Reviewer's report

Title: Ethnic difference in blood pressure among youth in Paramaribo, Suriname

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Reviewer: Kotsedi Daniel Monyeki

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Review of BMC Cardiovascular Disorders manuscript

'Ethnic difference in blood pressure among youth in Paramaribo, Suriname

Charles Agyemang, Ellen Oudeman, Wilco Zijlmans, JF(Hans) Wendte and Karien Stronks BMC Cardiovascular Disorders Research article

The main objective of this paper was to investigate the blood pressure patterns among youth from different ethnic backgrounds and to determine the association of BP with BMI in Paramaribo, Suriname. The paper concludes that there is higher BP among Javanese and Hindustani youth. This paper has merit in that it attempts to screening adolescent blood pressure elevation as they are a reflection of adult morbidity and mortality from hypertension and associate disorders.

Major comments

1. Page 5, data analysis section, it is stated that “Age specific mean SBP and DBP levels were determined for boys and girls.” It will be interested for the readers to know if these ethnic groups were Gaussian with a shift in mean values to the right or left side or the mean and median values were equal.

2. Reliability and validity of anthropometric measurements, demographic and physical activity questionnaires were not adequately covered in the manuscript.

3. Based on the diverse growth patterns of these children it will be interesting for the reader to know their socio economic status or maybe define the traditional lifestyle as it appear on page 7.

4. The probability of one ethnic group to have high risk of hypertension and obese/overweight status than the other could be interesting to the readers.

Minor comments

- Page 4,
  Study design, - Provide the total number of schools eligible for selection (sample frame)
  - Was there stratification of schools by different ethnic groups during sampling?
  - Are children allowed to take alcohol during school hours in Suriname?
- Clarify how children were diagnosed for heart diseases since one child was excluded from the analysis because he was suffering from severe heart diseases.

* Page 6
- Results - Rephrase the sentence “Female sex was negatively and independently…”
- Paragraph starting with “Figure 3a and 3b show mean…” Support these statements with relevant values from the tables 1 to 3.

Page 7, line 7-12.
- It is not clear if the energy intake of the population was part of the analysis.
- Table 1- Boys from all ethnic groups were taller and heavier than girls although their heart rate was lower compared to that of the girls of the same age group. It will be interesting for the readers to know the physical activity level of this population given the theoretical fact that girls during adolescence are heavier and taller than boys even though the theory might be contrary among Paramaribo, Suriname children.
- Second paragraph- line 1, insert the reference.
- Table 2- I suggest that the author should also include the 95% confidence interval. Rephrase the sentence.

Page 8- Conclusion section- Were adult included in the analysis of this study?
- Figure 2a and 2b- Use solid line and dotted lines to differentiate between groups