Author’s response to reviews

Title: Prevalence of initiation of complementary feeding at 6 months of age and associated factors among mothers of children aged 6 to 24 months in Addis Ababa, Ethiopia

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Author’s response to reviews:

Reviewer reports:

Mekitie Wondafrash (Reviewer 1): Comments and suggestions to the authors

General comments

The paper "Prevalence of initiation of complementary feeding at 6 months of age and associated factors among mothers of children aged 6 to 24 months in Addis Ababa, Ethiopia" is fairly well written and the statistical model utilized is appropriate. The findings of the study could also be crucial for policy makers and practitioners. However, the conclusions drawn should be adequately supported by the data used and the strengths and limitations should be clearly stated. The authors could have also calculated more indicators using the same study subjects.

There are issues that need to be addressed before publication of this manuscript.

Authors: The conclusions made based on the data; the strength and limitations are clearly indicated.
Abstract

Background

Pp2 Line 13-15- Why only initiations of complementary foods while the researchers could assess other IYCF practices?

Authors: Off course, it would have been good if the other indicators were assessed, but for us it was not cost effective because this was ‘small grant project’ funded by our institution (2963 USD), that is why we tried to focus on this issue, which is the very key indicator, even it was not studied well like that of timely initiation EBF. …

Method:

Pp2 Line 22-25: How was study subjects recruited using the sampling procedure indicated in this section? Why multistage sampling technique is used in this case? Why not selecting the health institutions in Addis Ababa at random and then proportionally allocate the samples to each institution?

Authors: As Addis Ababa is the capital city of the country, which has 10 big and wide sub-cities, it would be difficult and not feasible for us in terms of resource to randomly select the institutions from all sub-cities, but we believed as we should do the sampling in scientifically sound way with limited resources, that is why we have used multistage sampling technique, considering its advantage and situation of application.

Pp2 Line 25-27: Why not using existing data from DHS, 2016.Was it not possible to get the data from DHS program (https://dhsprogram.com/)?

Authors: off course, we did not try to get that data, but we do not think we can get all the information required in this study. …
Conclusion

Pp 2 Line 44-47: The study did not report on practices of other optimal infant and young child feeding and making the conclusion is not entirely supported by the findings.

Authors: it is corrected as ‘… caretakers should be educated on the benefits of introducing complementary feeding at 6 months of age and the consequences of early or late initiation of complementary feeding on child health.

Background

General comments:

* The study has been fairly well introduced. However, the authors should address some typos.

* The authors introduced about both breast feeding and complementary feeding, however, the emphasis was given only to initiation of complementary feeding at 6 months of age. In my opinion, other indicators of complementary feeding should have been assessed and calculated which could have been the most cost effective approach (e.g. minimum dietary diversity, minimum meal frequency and minimum acceptable diet).

Authors: Off course, it would have been good if the other indicators were assessed, but for us it was not cost effective because this was ‘small grant project’ funded by our institution (2963 USD), that is why we tried to focus on this issue, which is the very key indicator, even it was not studied well like that of timely initiation EBF. …

Specific comments:

Pp3 Line 38-40: The authors claim that there are only few studies conducted regarding time of initiation of complementary feeding in Ethiopia however, references have not been cited.
Moreover, there is at least one study which was cited and conducted in Mekelle town (which is the biggest town in the north of Ethiopia). (Rfr #13).

Pp3 Line 38-40: references are cited based on reviewer comment.


* *Tamiru D, Argu D, Belachew T. Survey on the introduction of complementary foods to infants within the first six months and associated factors in rural communities of Jimma Arjo. Int J Nutr Food Sci 2013; 2:77-84.

* *Mekele study ‘Shumey A, Demmissie M, Berhame Y. …

Pp3 Line 41-44: we were not sure as we could get all information required by this study.

Pp3 Line 48-58: again this was due to resource and feasibility issue.

Pp5 Line 3-4: revised as ‘… this study can provide a basis for an intervention programme to improve initiation of complementary feeding at 6 months of age in particular and complementary feeding practices in general in this area.

Methods

Study design and sample:

Pp 5 Line 12-13: How was the sample frame (sampling frame) determined for this type of study? Are the authors referring to source population, or target population in the study area?
Authors: corrected as ‘all women attended the public health facility were source population, and all women attended the selected health facility during data collection period were study population.’

