Author's response to reviews

Title: Birth Preparedness and Complication Readiness among child bearing age women in Goba Woreda, Oromia Region, Ethiopia

Authors:

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Daniel Bogale (dbogale386@gmail.com)

Version: 3 Date: 9 June 2014

Author's response to reviews: see over
I am very pleased for getting this golden opportunity to get comments from the enthusiastic peer reviewers for our research article entitled “Birth Preparedness and Complication Readiness among child bearing age women in Goba Woreda, Oromia Region, Ethiopia”

I got lots of good comment which are not only important for this current article but also for my future research work. On behalf of me and the co-author, I would like to send my heartfelt gratitude to the all the reviewers for their effort in providing their constructive comments which are very important in enriching this research article.

I hereby enclosed point by point response for all referee with this cover letter.

Sincerely,

Desalegn Markos

Lecturer

Department of Nursing, College of Medicine and Health Science, Madawalabu University
Point by point response for reviewer’s comment

Reviewer one

Title: Birth Preparedness and Complication Readiness among child bearing age women in Goba Woreda, Oromia Region, Ethiopia

Version: 1 Date: 12 May 2014

Reviewer: ALFRED OSOTI

Reviewer's report:

This is a succinct good paper that seeks to evaluate the Birth Preparedness and Complication Readiness (BP/CR) of women at community level. The BP/CR matrix is important in averting adverse pregnancy outcomes by engaging key stakeholders including policymakers, facility managers, providers, communities, families, and women in ensuring appropriate, effective, and timely care.

Major compulsory reviews

Abstract

1. **Background**: only covers definition of BP/CR and not the justification of the study? Why this locality does it differ from other localities where similar studies have been conducted in Ethiopia?

**Response**: this study encompasses both urban and rural community unlike some of the study conducted in Ethiopia like in Adigrat town where only urban communities are included. Additionally, this study is conducted in Oromia Region of Ethiopia where as others are in Tigray region and Southern region and the socio demographic and cultural conditions of different region of Ethiopia are also different.

2. **Methodology**: for a statistically significant result p should be less than 0.05 not equal or less

**Response**: the comment is accepted and corrected accordingly. It was typing error and during the actual analysis, P value < 0.05 was considered.

3. **Results**: it’s surprising that more respondents were prepared yet fewer knew about BP/CR? I hope this is explained later in the results.
Response: yes; you are right it is surprising finding; but one of the justifications for this is women can practice some of those BP/CR components without having the knowledge of its rationale. Therefore, their continuous practice in the future is under question because of their knowledge gap. I think, it also needs further study or analysis.

4. The context in which besides is used isn’t clear.

Response: the comment is accepted and corrected as follow:

In contrary, only 82 (14.6%) study participants were knowledgeable about birth preparedness and complication readiness while 480 (85.4%), were not

Background

1. Needs a bit of editing of English for example “…..only 10% of births in Ethiopia are delivered at a health facility.” To only 10% of births occur in health facility

Response: the comment is accepted and corrected as follow

However, only 10% of births in Ethiopia occur in health facility while 9 women in every 10 deliver at home.

2. References should be given when new terms are first used or facts quoted eg
a. References for BP/CR
b. References for “In many societies in the world, cultural beliefs and lack of awareness inhibit preparation in advance for delivery and expected baby

Response: they are obtained from reference number 4 and 5 respectively which are mentioned at the end of each paragraph. The reason why I did not mention immediately after the sentence is to avoid redundancy.

3. Are there any studies done in similar population? The only studies cited are those among pregnant women not of recently delivered as per the inclusion exclusion criteria.

Response: yes, for example birth preparedness and complication readiness among Slum Women in Indore City in India is researched among women who have given birth. This literature is added in paragraph six under background section.

