Reviewer’s report

Title: The association between pre pregnancy body mass index and risk of preeclampsia: a registry based study from Tanzania

Version: 1 Date: 21 Jul 2017

Reviewer: Mary Lou Thompson

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There are a number of points in the authors' responses to the previous review which would benefit from further clarification:

1. In response to the question regarding repeated measures on individual women, the authors explain that some women will indeed be represented in the study more than once, but that they do not anticipate that adjustment for repeated measures will impact their results. While this may be correct, I nevertheless recommend that they acknowledge the presence of repeated measures in the study sample and provide information on how many women are included for two pregnancies.

2. The authors explain that they have specified confounders a priori and hence that choice of confounders to adjust for is not based on hypothesis testing. However, in Lines 195-198 they appear to additionally adjust for further variables (chronic hypertension, diabetes mellitus, and heart diseases before pregnancy). Are these variables also regarded as potential confounders and, if so, is this "second step" analysis to be regarded as a sensitivity analysis to assess the need for additional adjustment beyond the initially specified confounders? Please clarify.

3. The authors acknowledge that multiple comparisons are a concern in this study, but argue that this is mitigated by there being only one exposure of interest, BMI (and one outcome of interest, preeclampsia). In that case, the purpose of the many additional hypothesis tests carried out is not clear. The authors should acknowledge the multiple comparisons issue and that these additional hypothesis tests should be regarded as exploratory.

4. Lines 174-178: The text regarding cut-offs for height and weight is still not clear. Were, e.g., women whose records had a height <130 cm or >200 cm excluded from the study? The authors state this clearly for BMI: "we excluded records with BMI above 40 (0.4%) and BMI below 15 (0.5%)". It would be helpful if they made similar statements regarding height and weight if subjects were indeed excluded on the basis of these measurements also.

5. Lines 186-187: "P value for trend was computed for the ordinal variables" - it is still not clear here what trend is being assessed. For instance, in Table 1 the tests for trend are for the cross-classification of BMI categories with each of mother's age, mother's education and mother's height. None of these tests is associated with the primary aim (association
between BMI and risk of preeclampsia) and the motivation for carrying out these tests in addition to Chi-squared tests for independence/homogeneity is not made clear.

6. Lines 206-209: please make clear that the test was for interaction between, e.g., height and BMI in their impact on risk of preeclampsia.

7. Lines 225-226: it is not clear what differences (comparisons) are being referred to.

8. Table 2: Gestational age is considered in categories of "Below 37" "More than 37". It is not clear which category includes gestational age =37.

A number of typographical errors have been introduced in the revised manuscript. These include:

Line 155: "multiple"

Line 226: "mean BMI was above 25"?

Line 261: "showed"

Line 320: "self-reported weight"

Line 322: "socially acceptable"

**Are the methods appropriate and well described?**
If not, please specify what is required in your comments to the authors.

Yes

**Does the work include the necessary controls?**
If not, please specify which controls are required in your comments to the authors.

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