Reviewer's report

Title: Are lifestyle cardiovascular disease risk factors associated with pre-hypertension in 15-18 years rural Nigerian youth? : A cross sectional study

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Reviewer: Sorina Mihaila

Reviewer's report:

The authors describe in the presented study the prevalence of pre-hypertension in a young population of Nigerians and try to find the life-style risk factors that are associated with the appearance of pre-hypertension. Moreover, the authors make an explorative research on the association of pre-hypertension in these young individuals with different individual risk factors (like gender, age, or BMI), and their potential relationship with their higher cardiovascular risk.

The study is of importance for the local national authorities, as it identifies cardiovascular life-style risk factors among apparently young Nigerian individuals from the rural environment, which will help to implement future direction for prevention of hypertension and cardiovascular disease in this population.

Remains, indeed, the question if the paper is of interest for the journal, as well.

Some concerns about the study need to be addressed:

Major comments:

- Blood pressure was measured only once in young individuals; elevations in the blood pressure might be caused by the presence of dedicated staff of the study (like the “white coat” hypertension), due to the stressful environment. Authors write that they repeated measurements in young with elevated BP. At what distance interval? The larger percentage in systolic pre-hypertension might explain this fact.
- Table 1 is missing from the manuscript
- For Tables 4-11, the statistical methods used to show the associations are missing. This makes difficult for an external reader to understand the results of the study. What do the different colors represent? Could the authors make some figures with the representative associations?
- In order to emphasize the importance of their study and the local relevance, the authors might write about the total population of rural adolescents from Nigeria (the number of the young individuals questioned and the total number of Nigerian youngsters)
- The written language of the manuscript needs to be carefully revised, eventually with the help of a native English speaker. The manuscript is in some parts difficult to be understood due to the poor English language. Some of the mistakes or unclear issues are emphasized in Minor Comments.
- Please correct, “we therefore interprets our results” from the Discussion section.
- Please clarify: “It is possible older age is associate of other unmeasured complex variable (such as socio-cultural norms and peer behaviors”. This is an assumption, based on what?

Minor comments:
- Abstract: correctly rephrase the paragraph with the Results of the study. The chosen language and poor grammatical usage makes it difficult to understand.
- “Low fruits and low breakfast cereal consumption tends to protect against low physical activity”...Please explain or make it clearer in text.
- What does the author mean with a “trend towards significance”, used several times in the results section of the manuscript? Please explain, or make it clearer in the manuscript.
- Abbreviations for Table 2 are missing
- Figures should be at the end of the manuscript, and with a correct display (the text is superposed in Figure 2).
- Why the authors did not use in their study the family history of cardiovascular disease or hypertension to be a risk factor for the analysis, too?
- The references need to be corrected. Reference 5 is "unpublished"?!
- References should be restricted to 35, maximum 40, by using the most relevant ones.

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Needs some language corrections before being published

Statistical review: Yes, but I do not feel adequately qualified to assess the statistics.

Declaration of competing interests:
I declare that I have no competing interests.