As you know it, there are two approaches to assess BP/CR. One is among pregnant women and the other is among women who have already given birth. When it is done among pregnant women, they disclose their plan regarding BP/CR because they are not experienced its full rage because they are being pregnant. But those women who have already given birth disclose their
real BP/CR practice because they have passed the whole process of pregnancy and labor (source: monitoring birth preparedness and complication readiness; tools and indicators for maternal and newborn health, pp 1-11). It is according to this information why the study subject in current study becomes women who already given birth.

Methods and Materials
1. Why is this repeated in area and design? “The estimated total number of women of reproductive age and pregnant women in the woreda (both Rural and Urban) is 16,277 and 2725 respectively”

Response: the comment is accepted and corrected by removing the repeated sentence written under study design section.
2. Define Kth interval

Response: I appreciate your concern on this case but proportionate samples were taken from 1 out of the 2 urban kebele and 8 out of 24 rural kebele. Therefore, the interval was calculated for each kebele and was differ from kebele to kebele. That is why it was not mentioned but the aforementioned idea was written on final sentence of first paragraph of sampling procedure part.
3. Definition of operational terms, is these standard or not? For example, the definition of BP/CR used in this study?

Response: the operational terms are standard which was taken after revising relevant literatures on similar topics
4. A few grammatical and spelling mistakes should be addressed, e.g. components used twice in a sentence, spontaneously etc

Response: the comment is accepted and corrected accordingly
5. Not sure of the difference in definition between BP/CR and knowledge about BP/CR

Response: it is to show their actual practice and knowledge regarding BP/CR respectively

Data processing, analysis and presentation
1. Were variables for preselected or selected based on significance levels in multivariate/multivariable analysis?

Response: yes, the variable for multiple logistic regressions was selected based on significance level. To make it clear for reader, the following sentence is included in the last part of data processing, analysis and presentation section:-
P value <0.05 was considered to select candidate variable for multiple logistic regression analysis as well as to declare as statistical significance variable.

**Results**

2. Results should include the household and participant selection e.g. how many households approached? Had eligible and/or ineligible participants etc.

**Response:** this part is tried to be shown in the first paragraph of the result section.

3. Specify currency and duration of income in the text

**Response:** the comment is accepted and corrected by mentioning the currency is Ethiopian Birr and adding additional sentence that tells the income range as follow

...1267.86 Ethiopian Birr

About 39.9% of the study subjects do not have any financial income

4. Sentences on obstetric characteristics require editing for clarity

**Response:** I accept your comment but I am also rightly commented to reduce the result section by one of the reviewer, I totally remove this section from the result part.

5. Often where others are used, it’s not clear who these are, please clarify.

**Response:** the comment is accepted and corrected accordingly

6. Was knowledge level equivalent to hearing about PB/CR?

**Response:** No, knowledge of BP/CR was assessed according to the criteria mentioned under the operational definition which is:

7. Findings of binary analysis not reported on the text

**Response:** the comment is accepted and corrected accordingly

**Discussion**

1. Results should not be presented here.

**Response:** the comment is accepted and corrected accordingly

2. When comparing findings with different previous studied try to find if there are there additional differences including that of settings and countries

**Response:** the comment is accepted

**Conclusion**

1. Has numbers, which are even repetitions

**Response:** the comment is accepted and corrected as follow
Only small numbers of respondents were found to be prepared for birth and its complication in their last pregnancy.

The study found that place of residence, educational status, ANC follow up, knowledge status during pregnancy and knowledge status during postpartum period has significant statistical association with birth preparedness and complication readiness.

**Recommendations:**

2. Too long

**Response:** the comment is accepted and corrected accordingly

**Level of interest:** An article of importance in its field

**Quality of written English:** Needs some language corrections before being published

**Response:** Response: three colleagues were consulted and edited the paper. Additionally, as an author, we made our best effort to further edit the paper

**Statistical review:** Yes, but I do not feel adequately qualified to assess the statistics.

**Declaration of competing interests:**

I declare that I have no competing interest
Reviewer two

Title: Birth Preparedness and Complication Readiness among child bearing age women in Goba Woreda, Oromia Region, Ethiopia

Version: 1 Date: 18 March 2014

Reviewer: Abebaw Worku

Reviewer's report:

Minor essential revision

1. The method and result section requires significant reduction (It seems thesis work) - Better to see published articles by this journal

Response: the comment is accepted and corrected as shown on the document

2. The application of systematic sampling technique is not clear in a community based survey. Requires adequate description to convince readers.

