Author's response to reviews

Title: Association between fruits and vegetables intake and frequency of breakfast and snacks consumption: a cross-sectional study

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Author's response to reviews: see over
Reviewer’s report
Title: Association between fruit and vegetable intake and frequency of breakfast and snacks consumption: cross-sectional study
Version: 1 Date: 3 May 2013
Reviewer: Lieke Raaijmakers
Reviewer’s report:
General comments
You conducted a study on an interesting topic. I recognize the importance of conducting studies into the prevalence of certain risk behaviors and associations between these behaviors in specific populations. Strength of your study is the large sample. The methods lack a clear description of your statistical analyses. The content of your results section is not well structured and the description of the results needs some revisions. In your discussion section you elaborate on the findings of your study, which is interesting, but try to compare your findings with previous studies or refer to comparable studies more often.

Introduction
- I miss information on the prevalence of the dietary behaviors among the research population of your study or more general in your country/worldwide.

We added this sentence: Another study on 9-year-olds children, carried out by Lazzeri et al. (2006) in our Region showed that the frequency of breakfast decreased with increase the mother’s BMI classes and their education level.

I think it is useful that you included this reference. However, the place of the information in the introduction is not logical to my opinion. Moreover, this does fully cover my comment since I was interested in previous studies reporting on the prevalence of the dietary behaviors. Please add additional literature on the prevalence.

We added this sentence: In Italy, the main national-level study that investigated fruit and vegetable intake of adolescents is the Italian HBSC survey [10]. The daily fruit consumption prevalence was found to be 45.5% for 11-year-olds, 39.9% for 13-year-olds and 38.4% for 15-year-olds, while the daily vegetable consumption prevalence was 21.1%, 19.6%, 20.2% respectively [11].

I think it is useful that you added information on the prevalence of the intake. However you do not explain what is meant with daily consumption? What do the percentages mean in this context? That is unclear to me. Please clarify by defining daily consumption. For example between brackets.

We added this sentence: In Italy, the main national-level study that investigated fruit and vegetable intake of adolescents is the Italian HBSC survey [10]. The percentages of adolescents who report eating fruits and vegetables with a daily consumption ("Once every day" and "Several times every day") are very low. The daily fruit consumption prevalence was found to be 45.5% for 11-year-olds, 39.9% for 13-year-olds and 38.4% for 15-year-olds, while the daily vegetable consumption prevalence was 21.1%, 19.6%, 20.2% respectively [11].

-I think it is valuable to make clear in the introduction that no previous studies were conducted in your country and that there is lack of consistent evidence on the topic based on international studies.

We added this sentence: No earlier study on this subject has been conducted in Italy and there is a lack of consistent evidence even in international studies.

I cannot find where you added this sentence in your manuscript.

Sorry, You are right, I was sure I had already add the sentence, however we have now inserted it at the end of introduction
The sentence does not fit the previous paragraph very well now.
In the previous paragraph we referred to studies about the association between meal frequencies and fruit and vegetable intake. In Italy such studies are lacking. Maybe it was not clear, in the sentence we added, what we were referring to, so we modified the sentence as follows: No earlier study on this association has been conducted in our country and there is a lack of consistent evidence even in international studies.
Methods

- The description of the different logistic regression analyses is confusing, please explain your analyses in more detail and rewrite this part, cause I am not sure what exactly you did in the analyses.

Done

The explanation is still confusing.

All the analyses were carried out using SPSS 20.0 (SPSS Inc., Chicago, IL, USA) statistical software package.

All the categorical variables are expressed with number of cases (%), and the continuous variables with mean (sd). In the descriptive analysis, we tested sex and age differences by Chi² test and used Cochran’s test to test for trend.

Multivariate logistic regression analyses were used to study the association between meal intake (breakfast and snacks) and fruit and vegetable consumption. Initially, we analyzed the entire sample implementing two models: one taking into account the consumption of fruit as the dependent variable and the other taking into account the consumption of vegetables, always as the dependent variable. The covariates included in both models were breakfast and snack consumption.

The models were adjusted for age, sex, socioeconomic status, family type, body perception, weight status and intended weight loss. Next, we introduced the variable sex as an interaction term with snack and breakfast consumption to test whether gender could be considered as a moderator for low fruit and vegetable consumption. This step was performed again separately by gender. In the last phase of the analysis, we have included age as an interaction term with breakfast and snacks consumption. A separate analysis was conducted by gender to assess whether and to what extent age could be considered as a moderator. Throughout the paper, statistical significance has been defined by conventional levels of p<0.05.

Is it correct that you separated both analyses by gender (see highlighted sentences above)? This is still confusing to me.

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New comment

In the methods subsection ‘covariates’ you describe the following: ‘Respondents were categorized into four categories “Traditional family” (living with two biological parents), “Single parent”, “Reconstructed family” (Living with one parent and one step-parent) and “Other family types” (e.g. foster homes).’ You do however not mention what concept these categories refer to. Please change this.

We added: The “family type” variable was based on the participant’s self-reporting of the people they lived with.
In addition, you use a lot of white lines and spaces in this section. Please check the layout.

Done

Results
- Furthermore, you only report the p-values of the Chi² test, while I would report the test value as well.
You can also choose to include an extra table with the results of the univariate analyses.
We put in the text the values of chi-square
Please use the symbol for Chi²: χ² since it is more concise than writing chi-square
Done