Pp 5 Line 19: How did the authors arrive at a sample size of 600? As indicated above what was the purpose of using a multistage sampling technique for this study?

Authors: we have clearly shown the sample size for both the first and second objectives considering different parameters including design effect, as our sampling method was multistage. As we all know we use the sample size determination formula to get the minimum sample required, so in our case the minimum sample size required to address both objectives was 564, but in addition 1-3 womens were included from each facility, this was just because of extra questionnaire we had by the time. …

Pp6: Lines 10-12: What was the source of the questionnaire? Did the authors developed it or adapted from other sources? Did the authors did piloting or pretesting of the questionnaire? The two are different and should be clarified.

Authors: the questionnaire was developed by the authors by referring different literatures and guidelines. The questionnaire was pre-tested. …

Pp6 ; Line 34-36: I do not agree that the whole purpose of back translation is to "confirm consistency of questions formulation". Mostly the purpose of back translation to the original language is to make sure that there is cultural and conceptual equivalence in the two texts and should be done by different translators. I would like the authors to comment on this.

Authors: actually we are also to mean that’… back translated to make sure that there is conceptual equivalence in the two texts. This was done by different translators.

Measurement of variables
Pp6 Line 40-42: What does principal dependent variable refers to? Does this term commonly used to refer to the outcome variable? What are the other outcome variables considered in this survey?

Authors: we are to mean ‘outcome variables’. We couldn’t have other outcome variable because of the reasons mentioned above.

Pp6: Rfr #2 describes “introduction of complementary foods” rather than ”initiation of complementary feeding”. How this definition was used based on the reference? It is not also included as one of the core indicators of IYCF by WHO or it is used differently (as introduction of solid, semi-solid and soft foods).

Authors: The suggested reference cited, and replaced by rfr#20.

Pp7; Line 4: How was birth preparedness measured? This is a composite variable and it has to be defined in the methods section or as footnote beneath the tables (e.g. Table 2)

Authors: Birth preparedness replaced with ‘Made a plan for reaching the facility during labor’

Pp 7 Line 9-: How was the different reason for the timing of initiation of complementary feeding identified? There is no reference cited as well.

Authors: this was open ended question and reported as it was mentioned by mothers.

Statistical analysis

Pp7 Line 31: Please correct the reference for SPSS for windows 21? SPSS Inc.


Authors: Corrected as ‘SPSS version 21.0 (2012; SPSS, IBM Corporation, Armonk, NY).

Result

Socio demographic characteristics

Socio-demographic characteristics
Pp 10: Mean and standard deviation should be put together. Mean (± SD).

Table 2:

* The total should be placed at the last column rather than the first column as the authors indicated.
* Definitions should be indicated as footnotes for some variables (e.g. birth preparedness, parity if not indicated in the methods section)
* Last variable: "Have been educated …" should be replaced with "received information…"

Complementary foods:

Table 3:

* Variables "reasons for early initiation and late initiation of complementary foods" should be indicated as not mutually exclusive and more than one reason is possible. Otherwise, it would be confusing to the reader.

The last variable "kind of commonly introduced foods" has multiple responses and should be indicated in footnote as well. Were these "foods" "considered as complementary foods" by the authors?

Complementary foods are defined as: "any food, whether manufactured or locally prepared, suitable as a complement to breast milk or to a breast-milk substitute, when either becomes insufficient to satisfy the nutritional requirements of the infant." WHO, UNICEF, 2008

* How was possible that "injera" is the "first food" given to a child that young? Was it prepared in a different way so that they can take it? I would like the authors to comment on this

Authors: Mean and standard deviation put together as recommended.

Table 2
* The total placed in the last column, but the previous reviewer suggested to put the total in first column. Now we agree to put the total in last column for readers’ easy understanding.

* definition for parity indicated as footnotes, but “birth preparedness” replace with a statement “Made a plan for reaching the facility during labor” because as you said birth preparedness can be measured as a composite score not only from mother perspective, it can also be measured from family, health care professional and community perspectives.

* the variable “have been educated…” replaced with “received information …”

Complementary foods:

Table 3:

* reasons for early and late initiation of complementary foods are indicated as the these are not mutually exclusive.