Response: the comment is accepted and corrected accordingly

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Needs some language corrections before being published

Response: three colleagues were consulted and edited the paper. Additionally, as an author, we made our best effort to further edit the paper.

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:

I declare that I have no competing interest
**Reviewer three**

**Title:** Birth Preparedness and Complication Readiness among child bearing age women in Goba Woreda, Oromia Region, Ethiopia

**Version:** 1 Date: 7 May 2014

**Reviewer:** Heather Whitford

**Reviewer's report:**

This is a potentially interesting study on an issue of importance in a country such as Ethiopia. However, the paper is long winded in places, and does not acknowledge sufficiently the cultural context or local situation.

Major Compulsory revisions are needed before it would be suitable for publication:

1. Is the question posed by the authors well defined?

   An attempt is made to justify the need for the study, however as similar studies have been done in other areas of Ethiopia; it is not clear why this study was needed. Is this area different to the other areas previously studied?

   **Response:** Yes; it is somewhat different because of the following reasons. This study encompasses both urban and rural community unlike some of the study conducted in Ethiopia like in Adigrat town where only urban communities are included. Additionally, this study is conducted in Oromia Region of Ethiopia where as others are in Tigray region and Southern region and the socio demographic and cultural conditions of different region of Ethiopia are also different.

   Page 3, para 2 – how does the maternal mortality compared to rates in other countries?

   **Response:** the comment is accepted and further facts regarding MMR is supplemented

   Page 3, para 3 – more details are needed of who prepared the BP/CR package and how it was developed. Was it developed for Ethiopia specifically?
**Response:** it is not specially developed package for Ethiopia only but BP/CR is a relatively common strategy employed by numerous groups implementing safe motherhood program in the world. This idea is supplemented on commented part of the paragraph with source of information (i.e. the source literature).

Page 3, para 4 – reference is needed for the first sentence. This section needs to be placed in the context of the health service provision. More information is needed about the local background - health care in the country, transport infrastructure, ambulance service, blood transfusion, etc. In many other countries women have intrapartum care from an early stage in their labour, so recognition of complications would be done by HC staff.

**Response:** the reference issue is accepted and corrected accordingly. But the issue of recognition of complications is not seen from the country’s perspective. The scope of this study is to see BP/CR from individual perspective. In fact you are right that BP/CR can be seen largely from the country, community, and even from family level which is not the focus of this study.

Page 3, para 5 – this also needs to be placed in the context of local antenatal care arrangements. High risk pregnancies – are these recognised during pregnancy and appropriate plans for place of delivery put in place?

**Response:** as I have tried to mention it above, the scope of this study is BP/CR at individual level. Currently, in the country where this study was conducted, WHO focused ANC model is used to care pregnant women and every pregnancy is considered as a risk. But, those women who have complication history in previous pregnancy are identified and provided specialized care. As you know, WHO focused ANC model has two type of care which are basic care and specialized care.

Page 3, para 5 ‘mandatory’ – who says?

**Response:** this idea is obtained from the following source. JHPIEGO; Maternal and neonatal health program. Monitoring birth preparedness and complication readiness tools and indicators for maternal and newborn health [Internet]. Hopkins, Bloomberg school of Public Health, Center

Page 3, para 5 – as before, more background needed to put this in context

**Response:** this comment was already addressed when response is given for the comment raised for the part of Page 3, para 4 and Page 3, para 5.

Page 4, para 2 – this information might be better earlier in the paper, as it helps to explain why the package is needed. More information about the geography of the different areas is needed (distance to HC facilities?)

