Author’s response to reviews

Title: Determinants of Infant Feeding Practices among Mothers Living with HIV Attending Prevention of Mother to Child Transmission Clinic at Kiambu Level 4 Hospital, Kenya: A Cross-Sectional Study

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Author’s response to reviews:

Reviewer #1:

The manuscript tried to investigate the 0 - 12 months old infant feeding practices and its determinants among mothers living with HIV. Currently, few works are available on the health of infants of HIV infected mothers. In this work, a cross-section method was used to characterize the changes among 180 HIV mothers. These results may provide a potential approach in characterizing the effects of HIV infected mother's breastfeeding with MTCT method on to the infant health. Therefore, I suggest it can be accepted after revising.

In the abstract section, the background needs to be more shrinked and precised. Also, no need to add the statistical method in the abstract. And, the conclusion and signification need to be more clarified.

- Statistical method removed from abstract, conclusion clarified in line with results.

Page 4, Line 73: More information about PMTCT and its relation with HIV infected mothers should be added and more clarified,

- More literature on PMTCT added.

Page 4, Line 82-89: Need to be recheck with the repetition of the same sentences meaning. Like, the WHO recommendation. And, I suggest deleting "World Health Organization (WHO) recommends that mothers living with HIV who are under ART treatment should exclusively breastfeed their infants for the first 6 months after birth, then introduce appropriate complementary feeding while continuing to breastfeed until the infant is 12 months old. Breastfeeding should only be stopped when a nutritionally adequate diet can be provided [3]." In which the other sentence is dealing the same meaning.

- Wording deleted

Page 5, Line 101: The objective of the study needs to be more clearly and in a separated paragraph.

In method section, generally, it needs to be more focused on the study plan with citing recent references
correlated with the study, like the questioners…..etc. Also, a very big concern, why you did not make FFQ or any other nutritional questioners for mothers in which it can give a feedback about the nutritional knowledge of the sample population.

- Objective of the study clarified and recent references used in the literature.

In Conclusions, more details about the study, not recommendations, must be added and the general conclusion should be focused on the findings of the study.

- Conclusion section revised and aligned to findings.

Reviewer #2: REVIEWER COMMENTS

TITLED PAPER: Determinants of Infant Feeding Practices among Mothers Attending Prevention of Mother to Child Clinic at Kiambu Level 4 Hospital, Kenya: A Cross-Sectional Study

This study is relevant in the Kenyan context to create useful evidence for the stakeholders in reducing MTCT. The paper in general is well written, but results interpretation should be improved and the discussion should be written accordingly to the correct interpretation of the results.

MAJOR COMMENTS

TITLE

1. Would be better to include in the title that are mothers living with HIV, so it would be more evident to the readers.

- Title revised and ‘are mothers living with HIV’ added.

2. Which would be the correct one 'Prevention of Mother to Child Clinic' or 'Prevention of Mother to Child Transmission Clinic' or 'Prevention of Mother to Child'? In my understanding, it would be the second one, since in other parts of the paper is like "PMTCT clinic".

- Title revised. Determinants of Infant Feeding Practices among Mothers Living with HIV Attending Prevention of Mother to Child Transmission Clinic at Kiambu Level 4 Hospital, Kenya: A Cross-Sectional Study

ABSTRACT

1. The abbreviation COR should be defined in the abstract ('crude odd ratio'), not only in the abbreviation list because there is a high probability that readers revise just the abstract of a paper.

- COR defined in the abstract, line 35. ‘(Crude odd ration (COR) 0.24; (95% Confidence Interval (CI) 0.06, 0.97; p=0.044)’.
2. Authors do not include information obtained from qualitative data, which complement the quantitative findings.
- Information on qualitative findings included.

3. Line 40: Is it just 'knowledge' or 'maternal inadequate knowledge'?
- Wording changed from 'maternal inadequate knowledge' to just knowledge, line 35.

BACKGROUND
1. In the paragraph from line 72-76: The Mother to Child Transmission (MTCT) of HIV due to breastfeeding was in mothers without ART? If that so, it should be clarify in the text because the way that it is contrast with the WHO recommendation and it could be confusing for the readers.
- Sentence amended as follows, line 61-65: ‘WHO issued guidelines recommending that mothers living with HIV who are on ARV should receive full support to breastfeed their infants exclusively for the first six months of life, then introduce appropriate complementary foods while continuing to breastfeed for at least 12 months and up to 24 months or longer [2]’

2. Line 78-81, page 4: The authors gave information about Kiambu County. However, it would be informative for the readers to know the access to PMTCT services in Kiambu County knowing the context.
- Information on PMCT access in Kiambu added, line 74-77: Approximately 1,951 pregnant women living with HIV accessed PMTCT services in Kiambu County. Only 5.0% children were infected with HIV in 2015 in Kiambu, 60% reduction from 2013 which indicated an improvement in reducing mother to child transmission of HIV [5].

