Author’s response to reviews

Title: Sexuality, fertility and family planning characteristics of married women aged 15 to 19 years in Ethiopia, Nigeria and Tanzania: a comparative analysis of cross-sectional data

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Dear Editor

RE: REPH-D-18-00354 Sexuality, fertility and family planning characteristics of married women aged 15 to 19 years in Ethiopia, Nigeria and Tanzania: a comparative analysis of cross-sectional data

Thank you for considering our manuscript for publication in Reproductive Health and giving us the opportunity to improve our paper further. Below are our responses to the Reviewers’ comments; the original comments from the Reviewer are presented and our response and changes to the manuscript are explained in detail below each comment. The changes within the manuscript are highlighted in yellow. The line numbers refer to the highlighted version of the manuscript.

The authors would like to thank the Reviewers for their helpful comments. Please find below a detailed response to the comments made.
1. The rationale of the study is not strong. It's not clear why the cross-county comparison and/or evaluation was done, beside that the A360 program was rolled out across those 3 countries (Ethiopia, Nigeria and Tanzania).

This paper examines baseline survey data from the outcome evaluation study of the A360 programme which is being rolled out in Ethiopia, Nigeria and Tanzania. As independent evaluators of the A360 programme, we had no involvement in the selection of these countries. The comparison is based on availability of baseline survey data from the main outcome evaluation study. However, it is an opportunity to share findings from three countries with a mix of characteristics, including geography, culture, religion, and contraceptive prevalence representing some of the diversity in sub-Saharan Africa. In addition, although country-specific DHS and FP2020 surveys routinely collect these data in sub-Saharan Africa, the numbers of adolescents in these surveys are small. Therefore, this is an opportunity to build a comprehensive picture of sexuality, fertility and contraceptive use characteristics of married women aged 15 to 19 years in these countries.

2. The question that the study seeks to answer is not well stated. 

We have rephrased the last paragraph in the introduction to make clear why the cross-county comparison and the aims of the study [line 113-127]:

“As part of the outcome evaluation, baseline survey data was collected on the target population in three sub-national settings. As independent evaluators of the A360 programme, we had no involvement in the selection of countries targeted for the intervention. Therefore, the cross-county comparison presented here is based on availability of baseline survey data from the main outcome evaluation study. However, it is a chance to share findings from three countries with a mix of characteristics, including geography, culture, religion, and contraceptive prevalence representing some of the diversity in sub-Saharan Africa. In addition, although country-specific DHS and FP2020 surveys routinely collect these data in sub-Saharan Africa, the numbers of adolescents in these surveys are small.[1, 14-16] Therefore, this is an opportunity to build a comprehensive picture of sexuality, fertility and contraceptive use characteristics of married women aged 15 to 19 years in these countries.”

The aim of this study is to describe sexuality, fertility and contraceptive use characteristics of married women aged 15 to 19 years living in three sub-national settings in Ethiopia, Nigeria and Tanzania.”

3. Reference is required for the modern contraception definition. 

We used the DHS definition of modern contraception [line 234]. Reference included:
4. It will be good to specify the factors that were used to assess sexuality, fertility and family planning characteristics of married women under the method section.

We have re-structured the “Study Outcomes” section in the paper to more clearly specify the variables included in the study [line 207-215 and 245-258].

“Sexuality and fertility characteristics included: age at first sexual intercourse, timing of last sexual intercourse, current pregnancy status, ever been pregnant, ever given birth, age at first birth, number of living children, planning status of most recent birth, and unmet need for modern contraception (as per DHS definition[18]).

Family planning characteristics included: mCPR, heard about modern contraception and sources of information on contraception, approval of married couples using a modern contraceptive method to avoid or delay pregnancy, knowledge of the benefits of contraception, misconceptions about contraception, and self-efficacy to use modern contraception.”

AND

“Knowledge of the benefits of contraception was assessed through five questions, including whether the woman agreed with the following statements: (1) preventing unwanted pregnancies is a benefit of contraception, (2) some contraception methods reduce sexually transmitted infections, (3) modern contraception can help an adolescent woman delay the birth of her first child, if she wants to, (4) after she begins to have children, modern contraception can allow an adolescent woman to decide when to have another child, and (5) using modern contraception can allow an adolescent woman girl to complete her education, find a better job and have a better life.