**Response:** I appreciate your concern. My intention was, first to explain about what BP/CR package mean and then to show the magnitude of the problem at individual level. Don’t you think the reader of this paper might get confused if I present the magnitude of the problem before I precisely explain what BP/CR mean and why it is important?

2. Are the methods appropriate and well described?

Page 4, para 3 – study area – what is a ‘woreda’? and a ‘kebele’? The area details are useful, but too much detail is given. This needs to be summarised.

**Response:** the comment is accepted and corrected accordingly. ‘Woreda’ and a ‘kebele’ are the smallest administrative division of particular region of the country. This was also explained in the document after this comment.

Page 5, para 1 – lacking clarity. The population was not all women in the age group – only those who had given birth. These two bits of information need to be given together. What is the relevance of the total number of women in the area? It would be more relevant to know how many had given birth in the last 12 months.

**Response:** the comment are accepted and corrected accordingly

Page 5, para 2 – there is no need to give the formula, just the final figure of the calculation.

**Response:** the comment are accepted and corrected accordingly
Page 5, para 3 – sampling procedure – ‘spined’?? This section needs to be explained more simply. What happened if the household did not include a woman who met the inclusion criteria? What if there was more than one? Did starting at the health post bias the sample?

Response: the comment are accepted and corrected accordingly. If the household did not include a woman who met the inclusion criteria, the next household will be substituted. Moreover, if the household, contain more than one candidate, one of them will be taken randomly by employing lottery method. The reason why health post is selected as a starting point is because it is commonly found in all kebele and usually located in average place for all kebele residents. I thought it rather avoid selection bias that may happen if we consider different starting point for different kebele

Page 7, para 4 – validation of the questionnaire – how was this done? The sentence ‘Furthermore…’ is not clear. More information about how the questions about BP/CR were asked is needed – were they open questions or were participants given a list of options? If they were asked open questions, how were the responses categorised? Information about translation/back translation of the questionnaire should also be given.

Response: content and face validity were checked by reproductive health expert. Additionally, after the pretest, to check the internal consistency of the tool, cronbach alpha value was calculated using SPSS window version 16.0 and its value for birth preparedness and complication readiness item were 0.86. This idea become incorporated under data quality control section

Regarding how the question about BP/CR asked was written both under the operational definition part and under data collection tool and procedure section. They did not asked open ended question. Rather the study subjects were asked their BP/CR practice waiting their spontaneous answer to check whether they practiced operationally defined BP/CR component. These are identifying place of delivery, plan of skilled assistant during delivery, saving money for obstetric emergency, plan of mode of transport to place of delivery during emergency, plan of blood donor during obstetric emergency, detecting early sign of emergency and identifying
institution with 24 hour emergency obstetric care services. If they responded one of the components spontaneously, the data collectors encircle the answer from the choice.

3. Are the data sound?

Statistics are reported inconsistently e.g. page 3 in same sentence 10% and ‘9 in every 10’

**Response:** may you look this part again because I don’t think they are inconsistent for the reason the sentence in page 3 showed the great magnitude difference of institutional delivery and home delivery respectively as follow;

Only **10%** of births in Ethiopia occur in **health facility** while **9 women in every 10 deliver at home**

Page 9, para 2 – Result – how many mothers were approached? How many refused?

**Response:** 567 were approached. Among these, 5 of them refused to respond for the study and the remaining, 13, were not found in their home with three times attempt to get them.

Page 9 – The results section is written in a long-winded style. The main or key findings need to be highlighted in a more succinct manner and the Tables used more effectively to supplement the text. It is not necessary to repeat every finding in the Table as well as the text. There needs to be consistency between the table and the text – in the text the mean and SD is reported, but this information is missing from the Table.

**Response:** the comment is accepted and corrected accordingly

Page 9, para 2 - There is inconsistency in the number of decimal places reported.

**Response:** the comment is accepted and corrected accordingly

Page 9, para 3 – the information in the text about live birth, abortion and stillbirth is wrong (or does not tally with the information in Table 2).