3. The abbreviation ART is used in the paper just once (line 82, page 4) and is not in the 'Abbreviation list'. However, the authors used the abbreviation ARV after that in the paper. It should be standardized the abbreviation. Alternatively, it could be written in extenso instead the abbreviation in the paragraph that mentions the WHO recommendation.
- Antiretroviral treatment (ART) added in the abbreviation list

4. Evidence about the coverage of ARV for pregnant women in Kenya should be informative for the readers.
- ART coverage among women added as follows: Line 67-68: Out of an estimated 79,000 eligible women, 59,000 women accessed PMTCT services in 2015 (74% coverage) [5]. Line 70-72: Recent statistics have shown that 68% of women in Kenya have accessed ART [6].

METHODS
1. The sentence in the lines 104-105, page 4: "The purpose of this study was to assess the infant feeding practices and its determinants among mothers living with HIV with infants 0 - 12 months old
attending PMTCT clinic at the Kiambu Level 4 Hospital" should be at the end of the Background section. Then, authors should consider re-write the sentence "This study explored gaps on determinants of infant feeding practices of mothers for effective expansion of appropriate and safe infant feeding practices in the context of HIV" (lines 101-102, page 4).

- Sentence move at the end of the background section. Line 83-85.

2. Although it is explained in the subsection 'Sample size and sampling techniques' how the predeterminate number of participants was obtained. In the sentence from 115-116 lines should also include the number '180'.

- The sample size added in the sentence. Line 96

3. Line 119-120, page 6: The sentence is not clear. What means "…using [10] equation…"? The equation used has a name? Authors can cite the equation's authors or explain a little about how was created.

- Name of equation added as follows, line 99: The sample size for this study was calculated using Fischer et al. equation [12]

4. To analyze qualitative data, did the authors use any software?

- Qualitative Data Analysis software used added, Line 136-137: QDA Miner (Qualitative Data Analysis) tool was used to analyze key informant interviews and focus group discussion transcripts.

RESULTS

1. Table 1: Authors could be omitting the word 'maternal' and only write 'Age group (years)'. Also, omit the words 'year' after that age group, since it was specified into parenthesis.

- Word 'maternal' removed from table 1.

2. Table 2: It is unusual that for some categories the 95% CI was included and for other was not. Perhaps, it could be more explicit to present the N in one column and % with the 95% CI in another column.

- 95% CI included in all categories. Results on N, % and 95% CI presented as suggested in table 2.

3. Table 2: Instead of "Mode of feeding…” should be consider "Feeding practice…”

- Amended to Feeding practice

4. Table 2: Instead of "Have you ever breastfed your baby" should be consider "Ever breastfed"

- Amended to Ever breastfed
5. Subsection named "Infant feeding decision" could be "Infant feeding practice decision"
   - Subsection amended to Infant feeding practice decision, line 180.

6. Lines 217-219, page 11: this part should be part of the methods' section. I encourage the authors
to include in the methods' section how they obtained the maternal knowledge score that is written as part of the results (lines 229-232, page 11).
   - A subsection added under methodology ‘Knowledge score analysis’, line 139

7. Table 4: The complement information is unnecessary (i.e., Inadequate knowledge).
   - Table 4 removed

8. "Maternal knowledge categories" could be omitted or changed to "Mothers with a child aged (months)" and use the following categories: 0-5 (n=77), 6-12 (n=103) and 0-12 (n=180)
   - Table 4 removed

9. Lines 239-240: The sentence is more accurate for the discussion section.
   - Sentence moved to discussion section, line 271-273.

10. Lines 244-246 (see also Table 5): The statement "mothers with inadequate knowledge on infant feeding were more likely to practice mixed feeding (COR 1.00; 95% CI 0.21, 4.85)" is rare, since the 95% CI includes the unit. Authors should revise the p-value. Also, the category of reference of maternal knowledge in the column of mixed feeding seems that was swapped because it is different from the other feeding practices in the table. If it is not the case, a note would be useful to clarify the reason to change the reference group.
   - Mixed feeding results removed from the table because N is lower than 25.

11. Table 5: it is missing the number 1, which indicates the category of reference of maternal knowledge in the column "Complementary feeding with breastfeeding"
   - 1 added.

12. Table 5: The N of any of the subcategories could be too small. Thus, for the readers could be useful to include the N for each subcategory (since -> 77 children received exclusive breastfeeding, replacement feeding or mixed feeding; and 65 children received complementary feeding with breastfeeding) in the table or as supplementary table.
   - Included the N for each subcategory: exclusive breastfeeding (n=55) and complementary feeding with breastfeeding (n=65). Removed replacement feeding and mixed feeding practices because N is lower than 25
13. If any N is lower than 25, the estimate should not be presented and if the N is between 25 and 50 should be interpreted with precaution.