* these were the kind of foods considered as complementary food by Mothers/caretakers.

Factors associated with initiation of complementary feeding (CF) at 6 months of age

Table 4:

* The complementary feeding initiation category is missing. I think the authors should include that in the table. The categories are presented but the frequencies and percentages are missing.

* The authors could present only those variables which showed significant association in the final model.

* Association with mother's educational status: why higher educational attainment was not associated with initiation of complementary food at 6 month? Was it due to lack of power (small number of observation?) or other reasons?

Authors: Factors associated initiation of complementary feeding at 6 months of age

Tables 4

* In the first submission of manuscript the complementary feeding initiation category was included, but the previous reviewer (the one before the current reviewers) has recommended removing this category because this information is already
indicated/included in the table 3. It was not missed rather this was the reason. So, to which reviewer comment should we stick? I think the editors would reflect on this.

* It is true that higher education was not associated with initiation of complementary food at 6 month. The reason is that if you look, from table 3, the proportion of initiation of complementary feeding status b/n mother with higher education and mother with no-formal education (reference group), seems as there is difference but that difference is not statistically significant. That means the number of mothers with higher education are equivalent to the number of mothers with no-formal education when we see them by initiation of complementary feeding status.

Discussion

General comments

The discussion and conclusions made are mostly based on the findings described in the results section. However, the following are some issues to be addressed by the authors;

Pp 14: Line 10-16: the denominator used to calculate the proportion who were initiated with complementary feeding is 6-8 months of age. Hence, there is minimal chance for recall bias. However, the authors used those who are from 6 to 24 months as denominator. How was this potential recall bias prevented or addressed?

Authors: the denominator to calculate the prevalence of the initiation of complementary food at 6 month of age was all children aged 6-24 months. Off course, there might be problem of recall bias, but clearly indicated in this section how it was tried to minimize it.

Pp14 Line 17-19: It is also important to mention the denominator used in the calculation of the prevalence of initiation of the complementary feeding at 6 month.

Authors: the denominator mentioned based on the reviewer comment.

Pp 14 Line 26-29: reference should be provided after "… the importance of key IYCF practices".

Authors: reference provided.

Pp 15 Line 4-6: The authors should provide reference for this claim.
Authors: reference given for the claim.

Pp 14 Line 24-29: The authors claimed that the possible relatively higher educational status of urban mothers in this studies contributed to the higher level of initiation of complementary feeding. The authors should present reference for this claim.

Authors: reference provided for the claim.

Pp 14 Line 4-7; "optimal child feeding practice" is broader that what the authors addressed in this study. Hence, this line should be revised.

Authors: revised

Pp 14 Line 12-19: Do the authors believe that an intervention study is recommended based on a single study on initiation of complementary feeding?

Authors: as we have indicated in the discussion part education is consistently associated factor in Ethiopia and abroad studies, so the recommendation to design intervention study is, we think, appropriate. …

Pp 14 Line: The authors reported that ‘timing of local events" are used to help mother remember the time of initiation of complementary foods. However, local event calendars are more helpful if we are considering major events like birth, etc. People tend to associate birth and other major milestones with local events rather than initiation of complementary feeding. It would be nice if the authors comment on this.

Authors: even though, we have mainly related initiation of complementary feeding at 6 months of age, with child vaccination schedule, still for some mothers relating with local event calendar was important to recall initiation of complementary feeding at 6 month.

Conclusion
* As it is an urban setting, health extension workers could be crucial to disseminate information about the time of initiation of complementary foods. However, the whole IYCF practice indicators should be discussed with caregivers/mothers of children 6-24 months of age to be more cost effective. The authors, however, looked into initiation of complementary feeding alone and we do not have any information about other IYCF practices.

* The authors recommended "improving educational opportunities" for girls and women for the purpose of improving the health status of women and children. However, this is not entirely supported by the findings of this study. I would like the authors to comment on this.

Authors:

* we think this will be a very good support in addition to the recommendation provided by different organization to provide information to mothers on IYCF in urban setting by health extension workers.

* we recommended this because mothers’ education is consistently associated with complementary feeding, as this may help them to read and understand nutrition related information.

