

In reply Asif M et al.

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Dear Editor,

Firstly, we are very thankful to the reader who took really a very keen interest in our research work. In our study, we checked the diagnostic performance and determined the best cut-off points of the neck circumference (NC) for identification of overweight and obese Pakistani children (1). The diagnostic ability of NC to discriminate children with or without overweight and obesity was assessed using area under the curve (AUC).

1) The reader raised the point that it would be better to refer to AUC values between 0.5 and 0.65 as “not accurate” rather than “moderately” accurate. We (the authors) want to explain that we used the AUC cut-off points that were suggested by the Perkins and Schisterman (2) and the same cut-points for AUC in determining the diagnostic ability of NC were also used by Kelishadi et al. (3).

2) The reader also reported that one could calculate the sample size required to find an AUC equal to the minimum considered “highly accurate”, that is, 0.65. The pROC package (4) for R uses the formula published by Obuchowski et al (3) to perform this calculation. For getting AUC at least 0.65 in pROC package, minimum sample size for each age-group should be 110 (number of cases = number of controls). He mentioned that a total of 800 subjects would have been required for each age group and these numbers were greater in our study. In our study, the number of cases were not equal to number of controls in each age-group

and we used the software; “Statistical Package for Social Sciences (SPSS)” version 21.0 for ROC analyses which doesn't require such type of sample size conditions. That's why, one who used the pROC package in R could follow the required sample size conditions.

Ethics

Peer-review: Internally peer-reviewed.

Financial Disclosure: The authors declared that this study received no financial support.

References

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Conflict of interest: None declared

Received: 11.08.2021

Accepted: 15.08.2021