

Comment on “Budding adult hypertensives with modifiable risk factors: Catch them young”

Sir,

In the article, “Budding adult hypertensives with modifiable risk factors: Catch them young” by Ramanathan *et al.*, the need to identify hypertension in younger age groups and the associated risk factors has been evaluated.^[1] We appreciate the research work done using such a large sample size. However, we find that certain aspects of their methodology need clarification.

First, the authors mentioned in the abstract that they used random sampling to select 10–17 year-old children who lived in Chennai, an urban area of Tamil Nadu. In the methods section, they stated that children from selected schools in Chennai were examined. Whether the schools were selected conveniently or randomly was not mentioned. The sampling frame from which the children were selected, i.e., the number of schools included in the study and the total number of children in the selected schools should have been mentioned. Furthermore, as the study was to find point prevalence, the time when the study was conducted (year and month) should have been reported.

The authors mention that the blood pressure (BP) was checked three times at 2–3 min intervals. The rationale behind this and any standard guideline they used in their measurements should have been stated. BP tends to vary at different time points. How were these variations assessed for accuracy? Using the same person to measure BP thrice, what kind of variation were the authors trying to capture? We feel that classifying the groups as “cases” and “controls” in Table 3 of the article must be a misnomer as this was a cross-sectional study.

It would be interesting to know the number of children who were classified under “prehypertension” as this also poses a risk for developing hypertension in future. Although the authors mentioned that BP is classified into three categories based on percentile values, the proportion of children who were actually in the “prehypertension” group was not reported. The World Health Organization recommends at least 60 min of moderate- to vigorous-intensity physical activity daily for children aged between 5 and 17 years.^[2] The rationale behind using “physical activity <30 min for 4 days/week” as cutoff to classify as high risk needs justification. Furthermore, the method of assessing the physical activity needs to be stated clearly.

A study done on school children aged 11–18 years in Bhopal city, India, reported a marginally higher diastolic hypertension in girls compared to boys.^[3] In this study, the authors mentioned in the discussion that there was no difference between the diastolic BP (DBP) of the boys and the girls. Yet the difference between the boys and girls in the classification of hypertension

based only on DBP is noted to be very wide (21% in boys vs. 47% in girls). Thus, about half of the girls were classified as hypertensive on account of high DBP alone. The authors could have brought this difference out in their discussion.

The children were classified into normal, overweight, and obese, based on their body mass index (BMI), but the criteria or cutoff used to classify them were not mentioned. Furthermore, the proportion of people who were actually normal, overweight, and obese was not clearly stated. The odds for overweight and obese children being hypertensive were calculated separately for binomial responses. This leads to the inclusion of the obese in the overweight category and a resulting influence on the odds ratio. During the bivariate analysis, it would have been better if children with normal BMI were set as reference, and the odds for being hypertensive were calculated for the overweight and the obese.

The authors concluded by saying “...advise obese children to modify their lifestyle with respect to diet, exercise, and salt,” all of which factors were not significant in the study. We feel the article by Ramanathan *et al.* brought out the importance of the “iceberg” phenomenon in hypertension in children. However, a full report of the sampling strategy as well as the proportion of “prehypertension” diagnosed should have been given.

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Conflicts of interest

There are no conflicts of interest.

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