Misconceptions about contraception were assessed through four questions, including whether the woman believed that: (1) some modern contraception can stop an adolescent woman from ever being pregnant again even after she stops using it, (2) if a modern contraception changes an adolescent woman’s menstrual bleeding, it’s bad for her health and can harm her womb, (3) some modern contraceptives can make adolescent women permanently fat, and (4) adolescent women who use modern contraception are promiscuous.”

5. Table 1: Include age as a continuous variable and present mean (SD)

Table 1 amended [line 310].

6. Table 1: For the categorical variables, it will be good to present median (IQR) for each category in addition to the overall.
The authors feel that presenting the overall median (IQR) is sufficient. We feel that presenting median (IQR) for each category would make the table too busy. In addition, some of the categories are very small e.g 15-17, 18-19, therefore we do not feel this additional information would be helpful to the reader. However, we have included as an additional file an amended Table 1 with the reviewer’s suggestion and the editor can decide which version of Table 1 to include.

7. Table 1: Specify the numbers in the parentheses as n (%) in a heading column to make it clearer.

Table 1 amended [line 310].

8. Table 1 requires formatting to meet the journal requirement.

Table 1 amended [line 310]. The authors have followed the requirements as specified on the Journal’s webpage https://reproductive-health-journal.biomedcentral.com/submission-guidelines/preparing-your-manuscript#preparing+tables

However, if the Editor feels that this needs further reformatting the authors are happy to seek further guidance from the customer service team at info@biomedcentral.com.

9. Table 2: Mean (SD) for continuous variables (age at first sexual intercourse, age at first birth

Table 2 amended [line 318].

10. Table 2: There is a little confusion over the unmet need for modern contraception. In the method section, authors have mentioned that they used DHS definition (mainly retrospective) for unmet need. However, in the results (Table 2, footnote) it seems that both prospective and retrospective definitions were used to assess the unmet need. Please keep it consistent.

The author’s used DHS definition for unmet need. We have removed the footnote for Table 2 and provided more detailed definition in the Methods (Study outcomes) section [line 217-232].

“As per DHS definition, this study considered three outcomes for unmet need for modern contraception: total unmet need, unmet need for spacing, and for limiting. The denominator for the calculation of unmet need is the total of currently married women aged 15-19 years.[18] The numerator includes only women who were not using contraception at the time of the survey. The nonusers were first split into pregnant or postpartum amenorrhoeic (menstrual period not returned following a birth during the two years preceding the survey) women on one side, and those who were neither pregnant nor postpartum amenorrhoeic on the other. The pregnant or
postpartum amenorrhoeic were then classified by whether the pregnancy or last birth was wanted at that time or unwanted. Women in the mistimed or unwanted category were considered having the unmet need for spacing and for limiting respectively.[18] The other component of unmet need is composed of women who were neither pregnant nor postpartum amenorrhoeic. These women were further divided, into fecund and infecund. Fecund women who wanted children two or more years in the future, or were undecided whether/when they wanted a child were regarded as having an unmet need for spacing. Fecund women who wanted no more children were regarded as having an unmet need for limiting.[18] The total unmet need was composed of unmet need for spacing plus the unmet need for limiting.”

11. In the first paragraph of the discussion, authors have stated injectables as long-acting reversible contraceptive method. Generally, implants and IUDs are only included under this category. Also, do not introduce new findings in the discussion (e.g., % of women using long-acting methods among women who used modern contraceptive methods), and avoid duplicating the results.

In the first paragraph the authors have revised the statement about injectables and implants accordingly [line 416-417]. We have put the % of women using long-acting methods among women who used modern contraceptive methods in the results section [line 340-241 and 363-364 and 384-385]. We have revised the discussion to minimise duplication of results.

12. Need to compare findings with the other studies. It's compared but it is not sufficient.

We have revised the discussion to emphasise the consistency of our findings with other additional studies.

