Reviewer’s report

Title: The associations between some biological markers, obesity, and cardiovascular risk in Slovenian children and adolescents

Version: 0 Date: 07 Jan 2020

Reviewer: Amerigo Rossi

Reviewer's report:

The role of biological markers of obesity in Slovenian children, adolescents and young adults.

The authors have done commendable work in evaluating such a large group of young people to determine effective methods for determining early biological markers of cardiovascular disease. In my opinion, however, there are several issues with the manuscript that need to be address prior to further consideration for publication.

Feedback.

1. Grammar throughout. Please have this manuscript revised by a native English speaker. There are several phrases throughout that are difficult to understand due to small issues with wording.

2. The title and abstract refer to the children, adolescents and young adults tested. However, on many occasions, the authors simply use the phrase 'children' which is inaccurate in this case. Please be consistent on the sample description

3. Title: I would not use the phrase, "The role of biological markers…” because the study does not evaluate their role. Something more like "the associations between biological markers and obesity…”

Abstract.

Line 5. These are not new biological markers. I would change the phrase to indicate that they are understudied, or something to that effect.

Line 9. Abstract and methods say 337 participants, but the results says 301. Please provide some explanation in the manuscript.

Line 14. "Some clinical parameters….." Please be more specific. Also provide some summary of analyses conducted.

Line 19-30. Please provide some numbers in the abstract. (Pearson's r, or at least p-values)

Line 29. 'only values of ghrelin have been found different' The grammar should be fixed, but also please explain different from what.
Introduction.

Please provide a better rationale for why these biomarkers would be better predictors of CV disease than BMI.

Materials and methods.

Line 50. Please provide a brief description of the Riva-Rivera method.

Line 1 on next page. Please provide a reference for the 'standard procedure.'

Line 9. Data 'were' statistically.

Line 13. The 'sample' was analyzed.

Line 13. No min and max are provided.

Line 15. Instead of 'average' use 'mean'

Line 18-23. This is very confusing and needs some work considering the number of statistical analyses done. I would provide the methods for the correlation tests in detail, and then for the comparative tests in detail. Did you use post-hoc tests for the ANOVA? Given the large number of associations, I think you should use a Bonferroni adjustment for the p-value.

Results.

The narrative of the results should highlight the main findings from the tables. Currently the text just points the reader to the tables, which are challenging to decipher because there is so much data.

Table 1. I don't think it is necessary to include, height, weight and BMI since they are redundant. I would not compare the total scores to the control group since that is not relevant.

Table 4. Remove BMI abbreviation from below the table.

Table 5. Instead of presenting this table, I think it would be more beneficial just to write the relevant strong correlations in the text. Otherwise, the reader has to search through this giant table to try to find interesting results.

Generally speaking, I think that the results section as presented is not informative. There is so much information, the it is difficult to evaluate what is important. Please think about what the purpose of the study is, then provide results to support (or oppose) the hypothesis, then present that data. I think that the most important part is the comparison of BMI and the other Biomarkers, which is relevant, but that is hidden at the end of the section.

Discussion.

The first paragraph of the discussion should provide an overview of the important findings of your study. I found the paragraph to be confusing and not related to the core findings.
Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

Yes

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

Yes

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

No

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I am able to assess the statistics

Quality of written English
Please indicate the quality of language in the manuscript:

Needs some language corrections before being published

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