Reviewer's report

Title: Family-based factors associated with overweight and obesity among Pakistani primary school children

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Reviewer: Arturo Jimenez-Cruz

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Research article
Family-based factors associated with overweight and obesity among Pakistani primary school children
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The study conducted by Mushtaq et al, aimed to explore family-based factors associated with overweight and obesity among Pakistani primary school children. It is an interesting cross-sectional study from a representative multistage cluster sample of 1860 children aged 5-12 years in Lahore, Pakistan. The authors found that 17% (n=315) of the children were over-weight and 7.5% (n=140) were obese. Additionally, children having highly educated parents, fewer siblings, less crowded living room, both parents working, and residence in the high-income neighborhoods were more likely to be overweight and obese. The results for dissemination are relevant, due to the scar information from a statistically representative sample in Pakistan.

Although overall it’s a well designed and well performed study, there are certain issues that need minor and major changes:

Major Changes
1. Please include in the result section the z-score of BMI-for-age distribution, including – 1 SD and -2 SD, and how each z-score was associated to the family-based factors studied. Add a comment in the discussion section.
2. In the result section (Page 9 and 10), please do not repeat the results from the table in the text. This section should be reworked.
Page 10, line 16, “Only 6.5% of children living in low-income neighborhoods overweight while…..” the verb (were) is missing.
3. Table 10: the Odds ratio was calculated only for OW and OB children (315), it should include the whole population and the reference should be the normal BMI category.
4. Discussion. In the first paragraph, it should be pointed out that higher education was associated with OW or O when compared with children of illiterate parents. It should be necessary to make the OR compared with children of illiterate parents excluding those with z-score of BMI-for-age lower than – 1SD.

5. Discussion. Parental status and number of siblings adjusted OR were not statistically significant at 95% level, thus, it should be noted in this section, not otherwise.

6. Discussion. Please comment on why the results are not consistent with the higher prevalence of obesity among low income and migrant children in developed countries or among children from migrant parents within developing countries. The authors comment that different socio-cultural circumstances in South Asia explain the contradiction with the results elsewhere. Please be more specific as which socio-cultural differences might result in higher OW and O in high SES population.

7. The last paragraph of page 12 is repetitive, and the first three paragraph of page 13 could be reduced to one paragraph.

8. The whole discussion section needs to be reworked.

9. Odds Ratio (Table 3) shows no statistical significance at the 95% CI of parental working status and number of siblings, nor with middle SES neighborhood income. Level of education was compared with illiterate, which might be associated to very low income and undernutrition levels. It would be more relevant to compare it with high school level as a reference.

10. The figure is not necessary. Trends could be described in the results section.

Minor Changes

11. Last sentence of introduction should be moved to the discussion section.

12. Page 5, second paragraph, last sentence. Said…and “children not willing to participate” were excluded (removed this, since they were not willing to participate they were not excluded).

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

Declaration of competing interests:

I declare that I have no competing interests