Objectives A new method using systolic blood pressure-to-height ratio (SBPHR) and diastolic blood pressure-to-height ratio (DBPHR) for diagnosing hypertension has been raised recently. We aimed to further confirm and examine whether it is applicable in children.

Methods We conducted a cross-sectional study consisted of 6837 children and adolescents aged 5–18 years. Blood pressure was measured and classified using the population-based percentiles.

Results Areas under the receiver-operating characteristic curve of SBPHR and DBPHR were all >0.9 across all ages except for that identifying the level of SBP between 90th and 95th percentile. For adolescents, similar cutoff points for diagnosing hypertension were found compared to previous study with high sensitivities and specificities, especially for stage 2 hypertension (all >95%). Among children, good diagnostic value was also observed.

Conclusions SBPHR and DBPHR were practical for detecting hypertension, particularly stage 2 hypertension among adolescents and children if confirmed by further investigations.

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BLOOD PRESSURE/HEIGHT RATIO: A NEW METHOD FOR DIAGNOSING PAEDIATRIC HYPERTENSION

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