Reviewer's report

Title: Oscillometric Blood Pressure By Age And Height For Non Overweight Children And Adolescents In Lubumbashi, Democratic Republic of Congo

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Reviewer: Mehmet A. Agirbasli

Reviewer's report:

This paper by Muyumba et al. reports a cross-sectional study of blood pressure on a representative sample of school-children aged 3 to 17 years. They standardized BP measurements were obtained using a validated oscillometric device (Datascope Accutor Plus). Of the 11283 selected students and 8371 children and adolescents consented and were enrolled for a global participation rate of 74.2 %. They excluded overweight and obese children and adolescents. 50th, 90th and 95th percentiles of SBP and DBP for 3373 boys and 3510 girls were tabulated by age and height (5th, 25th, 50th, 75th and 95th height percentile).

They compared findings with those of KIGGS and OLAF studies. In conclusion: authors declared the BP percentiles in Lubumbashi, Democratic Republic of Congo. The study is valuable to develop a local program of high blood pressure awareness in children.

The authors are to be complimented to gather such a large data set of blood pressure in children.

In general manuscript addresses a timely subject and confirms and adds to the existing knowledge. The article is important as a better understanding of the hypertension in children which can help the pediatrician to manage the blood pressure in children. As cardiovascular diseases are the major components of mortality, the need exists for local normal levels to surrogate vascular risk. In this interesting and well written article, authors study the blood pressure levels in lean children. The authors need to address the following points.

Specific comments:

As authors indicated the potential limitation of such studies study is the selection bias.

The decision to exclude the overweight and obese children should be explained further. After excluding subjects overweight or obese, gender-specific SBP and DBP percentiles were constructed. However including all subjects could be more representative of the entire local pediatric population.
They could also compare their data to different populations such as Bogalusa Heart Study. Reference is as below: Such comparisons provide temporal changes in blood pressure among children.

Blood pressure of children, ages 2 1/2-5 1/2 years, in a total community--the Bogalusa heart study.

Voors AW, Webber LS, Berenson GS.


Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

Yes

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

No

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

Yes

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

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Acceptable
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