Reviewer’s report

Title: The association of body image distortion with weight control behaviors, diet behaviors, physical activity, sadness, and suicidal ideation among Korean high school students: a cross-sectional study

Version: 0 Date: 13 Sep 2015

Reviewer: Noh Amit

Reviewer's report:

Comments:

The discussion on 'general mental health' in this manuscript should be excluded as both depressive mood and suicidal ideation were measured by single close ended item/question. This really does not reflect to the constructs of depressive mood and suicidal ideation. There are available comprehensive instruments to measure depressive mood and suicidal ideation which are used cross-culturally.

The rationale of using past year measurement of depressive mood and suicidal ideation are not highlighted. The measure of depressive mood and suicidal ideation during the past year also could be associated with memory decay in recalling. As this is a national study, this critic could be overcome at the research design stage. Therefore, the discussion on depressive mood and suicidal ideation should be excluded throughout this manuscript (e.g., the introduction, methodology, results, discussion, and conclusion).

Specific Comments:

Title:
- Title should be revised and mental health should be removed.

Introduction

Pages 3-4:
- The place and the sample of the studies (i.e., studies 4-8) should be highlighted/reported.

Page 4:
- Measures or aspects of mental health in studies 5, 7, 8 were not highlighted clearly.
- It is not clear how the literature discussed in the introduction section set a background for the present research (especially in discussing previous findings on the same variables which are examined in the present study) and how the discussed literature informs the "hypotheses tested" in the present research.

- The authors did not provide critic on the limitation(s) of the findings and what could be the possible interpretations of the findings in the reported literature. This comment applies throughout the introduction section.

Methodology

Page 5:

- The tested hypotheses are not stated. Please provide the tested hypotheses in this section.

- Please define what co-ed school is. This definition is important to readers who are not familiar to Korea school system.

- Provide rationale why the researchers excluded fast foods.

Page 6:

- No indication of how socio-economic status is defined and categorized (e.g., in term of monthly salary or family income). Please provide the indication of the measured socio-economic status.

Page 7:

- The use of 'fasting' is not defined. Highlight how fasting is operationalized and measured in this present study? What are the methods of the fasting measured in this present study?

Page 9:

- It is important to exclude the discussion on depressive mood and suicidal ideation as the use of close ended question should be avoided or minimized.

- The revision of statistical analyses section: It is no clear what are the variables used for ANOVA and Chi-square analysis.

Page 10:
It is not clear what the statement "To test our hypothesis" refers to as there are no specific hypotheses highlighted in this manuscript.

There is no the sample size calculation and power calculation provided. It is important to provide the sample size calculation and power calculation for the present research.

The use of option "do not know" could be replaced by "not specified/ unspecified."

Page 12:

"After excluding the two common types of weight control behaviors (i.e., 'doing regular exercise' and 'eating less') in the three groups…” Provide the explanation of the exclusion.

The use of double parentheses [i.e., (…) (…)] should be revised throughout this manuscript— e.g., (26.4% of females vs. 5.0% of males) (Table 2), (≥24 hours) (5.2%), (4.28 times) (P < 0.01) etc.

Pages 13-14:

Exclude the findings on depressive mood and suicidal ideation as it brings critic on the methodology, measure and operational definition of the construct (as not a single measure item) in the present research.

Page 16:

The following statement:

"Third, we yielded reliable predictors of self-perceived underweight and overweight subjects compared with students who perceived their body weight accurately among normal weight adolescents with multivariate logistic regression after controlling for multiple factors."

The above-mentioned statement reflects to a strong claim but the fact is the findings are only based on multivariate logistic regression. The use of categorical data and its limitation should be acknowledged. Therefore, the findings should be interpreted with caution by highlighting the limit of the generalization.

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.
No

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

Yes

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:

Acceptable

Declaration of competing interests
Please complete a declaration of competing interests, considering the following questions:

1. Have you in the past five years received reimbursements, fees, funding, or salary from an organisation that may in any way gain or lose financially from the publication of this manuscript, either now or in the future?

2. Do you hold any stocks or shares in an organisation that may in any way gain or lose financially from the publication of this manuscript, either now or in the future?

3. Do you hold or are you currently applying for any patents relating to the content of the manuscript?

4. Have you received reimbursements, fees, funding, or salary from an organization that holds or has applied for patents relating to the content of the manuscript?

5. Do you have any other financial competing interests?

6. Do you have any non-financial competing interests in relation to this paper?

If you can answer no to all of the above, write 'I declare that I have no competing interests' below. If your reply is yes to any, please give details below.

I declare that I have no competing interests.

I agree to the open peer review policy of the journal. I understand that my name will be included
on my report to the authors and, if the manuscript is accepted for publication, my named report including any attachments I upload will be posted on the website along with the authors' responses. I agree for my report to be made available under an Open Access Creative Commons CC-BY license (http://creativecommons.org/licenses/by/4.0/). I understand that any comments which I do not wish to be included in my named report can be included as confidential comments to the editors, which will not be published.

I agree to the open peer review policy of the journal