References

* The style of referencing should be consistent throughout. I suggest that that the journal's referencing style be applied strictly throughout.

o See Rfr #1 vs 18.

Authors:

* style of referencing made consistent.

* typo and grammatical errors addressed.

Maryam Amini, Ph.D. (Reviewer 2): Method
To find reasons for initiation of complementary feeding at different ages, you defined some reason a priori. Why did not you ask open question instead, and did not let the mothers respond the questions by their own words. If you had done that you may have collected some more interesting and not anticipated results.

Authors: Mothers were asked the question openly. They responded for the questions on their own way.

Result

As far as I know level of statistical significance in medical sciences is 0.05, however to my surprise, in the bottom of table 4 you have mentioned:"statistically significant at 20% level of significance". Why?

Likewise, in that table for Antenatal care Attendance, Birth preparedness, Postnatal care attendance and Parity the confidence interval(95%CI) for Crude OR crosses 1 which implies there is no difference between arms of the study! But you concluded there was a significant difference between two arms. Why?

Authors: Off course, it is true. We have used the 20% level of significance just to select the candidate variables for the final model, but as you said we have used the 5% level of significance for the final decision.

Again, here the cut off $\alpha$-value is 20%, not 5%.

Discussion

Page 15 lines 24 to 29 you've mentioned"The urban women in this study may have better employment opportunities that facilitate higher incomes, as well as access to higher quality health facilities where they may be exposed to health education during their pregnancies". I did not understand how the authors reckon the mentioned mother had better employment opportunities and in result higher income?

Authors: It is assumed that as women education level increases here job opportunities increases compare to women who are not literate (no formal education). As a result, her income may increases.
Prakash Shakya (Reviewer 3)

Major issue

The author’s main argument on the novelty or need of this study in Ethiopia is its rural setting. However, the background section needs more details on socio-economic, cultural and health access related differences between rural and urban Ethiopia, and how it may affect the complementary feeding practices.

Authors: The author’s main argument is the need to conduct this study in urban setting not in rural setting. We think what is written in this section would be enough.

Minor issues

Background

Page 3, line 21: "poor middle income". Is this the correct/standard term? What is the difference between low-income and poor middle income?

Authors: Better to say low-income and lower-middle income.

Page 3, line 41: Please include the reason why mothers may produce less breast milk, upon introduction of complementary foods.

Authors: Reason included.

Page 5, line 9: "to provide a basis for an intervention programme to improve child feeding practices in this area". It sounds very broad. It is better to mention only the specific objectives.

Authors: Specific objectives mentioned.
Methods

Page 5, line 53: Please include how randomization was done.
Authors: randomization was included.

Page 7, line 34: Remove "frequencies and proportion" from the text. It is redundant.
Authors: frequency and proportion removed.

Page 8, line 14: Please change to "right not to participate".
Authors: changed.

Results:

Why the mother`s age is not included in the regression model? It is an important predictor variable in this study.

Authors: It might be important predictor but it is not modifiable factor. In fact, we have that variable we don’t think it would be an important predictor particularly in this study.

Discussion

Page 14, line 43: mothers' initiation
Authors: mothers’ initiation

Page 16, line 4: relevant for the promotion
Authors: relevant for the promotion

Page 16, line 7: It is obvious that causality cannot be inferred from cross-sectional study. No need to mention here as a limitation of the study.
Authors: for most scientific community it is obvious, but it may not be obvious for emerging scholars and health practitioners, so still it is better to mention this.

Conclusion

Page 16, line 38: "In conclusion, this study suggests the importance of educating mothers on optimal feeding and care practices for their children." This conclusion or recommendation cannot be drawn from the major findings of this study. There is no evidence in this study that mother's knowledge on IYCF practices is associated with improved complementary feeding practices.

It is better to write specific conclusion based on your findings.

Authors: Specific recommendation written.

Baharek Nikooyeh (Reviewer 4):

Please include all comments for the authors in this box rather than uploading your report as an attachment. Please only upload as attachments annotated versions of manuscripts, graphs, supporting materials or other aspects of your report which cannot be included in a text format.

Please overwrite this text when adding your comments to the authors.

Authors: all the comments are considered and included in the manuscript accordingly. The revised manuscript and the response for the reviewer comments are uploaded as a separate document.