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.

Major compulsory revisions
In general the paper needs editing on English spelling and grammar, since I notice quite some spelling errors, errors in the formulation of the sentences and sloppiness in general.

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.
- 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.

Methods
- I prefer to report the response and demographic characteristics in the results section
- In the paragraph on independent variables you refer to study number 33, when stating that there are no clear guidelines defining regular meal intake (page 6). What is the point of your statement? I would either write that there are no clear recommendations available in Italy or refer to an international recommendation. Now, you refer to recommendations for Nordic countries and I am missing the direct relevance of this reference. Moreover, dietary habits and recommendations appear to differ between countries. You continue with explaining the definition of regular meal intake, which is confusing. Please reconsider relevant studies and rewrite this part of your methods section.
- The structure of the description of the covariates is missing. Please restructure
the paragraph and describe the measures in the same sequences as you mention the covariates in your first sentence.

- In the paragraph on statistical analyses I miss information concerning the use of the statistical program and descriptive statistics.

- 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.

Results

- Please rewrite the results on page 8 from ‘The ratio of boys….’ onwards, since it is quite unstructured and described and in general a repetition of numbers from the tables. I think it would be more interesting to interpret the OR and report the results in terms of low level of….was associated with…like you did in the abstract of the manuscript. This comment also applies for parts of the results description on page 9

- 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.

- I cannot trace the reported OR’s on page 8 of your results. Are they included in table 2 and 3? If not, I would add another table to structure the section.

Discussion

- Your paragraph on strengths and limitations is quite extensive, try and be more concise if possible

- You mention that only weekdays were considered in the measure of frequency of breakfast. However the measure for fruit and vegetables is measured for every day of the week. I am wondering whether this leads to a bias in your results. Did you correct for this difference in assessment?

- You do not describe any interventions focusing on irregular intake, are they already available. It could be interested to mention.

Minor essential revisions

Abstract

Conclusion:

- you do not mention recommendations related to the differences in age and gender

Background

- The reference numbering is not in consecutive order

- A reference for your second reason for the importance of fruit and vegetable consumption in childhood and adolescence is missing in the first paragraph

- The last sentence of the first paragraph is unclear to me

- Please add the age of your target population in the aim of your study.
Methods
- The sentence ‘The institutional review board…..was not returned’ is confusing and includes spellings errors
- Does the HBSC use one or multiple questionnaires? In the sentence ‘The HBSC study…..distributed in schools’ you mention questionnaires, but in the following sentences you write about ‘the questionnaire’. Please check for inconsistencies.
- Please remove the limitation of self reported weight and height to the discussion section. It is not common to already mention limitations in your methods section.
- I would prefer to remove the reference to table 1 to the results section
- The structure of the paragraph on statistics is not clear. Transpose the final sentence of the paragraph on statistics to the beginning. Furthermore I advise to describe the descriptive statistics before multivariate statistical analyses.

Results
- Please refer to table 1 in the first paragraph of your results section
- Please rewrite the second sentence on low fruit consumption on page 8

Discussion
- I prefer to repeat the aim of the study in the beginning of the discussion section

Quality of written English: Not suitable for publication unless extensively edited

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