Author's response to reviews

Title: Age at Menarche in relation to Nutritional Status and Critical Life Events among girls in Urban and Rural Secondary Schools in Post Conflict Northern Uganda

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Author's response to reviews: see over
**Cover Letter**

Dear Editor: Thank you for your helpful comments. The changes made are indicated after each paragraph.

General
The paper needs to be corrected for numerous typographical errors, including a paragraph that is repeated in the discussion section.

AU: Corrections made throughout the document and repeated paragraph from the discussion section from Lines 265-272.

Abstract
- In the abstract, results on age at menarche are presented for rural and urban residing girls and for girls who attended rural and urban schools. The wording should be clarified so that it is more clear how these two sets of findings are different from each other. Alternatively, the authors could present only the significant findings in the abstract.

AU: Rewording done, lines 37-40, deleted living and replaced with dwelling

- It is overstating the results to say that the girls “showed resilience to critical life events such as war, abduction, and loss of loved ones” because no mental health or physical health outcomes were examined. The only outcome studied was age at menarche. This statement needs to be reframed.

AU: Rephrasing was done, lines 37, deleted resilience and replaced with ‘was not affected’.

Methods
- The authors have added more details about their measures, but some details are still missing. It remains unclear exactly which stressful life events were measured (some events are described, but the list is not complete). Also, did the events have to occur during the period of the conflict?

AU: List of stressful life events and definitions added, Lines 124-133.

- The authors indicate that if both parents were living together at home they were considered to be married. Living together in the same home may not necessarily overlap with marital status.

AU: Definition rectified. Lines 136-137.

- The authors hypothesized that the presence of elder siblings in a household would affect the age
at menarche. Has this been supported in previous research? If so this should be cited. This hypothesis should be mentioned in the introduction section not introduced in the methods section.

AU: Deleted the paragraph. Lines 149-153.

-The authors mention doing a linear regression analysis in the methods section, but this result is not presented in the paper.

AU: Deleted statement as it is for another paper for publication on combined data analysis for general age at menarche in the region. Lines 169-171.

-The authors should specify the inputs to determine the sample size. What was the study powered to detect?

AU: Sample size formula calculation and power plus other details added. Lines 102-115.

-How was the survey administered? Was it self-administered by the students? Did the participants take part in the survey while they were at school? How was confidentiality protected? These details need to be added.

AU: Details on survey administration and confidentiality added. Lines 159-165.

Results
-Results on parental education are difficult to follow and some of the %'s reported do not match what is reported in the Table.

AU: Corrections and rephrasing sentences done. Lines 191-197.

-The authors included “not living with both parents” as a stressful life event. This is a demographic factor, not a stressful life event. There needs to be greater clarity throughout the paper about what exactly was considered a stressful life event.

AU: Explanations done. Lines 144-147.

-Under the heading “effects of critical life events on age at menarche” the authors report results on paternal education and place of residence. These should be moved to a different section, or the section heading should be modified. Given that the results are based on cross-sectional data, the wording used in the heading should be "associations", not "effects."
Parental education and residence was left since they determine socioeconomic status and food security all of which affects age at menarche.

Discussion
-The authors have not sufficiently placed their findings in the context of other studies. Have other studies found significant associations between these types of stressful events and age at menarche or other health outcomes? The authors mention the possibility of bias in the sample, but are there other explanations for the lack of significant associations?


-Why do the authors think that paternal but not maternal education was associated with age at menarche? This was not explained.

AU: Explanation given. Lines 250-259.

-The limitations section needs to mention limitations of the measures of stressful life events. The perceived stressfulness of the events was not measured and the measures were only measures of specific traumatic events.


-The authors need to define the terms avoidant and anxious/ambivalent strategies in the discussion.

AU: Definition done. Lines 252-254.

Table 1a.
Is the significant difference between rural and urban schools on “lives with both parents” correct? This result looks strange and the numbers don't appear to add up.

AU: This was a bivariate analysis comparing girls in rural versus urban in respect to living with both parents. However when this was compared against menarche age, it was not significant. Numbers checked an total is 271.

Thanks

Dr Odongkara Beatrice Mpora

Corresponding Author
We would be grateful if you could address the comments in a revised manuscript and provide a cover letter giving a point-by-point response to the concerns.

Please also ensure that your revised manuscript conforms to the journal style (http://www.biomedcentral.com/info/ifora/medicine_journals). It is important that your files are correctly formatted.

We look forward to receiving your revised manuscript by 9 November 2013. If you imagine that it will take longer to prepare please give us some estimate of when we can expect it.

You should upload your cover letter and revised manuscript through http://www.biomedcentral.com/manuscript/login/man.asp?txt_nav=man&txt_man_id=1505247993910229. You will find more detailed instructions at the base of this email. Please don't hesitate to contact me if you have any problems or questions regarding your manuscript.

With best wishes,

Ms Janelyn Ann Cruz
on behalf of Dr Davida Becker