Reviewer's report

Title: Cardiovascular autonomic function tests in an African population: A report on reference values

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Reviewer: Andre Diedrich

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Cardiovascular autonomic function tests in an African population: A report on reference values

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This article addresses an important issue to characterize autonomic function in an African population. Only view articles have been published about this topic. The authors studied 276 African men and women. They generated reference values for cardiovascular autonomic function especially for the response to deep breathing and upright posture. They could replicate gender and age dependencies of autonomic function as has been shown by others. Ethnic differences in blood pressure have been found between the tribes. What are possible reasons for this? (environment, genetic, habits, .). What about height and weight differences between the groups? Please provide height and weight of the studied population.

The authors should discuss the limitation of this study. They should describe how diet and drugs were controlled during the study. Further it is not clear how the complete protocol was conducted. Did they use different protocols for heart rate and blood pressure analysis of the posture response? How did they perform the deep breathing test?

The statistical analysis needs some improvements. The author should consult a expert in statistics to discuss possible methods for data without normal distribution. It would be a good addition if the author could add spectral analysis of heart rate variability of this population.

In summary, this work is a good start to generate reference values of autonomic function in an African population.

"baseline mean (SD)"
please change "baseline" to resting supine and delete (SD). If data are not
normal a presentation of SD is not appropriate.

"Because the SPSS statistical program does not facilitate adjustment for covariables in nonparametric statistics, the test results were checked using ANOVA, and each autonomic function test result was reciprocally adjusted for age and gender." At the 5% significance level, all

Please consult an expert in statistics. ANOVA is not the right method for data without normal distribution.

You could use log transform to get a normal distribution. After data transformation you can use a parametric test.

**Level of interest:** An article of importance in its field

**Quality of written English:** Acceptable

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

**Declaration of competing interests:**

no to all questions.