Reviewer’s report

Title: Demand for family planning satisfied with modern methods among sexually active women in low- and middle-income countries: who is lagging behind?

Version: 0 Date: 03 Dec 2017

Reviewer: Sally Romero

Reviewer's report:

Summary and overall impression of submitted manuscript:

This original article by Ewerling et al. describes the demand for family planning satisfied with modern methods in low- and middle-income countries. The authors highlight that coverage for family planning varies by country and many subgroups represented have coverage below 20%. These findings will help guide future interventions and programs geared towards increasing the demand for family planning satisfied with modern methods in low- and middle-income countries. Overall, the manuscript would benefit from significant revisions to improve the clarity and representation of the manuscript's findings. Below are suggested revisions to address major and minor weaknesses to the article.

Reviewer Comments:

Tables and Figures:

* The authors include a large amount of data in the tables and figures to present their findings, yet some of this data gets lost in the manuscript text. The authors may want to reduce the number of tables and figures to only include relevant data for this manuscript.

* The authors should review the manuscript text and make sure the text accurately identifies the tables or figures in which the data is discussed. It was very challenging to know which table or figure was referred to in the manuscript text as many of the references in the text were for a different table or figure.

* Tables should be included at the end of the manuscript after the references or as a separate file.

* The authors may want to remove Table 1 from the manuscript text and include it as only a supplemental methods table.
Table 4 would be easier for the reader to digest if it only included the "Countries with mDFPS below 20% at national level".

The "subgroups with mDFPS below 20%" data in Table 4 needs to be organized in a different way as the age, wealth, literacy, education, area, union, and religion data gets lost in the table as currently represented. It may be useful to have this data organized similar to the table shown in Figure 4. It may be helpful to remove the table from Figure 4 and only have the map included in Figure 4 since this is what the figure footnote includes. The table from Figure 4 can then become its own table including the subgroups country data from Table 4.

Is the data from the supplemental table with 95% CI referenced in the manuscript? If no, then the supplemental table can be removed from the manuscript submission.

The figure legends need to be updated to represent the correct figure number, as is all the figures are labelled as "Figure 1".

Please add axis labels to clearly illustrate the data presented in the figures.

The authors may want to consider only including Figures 1 and 4 in the manuscript. As they are currently displayed, Figures 2 and 3 do not add to the manuscript.

Introduction section:

Lines 73-75: This sentence needs rewritten for clarity.

Lines 71-83: These 2 paragraphs can be combined into 1 paragraph. In particular, Lines 76-83 can be re-written to briefly highlight and summarize the potential factors associated with disparities in DFPS.

Methods section:

Lines 96-97: Suggestion to remove Table 1 and include it as a supplemental methods table.

Lines 97-98: Since Table 2 includes results in addition to the 77 surveys included, Table 2 should be introduced in the results section, not in the methods section.
* Lines 96-98: Suggested rewrite: "We identified 95 surveys, from which we excluded 18 that only contained information for women who were married or in a union, leaving 77 surveys used in our analyses."

* Lines 124-125: Rewrite for clarity to match the wording used in the Table 3 footnotes: "Reliance on modern methods (% modern) was calculated as the ratio between the mDFPS and the DFPS."

* Lines 126-128: The inclusion of reliance on modern methods versus GDP per capita does not add to the manuscript. The authors may want to remove this analysis and Figure 2 from the manuscript.

* Lines 129-131: These sentences should be included in the previous paragraph in starting in Line 126.

* Lines 132: This sentence needs rewritten; in particular, the term "women who are being left behind" is confusing.

* Lines 133-134: The age categories chosen are not reflective of other age categories in the literature. It may be useful to use age categories that have been previously published in the literature, such as 15-24, 25-34, and 35-49 (see Lakew et al. Reproductive Health 2013, 10:52). If using age ranges not used previously in the literature, authors should explain why these age ranges were chosen.

Results section:

* Lines 146-150: These sentences need re-written to better summarize the findings in Table 2.

* Lines 152-158: Do these sentences refer to the "% modern" which is the 3rd column in Table 2, not the last column? If yes, then these sentences belong in the first paragraph of the results section.

* Lines 155-156: The explanation that women in these countries rely on traditional contraception belongs in the discussion section of the manuscript. This sentence should only present the results of the analysis. Please rewrite.

* Lines 157-167: The data described in these lines is shown in Table 3 yet there is no mention of Table 3 in the text. Please reference Table 3 in these sentences to direct the reader to the correct table.
* Lines 174-181: Since the data based on GDP and fertility rates does not add significantly to the manuscript, the authors may want to consider removing these sentences and Figures 2 and 3 from the manuscript. If the authors decide to keep the GDP and fertility rate data, then they need to show a better representation of the data. Figures 2 and 3 are too busy and each country is not easily identified. If the authors want to keep this data, then it may be better to illustrate the data by region (as in Table 2) versus all surveys.

* Lines 182-184: The authors reference Table 3, yet Table 2 shows the mean mDFPS data for women in a union versus those not in a union. These sentences belong in the first paragraph with the other Table 2 data. This data is not in Table 3.

* Lines 190-198: This paragraph refers to data presented in Figure 4, not Figure 3, and in Table 4. Please see my comments above regarding splitting Table 4 into two tables and removing the table from Figure 4.

Discussion section:

* The discussion section needs re-organized to highlight and discuss the main findings in an orderly manner.

* The first paragraph needs to include a summary of the results and highlight key findings, such as including sentences from the following lines: 200-201, 216, 244-247, and 252-253.

* Lines 202-205: These sentences do not belong in the first paragraph. They belong in paragraphs discussing religion or rural settings.

* Lines 206-215: This paragraph discusses the strengths of the manuscript and belongs near the end of the discussion section before the conclusion section. The authors need to also identify and comment on the limitations of the manuscript. These sentences can be included in the strengths paragraph.

* Lines 226-234: The authors reference Figure 3, yet the data discussed in these lines is in Figure 4. Please correct this error.

* Line 232: Please reference where the results of this data analysis is shown (Figure or Table?).

* Lines 238-239: This sentence is unclear and should be revised.
* Lines 247-250: These sentences should be removed or added to another paragraph as lines 244-247 belong in the first paragraph of the discussion.

Conclusion section:

* Lines 255-266: These sentences refer to the reliance on traditional methods and belong earlier in the discussion. They should not be part of the conclusion paragraph. The authors conclusion paragraph should briefly summarize the take home message of the manuscript and include the sentences similar to Lines 267-271 or similar to Lines 48-58 in the plain English summary.

**Level of interest**
Please indicate how interesting you found the manuscript:

An article of importance in its field

**Quality of written English**
Please indicate the quality of language in the manuscript:

Needs some language corrections before being published

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