Reviewer's report

Title: Determinants of obesity among children and adolescents in Germany

Version: 1 Date: 22 September 2008

Reviewer: German Vicente-Rodriguez

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General Comment

The work attempts to establish determinants for obesity in a representative sample of children and adolescents from Germany. Although the topic and approach is not novel on this field, it is true that it is the first carried out in a representative sample in Germany. Since these results could be especially relevant for this country, the paper provides useful information, which also could be relevant to reinforce the knowledge on this field.

The mayor strength of this paper is the sample size and the number of variables included in the paper. The major weaknesses are the way the physical activity is measured, the way the methods section is wrote and that the paper is difficult to follow in the present form because it is not concise enough.

Specific comments

Abstract

1. The aim or purpose of this study is missed. I do not think that the last sentence of the background is the aim of the paper.
2. The conclusion is not in accordance with the title and the aim of this paper.

Introduction

1. It is too general, may it be more concise and to drive to the aim of this study?
2. May it be possible to deal with the necessity of this study through the introduction?
3. The references 3 and 4 deal with the short term and long term consequences of obesity? In this case, please, clearly state this fact.
4. The aim presented in the last sentence is clear and should be the same in the abstract. Also it should keep on mind during the whole paper and the conclusion.

Methods

1. Please try to simply the number of variables and the way they were obtained.
2. Clearly state who answered the questionnaires in order to avoid the repetition each time you explain a question.

Sample
1. Which is the real sample analysed in this study? Authors provide some different n along the paper, but this issue should be clearly state here.

Anthropometry
1. The last sentence it is not clear for me since overweight and obesity is separately treated throughout the paper. Please, clarify.

Socioeconomic…
1. I suggest using pre puberty, peripuberty and post puberty, instead that infantile…
2. Please provide a reference for using the low birth cut-offs.
3. It is not clear whether the variable physical activity was the same for children and adolescents. Please clearly state this issue.
4. What do you mean with “approximate age-specific tertiles”, why not exactly?
5. It is known that the TV watching is possible the most important sedentary behaviour in relation to obesity in adolescents (Television watching, videogames, and excess of body fat in Spanish adolescents: the AVENA study. Nutrition. 2008 24(7-8):654-62.) this paper could be discussed. In relation, why you do not provide the TV watching independently from the other media behaviours? If this data are given together the real effect of TV could be underreported.
6. Again the variable of sleep time is differently measured in children and adolescents, why?

Statistical analysis
1. It is not clear for me when authors are speaking about obesity including overweight or alone. Please review in the tables and throughout the text.
2. In lines 18-19 the authors state that media consumption, physical activity were continuous variables, however in the method section they state that they were assess as categorical, and also they were also grouped in tertiles. Please, clarify.

Results
1. For table 2, 3 and 4 it is not clear whether include only obesity or overweight + obesity.
2. In table 2 the date regarding parental overweight are not clearly explained, and the table is not self-explained also.
3. It is supposed that parental overweight includes obesity, please clearly state.
4. In general the results section should be summarized for clarity.
5. In page 10 line 13, the association between weight status and consumption of vegetables and fresh fruit is presented in figure 1. Please state.
6. Last paragraph on page 10 is not clearly explained.
7. First paragraph on page 11 duplicate information that it is already in the table.
8. Has been the statement on lines 20-22 (page 11) statistically tested?
9. The sentence “An analogous picture is shown for all other determinants, presented in table 4” is not clear and ambiguous.

Discussion
1. If the aim is clear in the abstract and in the introduction you do not need to repeat it in the discussion.
2. Could you provide a possible explanation for statements like:
   Page 14, paragraph 2?
   Page 14, paragraph 4?
   Page 14, paragraph 5?
3. Try to do not repeat the results as it has been done in page 15, last paragraph.
4. I do not agree with the statement provide in page 16, lines 8-11. There are methods to assess physical activity with much more precision than those used in this study. This is not an explanation but a weakness of this study and should be presented in the limitations section.
5. Another weakness is the use of BMI instead of excess of fat, since the same BMI could be found between boys and girls with significant high amount of body fat in girls.

Conclusion
The conclusion is too long and should be focused on the real results of this paper and in direct relationship with the aim presented.

Level of interest: An article of importance in its field

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