Author’s response to reviews

Title: Metabolic syndrome and its predictors in an urban population in Kenya: A cross sectional study

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Author’s response to reviews:

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The Editor,

BMC Endocrine Disorders.

Dear Sir/Madam,

RE: RESUBMISSION OF MANUSCRIPT BEN-D-17-00035
Thank you for the detailed feedback on my submitted manuscript titled “Metabolic syndrome and its predictors in an urban population in Kenya: A cross sectional study”. The authors response to the reviewer’s feedback is as follows:

Reviewer 1

1. The introduction section is too lengthy. It should be shortened to 1 to 1.5 pages approximately

Response: This has been shortened by 2 paragraphs

2. It is mentioned in the methods section that “exclusion criteria included participants with a BMI greater than 35 kg/m2……Towards the end of the study, a few individuals with a BMI greater than 35 kg/m2 but less than 40 kg/m2 were recruited due to difficulties in recruiting healthy participants in the older age groups”. Since participants with a BMI greater than 35 kg/m2 are included, this can be removed from the exclusion criteria.

Response: For the better part of the study, recruitment excluded those with BMIs > 35. Those with BMIs >35 were only included towards the end of the study due to difficulties in recruiting people above the age of 50. The authors are willing to edit as requested however, we feel that the current wording best captures what was done hence has not been modified. See Exclusion criteria, pg 8, line 184-186.

3. It is mentioned in the methods section that a single measurement of BP was performed. BP is highly variable and therefore 2 measurements at least 5 minutes apart should be taken and the average of the two provided.

Response: Agreed. However, a common cause of variable BP measurements is taking them when someone isn’t well rested. We measured BP after participants had sat down for a minimum of 15 minutes which was the time taken to fill the study questionnaire and this ensured that they were well rested. Secondly, we measured BP using digital BP machines which are quite precise. Thirdly, we repeated blood pressure measurements for all those with BP in the hypertensive range. This has been clarified in the resubmitted manuscript. See Measurements, pg 8-9, line 190-195
4. Table 1: The intra and inter assay co-efficients of variation of the biochemical parameters should be provided

Response: Inter assay (between run) CVs during the period when samples were analysed in 2015 have been provided in Table 1, pg 10. Intra-assay (within run) CVs are only available for 2013 when the installation and performance qualification of the equipment was done. These might not be relevant as the sample analysis was done in 2015.

5. Table 2: variables like the height and weight of the study participants can be removed as providing BMI would be sufficient

Response: This has been done. Please see Table 2, pg 12

6. Table 3 provides both crude and adjusted ORs. What are the confounders adjusted? There is no information in the footnote on the confounders and this should be provided.

Response: The confounders adjusted are all variables listed except the 5 variables that comprise the Metabolic syndrome since this is the outcome being assessed. See Table 3 footnote, pg 14

7. Since measured and calculated LDL-C are included in the analyses, the values of calculated LDL-C could be included in Table 2

Response: This has been done, please see Table 2, pg 12

8. Table 1 mention that ALT, AST and ALP are measured. However, there is no further information on the levels of these parameters in the subsequent tables. They are also not included in any analysis. They can be removed from the methods section or data on these parameters can be provided

Response: Values have been provided in Table 2, pg 12.
Reviewer 2

1. The correct full form of ALT is alanine aminotransferase. This needs to be corrected at all the places used in the article.

Response: This has been done. See Background, pg 5, line 108; Table 1 key, pg 10, line 216; Table 2, pg 12, line 275; Abbreviations, pg 22, line 438.

2. In line 209 instead of patient samples, it would be better to write as participant samples as they were all healthy individuals.

Response: This has been done. See Results, pg 13, Methods, line 289.

3. In methods section inclusion and exclusion criterion should include only the points for inclusion and exclusion. Rest of the information like use of posters in public areas including churches, 177 universities, colleges, hospitals and companies etc. should be written separately as part of methodology.

Response: Has been done, please see Exclusion criteria, pg 8, line 176-187.

4. There should be a mention of total number of participants recruited in methods section.

Response: This has been done. See Methods, pg 7, line 161.

5. Which questionnaire is referred to in line 191?

Response: All study participants filled a questionnaire during recruitment.
All authors have read and agreed to the modifications.

Regards

Geoffrey Omuse