clear. You also mentioned 24-hour dietary recall data. Which questions were asked there regarding FV consumption? Give more details.
2. You divided respondents into two groups using mean daily serving of FV as a cut-off. Comparing the results from t-test and anova (table 1) with log regression (table 3) indicates either some confounding in t-test and anova or misclassifications in log regression. For example, from table 1 economic status is a strong predictor of FV consumption (expressed as servings per day), but from log regression the results did not reach statistical significance, though there is a clear trend observable. To address this, I could suggest the following. Did you consider log-transformation of estimated servings of FV to adjust for the skewed distribution of FV consumption? You could also divide the sample into e.g. quartiles of FV consumption and compare the 1st vs. 4th quartile only in log regression (to increase statistical power, even though you have less subjects in each group).

### Minor essential revisions

1. Is there a member fee for the elderly centres in Teheran? Who is eligible for these elderly centres?
2. How was chronic disease status assessed?
3. You mentioned several times reliability of the instruments – are these coefficients derived from the literature or from repeated measurements in your sample? If from your sample, you would need to give more details on that (e.g. was it a sub-sample, time span between the repeated measurement,...).
4. How did you derive or decide on the sample size required for the study?
5. Was weight measured with the same digital scales and were the scales calibrated (give also details on the brand of the scales)?
6. The difference between “unemployed” and “retired” is not quite clear. What is the usual age of retirement in Iran?
7. Which educational background did the interviewers have and how long did one interview take on average?

## Discussion

### Major compulsory revisions

1. In your limitations you might also address the self-report instrument of FV consumption and the measurement error associated with it. Did you capture seasonal aspects in your study, as one can imagine that season might influence availability of FV.

### Minor essential revisions

1. Explain why you deduct from your results that more research is needed to assess relationship between education and knowledge regarding FV consumption.
2. Specify which kind of knowledge has been associated with healthy eating? Do you mean general education or educational level?
3. Give your interpretation why you did not find differences in FV consumption according to gender.

#### Tables

##### Minor essential revisions

1. Titles of the tables should be more self-explanatory.
2. Add as a food note on which statistical tests the p-values are based on.
3. Be consistent with reporting decimals.

#### **Declaration of competing interests:**

I declare that I have no competing interests.