Author’s response to reviews

Title: A comprehensive analysis on child mortality and its determinants in Bangladesh using frailty models

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Author’s response to reviews:

Reviewer reports:

Reviewer #1: This article is relevant and is of great importance in its area of study. Following are my comments:

- Thanks for your comments. Please find our responses point by point below.

Introduction:

Page 2

Line 26: "With the growing emphasis….." need to give a reference here.
Response: Addressed in line 34, page 2.

Line 27: replace word 'implication' with 'implementation'.
Response: Addressed in line 32, page 2

Line 37: "Children of very young mothers are at greater risk of death and rate of mortality is higher for older women".

The authors are talking about the association of child mortality with extremes of maternal age. It will be a good idea to mention the maternal age-range/cut-off for which higher mortality rates have been reported in literature.
Response: Addressed in line 42-44, page 2
The authors did a good job in explaining the importance of using frailty model to assess the determinants of child mortality. However, they haven't explained why they think the determinants of child mortality would have changed in all these years making this study
inevitable since the determinants of mortality of children-under five are well-known and have been extensively studies in the past.

Response: A few lines (88-93, page 3) have been added.

Materials and Methods:

Page 3:

Line 42: Our study is based on [add 'the'] most….


Line 43: Health Survey [add's]…..

Response: Addressed in line 100, page 3.

Results:

Page 6

Line 24-25: Maternal age 25-34 and paternal age 26-35 had lower risk of dying but as compared to what age group? Give reference age group in text.


Discussion:

Page 7:

The authors discuss that one of the mechanisms through which mothers' education decreases child mortality is through empowerment. Why is it that they observed a higher risk of death among mothers who were working, when mothers' employment is also known to contribute towards empowerment? The study population included women from both urban and rural areas. So was the study population predominantly involved in some specific kind of work that lead to higher child mortality? I suggest that the authors throw some light on this area.

Response: A few lines (285-290, page 8) with reference have been added.
Can the authors briefly touch upon the probable unobserved community level factors involved in child mortality? This could be important for future research.

Response: Addressed (line 298, page 8) and added few lines (310-314, page 9) in the text.

Reviewer #2: The paper is well written.

- Thanks for your comments. Please find our responses point by point below.

I suggest anyway one more review to be sure to eliminate few oversights like world health organization (line 59) instead of "World Health Organization"

Response: Addressed in line 5, page 1.

Introduction

I guess that is remarkable how Bangladesh has been able to reduce its child mortality rates in few decades, unfortunately, I was not able to find in the manuscript any description of the strategy used to tackle down this issue. I deem one or two sentences will be enough to describe the fight carried out against this problem in Bangladesh.

Response: Addressed and added few lines (18-24, page 2) in the text.

The Introduction is pertinent, interesting and well written but in some passages I find it a bit redundant. In example: at lines 50-60 different studies like Hobcraft, McDondald, Rutstein, Mosley, Chen, D'Souza, Bairagi, Kabir are cited without giving much more information about their findings. Considering that these studies are also quite old (1984, 1985) and they are making much heavier the reading, I suggest their deletion. At the end only lines 59-62 where it is highlighted that previous studies did not consider frailty models is important.

Response: Thanks for your comment. We have addressed this in revised manuscript (lines 54-60, page 2-3).
I suggest to delete Lines 46 and 47: "Child mortality levels and its trend are supposed to be important indicators of the well-being of the population of the country". I guess this sentence is quite obvious and does not add anything more to the discussion.

Response: Deleted as suggested (line 51-52, page 2).

Materials and Methods


Response: Reference is added in line 100, page 2.

Among the co-variates of the analysis: exposure to media should be better explained (what does it mean precisely?). Maternal malnutrition and working status could be considered as current temporary status (and it is not clear from the methodology how malnutrition was measured) that could not have influence on the events happened in the past and concerning the health of the child.

Response: We have given definition of these variables (line 128-133, page 4). Yes, maternal malnutrition and working status could be a temporary variable. These variables may be indicating the possibility of maternal health status and working status on child mortality through different channels.

Discussion

Why has Sylhet worse results than Barisal division?

Response: We have added few lines (263-268, pages 7-8) in discussion section on this.

Conclusion

Unobserved factors at family and community level could be related to child mortality on the base of your analysis. I would like to suggest to add few sentences about what future studies could be carried out to better understand this correlation. Moreover, it will enrich your good manuscript if you could add references to the results of other studies addressing this issue (Unobserved factors).