Reviewer's report

Title: Prevalence and socioeconomic differentials of overweight and obesity among Pakistani primary school children

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Reviewer: Dieu Huynh

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Discretionary Revisions

The paper adds useful data to the literature on childhood obesity in developing countries in Asia. There are some comments that might need to be addressed before the paper should be published.

Methods:
Design, setting and sample:
1. How was the list of the public and private primary schools for each stratum created for random selection of schools? Based on the school population or SES ranking or geographic characterisitc?
2. For generating a list of sampling unit for each school, I think the word “class” instead of “section” is more relevant.

It is not clear how each class for each grade was selected. Randomly? I do not agree that the class selection process as currently described in this section might ensure adequate representative across all five grades. Further clarity is needed.

Data Collection:
3. For weight measurement, weighing scale with accuracy of to 100g or 200g is usually used in nutritional surveys.

Statistical analysis:
4. It would be interesting if regression analyses were also adjusted for parental education and household income apart from important biological factors such as age and gender. These factors are reported to link with childhood obesity development in literature and the data are also collected.

5. If the authors consider having a table for anthropometric characteristics of children in this study (see the comment below for the result section, how the anthropometric measurements are described such as with mean, SD, median etc. should be included in this section.

Results:
6. It had better to present age description with age in year rather than in months. It would be helpful for the readers or researchers who want to compare their
findings with those presented in this paper for the growth patterns if a table summarizes the means, SD, median of weight, height and BMI of children by age group and gender is included.

7. No clear description for Figures 2, 3, especially Figure 4.

8. The findings from linear regression analysis were mentioned, however, there is no supporting table. The authors may want to say something like “data not shown”.

Discussion:

9. The first paragraph: Figure 4 is to show the rapidly increasing trend over time in prevalence of overweight and obesity in Pakistani children that should be described in the result section rather than in the discussion section.

10. The authors also used IOTF classification system to define overweight/obesity in this study, the IOTF definition. There should be some discussion for the findings using this classification system.

11. The second paragraph discusses higher prevalence of overweight was seen in boys than in girls. However, as shown in Figure 1 the gender difference in overweight prevalence is different by grade such as more boys are overweight in lower grades one and two whereas overweight is more common in girls than in boys in grades three, four and fifth. The 95% CIs for overweight prevalence for higher grades do not overlap indicating significantly higher prevalence of overweight in girls compared with that in boys.

12. In the third paragraph, perhaps the authors provide some explanation for higher prevalence of overweight in private school than in public schools.

Tables:

13. Table 1 – Title: Perhaps prevalence of overweight and obesity by sociodemographic characteristics is more appropriate. Also there is an uppercase letter (a ) but it seems to be unnecessary.

14. Table 2 – Actually I think from public health perspective it would be an alert message if higher grade is an associated risk factor (grade one will be a reference group) rather than lower grade is a protective factor for childhood overweight and obesity.

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

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