**Response:** the comment is accepted. The information only indicates the major finding and. But I am also rightly commented to reduce the result section by one of the reviewer and I totally remove this section from the result part
Page 9, para 4 – It is not clear what this information means – did the women attend antenatal care in their last pregnancy (not ‘before their last pregnancy’ as currently written)?

**Response:** the comment for this part is already addressed in response given under your comment raised for Page 9, para 3 sections.

Page 9, para 5 – the use of the word ‘follow’ is not quite right. ‘had a plan to follow ANC’ – what does this mean? ‘had made ANC follow up’ – not clear. ‘followed three times’ – not clear.

**Response:** the comment for this part is already addressed in response given under your comment raised for Page 9, para 3 sections.

Why is the information in the last two paragraphs on page 9 and the first three on page 10, not reported in a Table? Why is some information presented in a Figure rather than a Table like the rest of the data?

**Response:** the comment is accepted and some of the information is removed provided that their removal does not harm the study objectives.

The reason for using figure for presentation of some information is because it avoids the monotonous presentation of information with table only and it also provides clear information unlike the text form.

Page 10, para 4 – how was ‘not knowledgeable’ defined?

**Response:** the comment is accepted and it is now incorporated under the operational definition section

Page 10, para 5, 6, 7 – this information is not presented in a table. The text is difficult to read.

**Response:** the comment are accepted and corrected. Some of vague text information are avoided.

Page 11, para 1 – how was ‘prepared for birth and its complications’ defined?

**Response:** the definition of preparedness for birth and its complication was written under the operational definition part in page 4
Page 11 – logistic regression – how were the independent variables selected?

**Response:** variable having significant association (p value < 0.05) on binary logistic regression were the candidate for multiple logistic regression and now, after this comment, this is written in paragraph two of data processing, analysis and presentation section of methodology part of the research as follow:

Moreover, binary logistic regression was performed to determine those factors associated with birth preparedness and complication readiness. Then, to control the effect of possible confounder, multiple logistic regressions were computed with a confidence interval of 95%. P value <0.05 in binary logistic regression was considered to select candidate variable for multiple logistic regression analysis as well as to declare statistically significance variable.

Page 11 – ‘odds’ is incorrectly written as ‘odd’ a number of times.

**Response:** the comment is accepted and corrected accordingly

Table 1 – is Family size the number of children or the number in the household?

**Response:** Family size include number in the household

What currency is the income measured in?

**Response:** the comment is accepted and corrected

The currency issue is incorporated both in the text part and under the foot note of the table 1 by mentioning it was measured by Ethiopian Birr

Table 2 – Is it necessary to give both gravidity as well as parity? Abortion – does this include abortion and miscarriage?

**Response:** the reason why both gravidity and parity is included was to make it more informative. That is why both gravidity and abortion was included.

Regarding the abortion issue, it include both abortion and miscarriage
Table 5 – how was birth preparedness defined? The variable has been dichotomised – how was this done? Italics – significant findings – needs to be explained in a key in the table.

**Response**: This was tried to be shown under the operational definition as follow:

Birth preparedness and complication ready: A woman was considered as birth prepared & complication ready if she identified four and more components of birth preparedness complication readiness item. The variables were dichotomized accordingly.

The Italic issue is accepted and corrected accordingly as shown in the table

4. Does the manuscript adhere to the relevant standards for reporting and data deposition?

See comments above.

**Response**: the comment is accepted

5. Are the discussion and conclusions well balanced and adequately supported by the data?

Page 12 – Discussion. There are some interesting points made, however the discussion needs to be rewritten to improve the clarity of expression, be more succinct and to identify more clearly the reasons for the similarity or difference of findings with other studies. The main findings need to be summarised clearly. The discussion is very brief and does not consider the political, economic, cultural, geographical or societal aspects in Ethiopia (or other countries where similar studies have been carried out) that might be relevant. A greater range of literature should have been considered in the discussion.

**Response**: the comment is accepted and corrected accordingly

How representative was the sample?