In the first paragraph of the discussion on mCPR we have compared our findings to other studies [line 423-427]:

“Our findings are consistent with previous studies focusing on sexually active women aged 15 to 19 years showing low contraceptive use in this subgroup of women, considerably variation by geographic region of sub-Saharan Africa, and Ethiopia showing significant progress in recent years regarding use of modern contraceptives among sexually active adolescents.[19-22]”

In the second paragraph of the discussion on unmet need we have compared our findings to other studies [line 436-439]:

“Our findings were consistent with results from the most recent country-specific DHS[14-16], and previous community-based cross-sectional studies [27-29] showing variation by geographic region of sub-Saharan Africa, and that unmet need for modern contraception is made up almost entirely of unmet need for spacing in this subgroup of women.”
Reviewer #2

1. The paper's background section would be strengthened with discussion of these different characteristics within the context of child marriage, specifically. This particularly important given the fact that the majority of their sample across the different countries married before the age of 18 years.

We have included the following sentences in the second paragraph of the Background section [line 91-96]:

“In developing countries, 90.0% of childbearing between the ages of 10 and 19 takes place within the context of child marriage,[8] and complications related to childbearing are the leading cause of mortality among adolescent girls aged 15 to 19 worldwide.[9] Child marriage has shown to be associated with unintended pregnancy, low levels of contraceptive use, and limited use of maternal health services, which result in increased vulnerability for negative maternal outcomes.[10]”

2. Please also include the specific SDG goals relating to reproductive health that this work relates to (Goal and Target numbers). The rationale for country selection is also important here, and cannot simply be explained away by referencing other materials on the Adolescent Health 360 study, otherwise this paper feels incomplete as a stand-alone study and paper.

As described above in response to Reviewer#1 Comments 1 and 2, we have rephrased the last paragraph in the Background section [line 113-127] to make clear why the cross-county comparison and the aims of the study. We have included more detail on the SDG goals in the first paragraph of the Background section [line 80-83]:

“It is an important aspect of three of the thirteen targets found in the United Nations (UN) Sustainable Development Goal (SDG) for health (SDG 3),[3] including by 2030, (1) reducing the global maternal mortality ratio, (2) ending preventable deaths of newborns and children under 5 years of age, and (3) ensuring universal access to sexual and reproductive health-care services. [3]”

3. The inclusion of male partners of adolescents in union is important. Some explanation as to why the figures for male partners are so low is recommended.

We have included the following statement in the Methods section [line 192-194]:

“The overall outcome evaluation study was powered to detect changes in mCPR in our target population (married women aged 15 to 19 years). Therefore, due to resource constraints it was possible only to include a small sample of husbands in each setting.[17]”
4. What are the research and programmatic implications of these result reporting on comparisons in unmet need and fertility intentions across these three settings? The paper mentions that a strength of the study is that it compared population-based data from three settings using a large sample, but what is the significance of this on its own, besides this work serving as the baseline for the Adolescent 360 Program.

We have included the following statement in the Conclusion to address this point [line 518-527]:

“This study highlights the importance of describing variations and differences in modern contraceptive use and unmet need among married adolescent women in order to better address their needs. The higher use of modern contraception in Ethiopia is an indication that, when proper policies and investments are made (e.g. the Health Extension Workers Programme), it is possible to have considerable impact in a short period of time. Further research should include systematic analyses of the reasons for success of the policies and strategies being implemented in Ethiopia. It is critical for evidence-based policy making and programme design to identify the components of these policies and strategies which can be implemented or adapted for success in other contexts, and share these findings with other countries.”

5. What are some of socio-cultural and structural barriers shared or dissimilar across these settings? ("Barriers" are mentioned, but little explanation is provided).

We have added the following sentences to the last paragraph of the Discussion [line 495-502]:

“Across all three countries, adolescents who have a high school level education or above, who are in urban areas, and who are in the highest wealth quintiles use significantly more modern contraception as compared to their peers who have primary-level education, live in rural areas, or who belong to the lowest wealth quintiles.[19] Differences across the three countries in terms of policies, strategies, and investment by governments in women's, children's, and adolescents’ health, will determine the extent to which keeping adolescent girls in school, curtailing child marriage, and access to modern contraception for all women of reproductive age will impact on the success of adolescent sexual and reproductive health programmes.”

6. Human centered design is brought up in the conclusions only, and comes slightly out of nowhere given that there is not explicit mention of it in the introduction/background or the discussion section.

We have removed this from the conclusion, as we agree it is not specifically relevant to the study findings described.