Reviewer's report

Title: Determinants of Hypertension in a Young Ugandan Population in Epidemiological Transition- The MEPI-CVD Survey

Version: 1 Date: 23 May 2015

Reviewer: Maria Kaczmarek

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- Major Compulsory Revisions

1. A term “Young” is typically used for adolescents (aged 10-18) or young adults aged 18-25; this term used in the title of the manuscript for addressing a cohort of people 18-40 years old is a bit misleading. It is suggested to revise the title as for example:
   Determinants of hypertension in a cohort of Ugandan adults in epidemiological transition …..

2. Introduction: The rationale for this paper seems to be adequate although the papers referred as to previous Ugandan data on hypertension condition are reviewed too briefly leading to oversimplified conclusions (see lines 75-80). It is suggested to review them more accurately as Wamala and associates (2009) conducted their study in a community-based sample of people aged 20 years and older, there is no info about hospitalization. Alike this paper, the one by Musinguzi and Nuwaha (2013) are based on data collected in adults 15 years and older in both urban and rural settings.

3. Materials and Methods: The overall study design is appropriate and adequate to appropriately solve the research question which was to determine factors associated with hypertension. Eligibility criteria clearly defined. The sample size is representative (3,920 subjects), methods used for collecting data and for elaborating them statistically are adequately described in the paper however, several additional information would be useful for the readers.
   Line 137 it is suggested to add the accuracy of blood pressure measurements (to the nearest 1 mmHg, 2 mm/Hg or ?).
   Line 142 it is recommended to insert a reference for the surveillance approach used in this study.

   The logistic regression model is the best statistical tool to evaluate association of high blood pressure with potential predictor variables. However, it also should be cleared whether the backward or selection method was used in the stepwise procedure (see line 168). The statistic procedure should be described more accurately.

4. Results: In the Materials and Methods section, three sets of data are mentioned (lines 127-133). Table 1 summarizes only socio-demographic and selected lifestyle behaviour variables.
It is suggested to describe other variables as they appear in the logistic regression models (Table 2 – fasting blood glucose).

It should be cleared up, whether 3,685 study participants had complete data or the sample size varied according to three different set of data described in lines 127-133.

It also should be explained why only selected variables were included to statistical analyses (uni- and multivariate regression models). It seems to me that most of socio-demographic variables were used.

Lines 187-194 Was prevalence of hypertension assessment based on systolic blood pressure, diastolic blood pressure or both being elevated? It should be clearly stated while presenting data on elevated blood pressure prevalence.

5. Discussion: In compliance with my previous remark on the term “young” applied to the cohort aged 18-40 years, authors should be careful of using this term while discussing their findings.

Again I wonder what happened with biochemical data. If they are not analyzed in this paper they should be

- Minor Essential Revisions
1. In Table 2 reference category should be specified: i.e. Age 18-29 (reference group); Male (reference group) a.s.o.

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

**Quality of written English:** Acceptable

**Statistical review:** No, the manuscript does not need to be seen by a statistician.

**Declaration of competing interests:**

I declare that I have no competing interests