Reviewer's report

Title: Prevalence and Sociodemographic Correlation of Weight Misperception in Korean Adolescents

Version: 1 Date: 9 March 2014

Reviewer: Kate Mulgrew

Reviewer's report:

I found this an interesting paper with some useful insights into the demographic factors that may influence size misconception in Korea.

Please consider all points as minor essential revisions.

1. Abstract
The abstract is clear.

2. Introduction
The Introduction provides a good rationale for the study and is suitably brief.
1st paragraph – “during adolescence. Adolescent…” clunky sentence, please revise.
2nd paragraph – the first sentence needs a supporting reference.
4th paragraph – this review could be a bit more nuanced. For example, much research shows that males are roughly evenly split between wanting to decrease and increase weight, as well as desiring to increase muscle tone. While females may be more concerned with weight, males will show other body management techniques which can still be troubling. Please consider these differences a little more closely.
5th paragraph – please clarify “and the resulting demotivation lowers the effect….” – what demotivation?
Final paragraph – clarify “3) other factors…”.

3. Method
The method section provides adequate detail.
The comment about not seeking ethics approval is quite troubling. Please confirm whether this practice is standard practice within Korea.

4. Results
a) Throughout the results section, please make sure that you are not repeating values in text that are available in the table (unless absolutely necessary). Many places seem to just list the percentages rather than describing the general patterns.
b) Section 1 (General characteristics) - “The distributions of adolescents who did not try weight control, tried to reduce body weight, and tried to increase body weight were 49.0%, 34.6%, and 6.7%, respectively (Table 1)” – however I cannot see this data in any of the tables nor any reference to how body change strategies in the Method. Please clarify.

c) Section 2 (misperception), paragraph 2: please change the wording slightly to better reflect the nature of the chi-square analysis when there are more than 4 cells. For example, perception of weight was significantly related to socioeconomic status, with the low SES group having a higher misconception than the other groups (rather than saying that the low SES was significantly different from the other groups… which wasn’t specifically tested, as far as I can see). The same comment applies for all chi-square analyses conducted.

d) There were some other really interesting findings in Table 2 that were not reported in text, for example, that most of those relationships conducted at a group level were also found when examining males and females separately, except for region.

e) Again, there are lots of interesting findings in table 3 that are not reported in text – e.g., that region and living with family were not related to weight perception (don’t forget to list non-significant findings!). But perhaps most interestingly, there is no mention of the BMI by weight perception findings! From what I can tell, 100% of the adolescents who were objectively overweight/obese underestimated their weight – if I have read this correctly, this finding alone has massive implications for future weight management interventions. Please consider adding more information about the findings from table 3 as I found these some of the most interesting of the paper.

f) Section 3 – please clarify the type of analysis conducted here. Why was the overweight/obese group chosen as the comparison group?

g) Tables: The bottom half of Table 1 (perceived vs actual BMI) should be separated out into a stand-alone table.

5. Discussion

The discussion provided a reasonable interpretation of the key findings with a consideration of implications for weight-management programs. Supporting references are used and limitations considered. Please consider the following points:

Paragraph 1 – “future and present physical and mental health” – this statement is too broad, please revise and give some specific examples.

Paragraph 1 – “this study examined factors…” – list those factors you focused on.

Paragraph 2 – differences between past research and the current findings are suggested to be explained by two factors (research methods and subject characteristics). Please elaborate on how you think research method differences
are important here. Please also consider adding a few sentences about the different cultural pressures that Korean adolescents may face which could predispose them to higher rates of weight misconception.

Paragraph 3 – second sentence – is 29.5% correct for both under/over estimated weight?

Paragraph 4 – 1st sentence, please clarify “the overall study population showed the same results”. Please also clarify “these adolescents have lower motivation…”

Paragraph 5 – why do you think that the greatest misconception was found in the normal weight group?

Paragraph 6 – please clarify the last sentence.

Limitations – although you acknowledge self-reported BMI as a limitation, I see this as quite a significant problem, especially as your study shows that weight misconception is common within the sample. Research is presented that shows that females tend to report lower values than males, but what about BMI groups? Please consider the implications of this limitation in more detail.

Conclusion – combine the last sentence with the rest of the paragraph, so that you don’t have one stand-alone sentence.

6. Other comments
The layout of the paper seems a little strange – please ensure that it meets the journal requirements.

**Level of interest:** An article whose findings are important to those with closely related research interests

**Quality of written English:** Acceptable

**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.