Reviewer's report

Title: Validity of self-reported weight, height and resultant body mass index in Chinese adolescents and factors associated with errors in self-reports

Version: 1 Date: 1 November 2009

Reviewer: Nikolaos Tsigilis

Reviewer's report:

The present study examines the accuracy of the self-reported data on population of Chinese adolescents. The topic is very interesting, the manuscript is easy to follow the ideas are presented clearly, the sample size is satisfactory, and the statistical analyzes are the appropriate ones. There are some minor revisions, mainly additional information, which are presented below.

Since an effort is made to correct the difference between actual and self-reported anthropometric data, a paragraph should be added in the introduction section presenting the efforts of prior studies and the factors that these studies used to adjust the observed bias.

Statistical analysis
The author should decide whether a gender effect exists. If there a gender effect then the results should be presented separately for each sex. On the other hand, the results should be reported for the total sample.

Please explain in brief the terms sensitivity, specificity, positive predictive value, and negative predictive value.

P.7, L. 123 – 125. “Measured and reported ...agreement.”
Please explain in brief the difference between quadratic weighted Kappa statistic and Kappa statistic and justify the application of the quadratic weighted Kappa.

P.7, L.126 – 127. “Kappa statistics ...cut-off points”
Please state explicitly which these three categories were.

P. 8, L. 151-162. “The difference between ... especially BMI”
The interpretation of the observed differences should be assisted by the calculation and provision of an effect size index. Moreover, it would be interesting to calculate and present the intraclass correlation coefficient as an additional measure of agreement.

P. 9, L. 190 – 193. “Multivariable linear ... in Table 3.”
Additional information is needed for the regression analysis. First the authors should provide the formula on which the corrections were made, the unstandardized and standardized coefficients, and clearly state whether the assumptions of the regression analysis were satisfied (e.g., normal distribution of
the residuals).

A table presenting the classification results based on actual, self-reported and corrected measures should be added.

Discussion section

A speculation should be provided explaining why the area of residence as well as the socio-economic status contributed to explanation of the difference between actual and self-reported data.

The issue of generalizability of the results to Chinese population should be also addressed.

Finally it would be stated if there was any category for underweight adolescents? If no, this decision should be justified. In addition, the impact of the number of categories on the classification results should be also discussed in the Discussion section.

Level of interest: An article of importance in its field

Quality of written English: Acceptable

Statistical review: Yes, and I have assessed the statistics in my report.