



DOI: 10.4274/jcrpe.galenos.2026.2026-2-17  
J Clin Res Pediatr Endocrinol 2026;18(2):368

# Internal Inconsistency Between the Reported 50<sup>th</sup> Percentile Value and the LMS Median Parameter

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**Cite this article as:** Teksan A. Internal inconsistency between the reported 50<sup>th</sup> percentile value and the LMS median parameter. J Clin Res Pediatr Endocrinol. 2026;18(2):368

**Keywords:** Z-score, anthropometric index, children, guidelines

## To the Editor,

We read with interest the article by Neyzi et al. entitled “Reference Values for Weight, Height, Head Circumference, and Body Mass Index in Turkish Children,” published in J Clin Res Pediatr Endocrinol, which presents percentile values together with corresponding LMS parameters for weight in Turkish children (1).

Upon independent recalculation, we identified an internal inconsistency between the 50<sup>th</sup> percentile (P50) value for weight reported in Table 1 and the median (M) parameter for weight presented in Table 5 for 8-year-old boys.

By definition, the M parameter represents the median of the distribution and should therefore correspond to the 50<sup>th</sup> percentile. However, the M value (23.9) reported in Table 5 does not match the 50<sup>th</sup> percentile value (25.9) provided in Table 1. Recalculation using the published LMS parameters resulted in an approximate deviation of 0.5 standard deviation score.

When the 50<sup>th</sup> percentile value reported in Table 1 was used as the M parameter, internal mathematical consistency was

restored and recalculated Z-score values corresponded to the published percentile data. This finding was reproducible upon repeated recalculation.

Given the widespread implementation of LMS parameters in digital growth assessment tools, even a localized discrepancy between the reported median and percentile values may have implications for automated percentile and Z-score calculations.

We respectfully request clarification regarding the reported LMS median parameter to ensure consistency between the published percentile and LMS data.

## Reference

1. Neyzi O, Bundak R, Gökçay G, Günöz H, Furman A, Darendeliler F, Baş F. Reference values for weight, height, head circumference, and body mass index in Turkish children. J Clin Res Pediatr Endocrinol. 2015;7(4):280-293.

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**Received:** 20.02.2026 **Accepted:** 26.02.2026 **Epub:** 16.03.2026 **Publication Date:** 01.07.2026



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