Page 13 – Recommendation. The paper places a great onus on the woman and her family to have the required knowledge and to make the necessary arrangements/plans for delivery and for emergencies. In other countries with better health services and with better access to trained staff, the assumption is that the services and staff will identify and initiate treatment in an emergency.
**Response:** if you see the first recommendation it place a great onus on Oromia region health bureau, Bale zone health department, Goba woreda health office to work hard to make women well prepared for birth and its complication. The second and the third recommendation also give great responsibility for Goba woreda health office and education office to work hard for women empowerment in relation to their BP/CR.

Women are not expected to be birth prepared or ready for complications. In Ethiopia there will be many reasons why the burden is placed on women, but these should be acknowledged. The recommendations in the paper are that women should be better prepared and better educated. Surely there is also a great need to improve access to skilled care at delivery and improve access to facilities for all women.

**Response:** I do share your comment but the reason we did not recommend on accessibility was it was beyond the scope of this study. That means, this paper did not assess whether there is a problem of accessibility or not and we will consider it in our future work as an extension of this paper.

6. Are limitations of the work clearly stated?

The strengths and limitations section is very brief.

7. Do the authors clearly acknowledge any work upon which they are building, both published and unpublished?

N/A

8. Do the title and abstract accurately convey what has been found?

Yes

9. Is the writing acceptable?

The paper needs proof read. There are numerous grammatical and typographical errors, including sentences missing ‘the’ at the start.
Response: the comment is accepted and the authors consult three colleagues for editing the typographic error. Accordingly, better efforts were obtained from all of the colleagues and it is incorporated.

There are no page numbers at the start

Response: the comment is accepted and corrected accordingly

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Not suitable for publication unless extensively edited

Response: three colleagues were consulted and edited the paper. Additionally, as an author, we made our best effort to further edit the paper.

Statistical review: Yes, but I do not feel adequately qualified to assess the statistics.

Declaration of competing interests:

I declare that I have no competing interests

Reviewer four

Birth Preparedness and Complication Readiness among child bearing age women in Goba Woreda, Oromia Region, Ethiopia

Authors:

Desalegn Markos, Daniel Bogale

Author of the comments about statistical aspects of the paper:

Ing. Marek Brabec, PhD

Department of Biostatistics and Computing Services

National Institute of Public Health
The paper certainly reaches difficult area and presents interesting results which have public health applications. From statistical point of view, it uses quite straightforward (very much standard) methodology.

The paper uses improper term of “multivariate logistic regression” (e.g. right on page 2, Methodology, and then on other places). What is actually used for analyses in this paper is just a standard (and hence definitely univariate) logistic regression with several explanatory variables. If necessary, it can be referred to as multiple (logistic) regressions, not multivariate. Multivariate logistic regression would suggest something MUCH more complicated – multivariate response distribution for a given explanatory variable values. This should be corrected.

Response: the comment is accepted and corrected without any hesitation and I appreciate the comment.

For page two parts, under the abstract, the correction is done as follow:

...binary and multiple logistic regression analyses were conducted

The improper term which is found under data processing, analysis and presentation in the methodology part of the paper, the correction is as follow:

Moreover, binary logistic regression was performed to determine those factors associated with birth preparedness and complication readiness. Then, to control the effect of possible confounders, multiple logistic regressions were computed with a confidence interval of 95%.

While the sampling procedure was quite complicated (multistage), it is not clear whether this complexity was or was not taken into account when analyzing the data. For instance, were the case weights adjusted to reflect the sampling procedure? There might be reasons for adjusting or
for not adjusting the weights. But what was done should be described and documented precisely and discussed in the paper.

**Response:** the calculated sample size was multiplied by 2 for design effect to control the effect of sampling that could happen due to employing sampling method other than simple random sampling. But the case weights were not adjusted.

There are few typos (e.g. “saving mony”) in the text. The text should be red carefully and the typos corrected.

**Response:** the comment is accepted and typos are corrected as follow:

These are identifying place of delivery, plan of skilled assistant during delivery, saving money for obstetric emergency...