- Removed replacement feeding and mixed feeding practices because N is lower than 25. Only presented exclusive breastfeeding (n=55) and complementary feeding with breastfeeding (n=65).

14. Authors interpret different cOR similarly: "Younger mothers were more likely to practice exclusive breastfeeding (COR 0.24; 95% CI 0.06, 0.97) and mothers with adequate knowledge had greater chances of practicing exclusive breastfeeding (COR 1.82; 95% CI 0.06, 0.57)." In this case, younger mothers had 76% less chances of practicing exclusive breastfeeding comparing with the reference group (older mothers) and mothers with 26 - 34 years were more likely to practice exclusive breastfeeding but this was no statistically significant. Younger mother usually does not give exclusive breast feeding because the lack of knowledge.

- Interpretation corrected, line 207-209: Younger mothers had less chances of practicing exclusive breastfeeding (COR 0.24; 95% CI 0.06, 0.97; p=0.044) compared to older mothers and mothers with 26 - 34 years were more likely to practice exclusive breastfeeding, though this was no statistically significant.

14. Line 249: It is "(COR 0.00; 95% CI 0.00, 0.90)" and should be "(COR 0.05; 95% CI 0.00, 0.90)"

- Corrected, line 212-213.

DISCUSSION

1. The authors wrote the following: "In this study, complementary feeding with continued breastfeeding for children older than 6 months was practiced by majority (63.1%) of the mothers living with HIV. This finding supports the current WHO recommendation for mothers living with HIV to breastfeed for at least 12 months with appropriate complementary feeding, if both mother and child are on ARV therapy." However, in this study there is no information about the adherence to ARV therapy from the participants (mothers and children). Authors only mention that mothers from the study had a good understanding of the use of ARVs in the prevention of MTCT.

- Sentence corrected and aligned to findings; Line 250-255.

2. Line 305: Is the information in parenthesis "(Maru, 2009)" a reference?

- Reference amended to [19], line 260

3. About the studies mentioned in the lines 318-325: Was the association between maternal age and exclusive breastfeeding practice adjusted for maternal socioeconomic characteristics?

- Sentence corrected, line 273-278.

4. Authors should revise the discussion accordingly to the correct interpretation of the cOR.

- The interpretation of the COR amended, line 272-292.

MINOR COMMENTS

1. Lines 47-49: Suggested changes in underlined and bold text: "Ministry of Health should come
up with strategies on infant feeding counseling that are aligned to a local context, to allow mothers to understand the importance of recommended infant feeding options for HIV-exposed infants.

- Sentence corrected. Line 43-45.

2. Line 72, page 4: the author could consider changing the word "by" for "of" in the following text ". . . a reduction by 66% since 2010."
- Sentence corrected. Line 62.

3. Line 95, page 4: omit the word "only".
- Sentence corrected. Line 78.

4. FGD (line 127, page 6) and KII abbreviations are only explained in the abbreviation list. It should be specified in the text the first time that was used by the authors (Line 147, page 7).
- Sentence corrected. Line 128.

5. Line 222, page 11: A number 6 is twice and it seems that was a mistake ". . . 6 months 6 old (Table 3)"
- Sentence corrected. Line 199-200.

Reviewer #3:

Abstract
* Use of abbreviation in the abstract is not recommended
- Abbreviation removed

* In the method section, there is no sample size determination and sampling procedure, it is very important here
- Sample size added

* Method of analysis and software that is used for the analysis must be included especially for the qualitative and for quantitative also it is short (which model is used? Is the linear, logistic, multinomial etc)
- Comprehensive Sample size and sampling techniques for both qualitative and quantitative methods discussed under methodology, line 99-112. Qualitative Data Analysis software used added, Line 136-137: QDA Miner (Qualitative Data Analysis) tool was used to analyze key informant interviews and focus group discussion transcripts.
* the conclusion must be focused and short. Try to state the magnitude of the practice and the
significant factors with the recommendation.
- Conclusion section revised and aligned to findings.

* Keywords must be in line with the topics gives emphasis on breastfeeding practices too much
- Amended, line 47: Determinants, Infant feeding practice, Mothers, HIV, Prevention of Mother-
to-Child Transmission

Background
* Well narrated and interesting but it gives emphasis on PMTCT and needs to have study findings
and should have to show the possible consequences contributing factors and intervention with one or 2
paragraphs.
- Background information updated with comprehensive PMTCT literature.

