Author's response to reviews

Title: Height, weight and BMI percentiles and nutritional status relative to the international growth references among Pakistani school-aged children

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Author's response to reviews: see over
Honorable Editor-in-Chief  
BMC Public Health

Re: MS #9620621846102408

We are pleased to submit the revision of our manuscript titled “Height, weight and BMI percentiles and nutritional status relative to the international growth references among Pakistani school-aged children.”

The paper has been thoroughly revised according to the reviewer’s comments. We have tried our best to address all the concerns. For your convenience, we have marked the major changes made in red. We hope that the manuscript will be up to the editorial standards for publication. The revised manuscript confirms to the journal style and all files are correctly formatted. Manuscript is carefully checked for any typographical and content errors. It has been a great experience to publish with you and we highly appreciate the time and efforts of the editorial and publication teams.

Response to additional comments from the Editor

Thank you so much for considering the manuscript for publication in BMC Pediatrics. We are indebted for all the support always extended by your office. We have Authors were sent the reviewer's comments and asked, not only to address them, but also to specify how they have been dealt with point by point in their response, as recommended by your office. thoroughly revised the paper, and carefully addressed all the concerns raised by one of the reviewers. Issues with the BMI calculation and study rationale (aims) have been settled. We hope that the revised paper is acceptable for publication.

Regards

M. U. Mushtaq, MBBS
Principal Investigator / Corresponding Author
Response to reviewer’s comments: Reviewer 1 (Anuradha Khadilka)

Thank you for considering the manuscript ready for publication. We are indebted to you for your time and comments to make this manuscript much more clear and comprehensive.


Response to reviewer’s comments: Reviewer 2 (Carla Pedros)

Thank you so much for your valuable time and comments for the improvement of this manuscript. We have tried our best to address the concerns raised and hope the revised manuscript is ready for publication.

Minor Essential Revisions

1. The results are now compared with reference to all the three growth references used (WHO, CDC and IOTF), as suggested.

2. There was some confusion in your understanding of the statement “…means of z scores relative to the WHO reference were closer to zero (and the present sample)…”

   It had been stated in the methods that: “Difference from zero for means of height-, weight- and BMI-for-age z scores, relative to the WHO and USCDC references and the present study, were calculated with Student’s t-test.”

   Results section has been updated for clarity as: “Mean differences from zero for height-, weight- and BMI-for-age z score values relative to the WHO and USCDC references were significant (P<0.001). Means of height-for-age (present study: 0.00, 95% CI -0.05 to 0.05; WHO: -0.19, 95% CI -0.25 to -0.13; USCDC: -0.24, 95% CI -0.30 to -0.18), weight-for-age (present study: 0.00, 95% CI -0.05 to 0.05; WHO: -0.22, 95% CI -0.29 to -0.18; USCDC: -0.48, 95% CI -0.54 to -0.41) and BMI-for-age (present study: 0.00, 95% CI -0.04 to 0.04; WHO: -0.32, 95% CI -0.59 to -0.46; USCDC: -0.53, 95% CI: -0.59 to -0.46) z score values relative to the WHO reference were closer to zero and the present study as compared to the USCDC reference. [Table 5] [Table 6] [Table 7]”

3. The conclusion that “Pakistani school-aged children significantly differed from the WHO and USCDC references but were relatively similar to the WHO reference” was made because the z score mean difference from zero was lower relative to the WHO reference as compared to the USCDC reference although Pakistani children significantly differed from both references. The manuscript has been revised accordingly and we hope it is clear now.
4. Smaller number of children (5-10 years) was for the WHO weight-for-age reference only. Height- and BMI-for-age z scores in Table 5 and 7 included the whole sample. It had been stated in methods: “the WHO 2007 reference does not provide weight reference values for children older than 10 years; therefore, z-score values for weight-for-age were calculated for five to ten years.”

5. In table 8, the prevalence statistics are now compared with reference to all the three growth references used (WHO, CDC and IOTF), as suggested.

6. Thinness/wasting were defined by <-2SD BMI-for-age z score. Thinness (low BMI-for-age) corresponds to wasting and indicates acute under-nutrition, usually because of insufficient food intake or a high incidence of infectious diseases. Weight-for-age is inadequate indicator for monitoring child growth beyond pre-school years due to its inability to distinguish between relative height and body mass, therefore, BMI-for-age is recommended by the World Health Organization (WHO) and United States' Centers for Disease Control and Prevention (US CDC) to assess thinness/wasting in school-aged children and adolescents [9, 18]. Methods section has been updated accordingly.

7. Age was presented in months in figures 1 to 6 because the curves generated by the LMS growth software were in months. We have provided the conversion scale into years as legend, similar to the one already presented in tables.

8. Figure 3: our sample did not include boys older than 12 years, the age at which they usually experience pubertal growth; therefore, we cannot comment about that. The curves represent what we observed in younger Pakistani boys. However, an earlier pubertal growth spurt was noted among girls in accordance with the previous literature.