Methods

* Better to avoid this statement under the title of Method "The purpose of this study was to assess
the infant feeding practices and its determinants among mothers 105 living with HIV with infants 0
- 12 months old attending PMTCT clinic at the Kiambu Level 4 Hospital." In paragraph 1, line 104 and
105. It is stated in the last paragraph of the background (line 101 and 102)
- Sentence move at the end of the background section. Line 83-85.

* Line 107 - 108: "... a cross-sectional analytical study design with both qualitative and
quantitative methods of data collection and analysis." It is not clear? Is there a study which is said
cross-sectional analytical study? Pleased to be sure that a cross-sectional study design will include both
the quantitative and qualitative …. Needs revision
- Sentence corrected, line 88-89

* Your Study participants (line 115 - 116) were those who have a child 0 - 12 months at the time
of the data collection. Your result will be under or over especially the magnitude because of your
target group. A mother that will be interviewed at the child age of 3 months with exclusive
breastfeeding will not continue for the next 3 months after the interview. So how did you handle such
effects? I think the target group is not selected appropriately.
- The study was a cross-section, with data collected at a specific point in time. Therefore, cannot
be used to establish change in behavior over a period to time. Under limitation of the study, line 294-
297, we have mentioned the following: ‘The study sample were mothers attending PMTCT clinic at the
time of the study, which may not be a representative of the general population of mothers living with
HIV with infants aged 0 -12 months at Kiambu Level 4 Hospital. The findings are therefore only
generalizable to studies conducted in similar circumstances’. 
* Is the sample size calculated by using a single population proportion formula? If so, make it clear. Is 180 include both qualitative and quantitative? If so, state separately to make it clear

- Name of equation added as follows, line 99: The sample size for this study was calculated using Fischer et al. equation [12]
- Comprehensive Sample size and sampling techniques for both qualitative and quantitative methods discussed under methodology, line 99-112.

* When did you say a mother has a feeding practice? I think you need some operational definition for such words like feeding practice, EBF and mixed breastfeeding, maternal knowledge on feeding practice etc

- Submission guidelines don’t recommend operational definition subtitle

Result

* Please give a full title for the Tables? Where, when and target group etc

- Amended

* When did you say "Breastfeeding was a common practice among mothers"? line 184

- Breastfeeding was a common practice among mothers, and most of the children had been breastfed (91.7%), line 165.

* Did you determine the practice of breastfeeding by using the questions listed in table 2? If so when did you say there is a practice? When the mother answer 3 out of 4, 2 out of 4 or …. better if you consider in the method part as a sub-title of Operational definition

- Submission guidelines don’t recommend operational definition subtitle.

* Line 203, what type of influence, is it positive or negative? When the stigma will happen? Is by avoiding the breastfeeding or any other????

- Influenced their current feeding method, either the recommended feeding practice or non-recommended feeding practice.

* By using this small sample size, having this separate analysis will not that much significant or important, it has its own limitation. Example there must be 20 respondents for 1 variable to do a logistic regression, how did you see this?

- Removed replacement feeding and mixed feeding practices because N is lower than 25. Only presented exclusive breastfeeding (n=55) and complementary feeding with breastfeeding (n=65).

* I think the method of analysis must be build based on the recommendation as the mother practicing the recommended breastfeeding or not? I want to hear why not you prefer to do like this? Even there is a different study in your area as you stated, so what will make your study different?
While age was a determinant of exclusive breastfeeding in this study, other studies showed no significant association of age and exclusive breastfeeding.

WHO issued guidelines recommending that mothers living with HIV who are on ARV should receive full support to breastfeed their infants exclusively for the first six months of life, then introduce appropriate complementary foods while continuing to breastfeed for at least 12 months and up to 24 months or longer. Majority of the studies have focused on feeding practices of children less than 6 months.

* When did you say the mother has knowledge of breastfeeding after asking this 8 serious of the question to assess this knowledge?

Line 145-146: A mother was considered to have adequate knowledge on infant feeding practices in the context of HIV if she scored all the knowledge questions right.

* If possible, I want to see the possible definition of AORs in the result section in addition to the existed statement with a confidence interval and there must be a confidence interval for the magnitude of Exclusive breastfeeding, mixed feeding etc .... To see whether it overlaps or not

COR defined in the abstract, line 35. ‘(Crude odd ration (COR) 0.24; (95% Confidence Interval (CI) 0.06, 0.97; p=0.044)’.

Discussion

* What is the possible reason for similarity or having a different result? It must be stated at the end of each paragraph discussion? Example why this happens at the end of line 272, next to reference number 7? I want to see for other discussions too?

Discussed in line 227: A likely explanation for low span of breastfeeding in this studies could be due of the trepidation to infect their children through transmission of HIV amid breastfeeding.

Conclusion

* The conclusion must be based on the finding

- Conclusion section revised and aligned to findings.