Reviewer’s report


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Reviewer: Nega Assefa

Reviewer’s report:

Dear Editor and Authors of this article:

Thank you for the chance given to me to review the material entitled “Trends in neonatal mortality and assessment of associated risk factors in Butajira District, South Central Ethiopia, (1987-2008): a prospective cohort study”.

It is an interesting paper to go through. It is beneficial for the country’s health system as it is striving to achieve on the MDG. It is also good for researchers to look in to and find out what other ways are there to see in to such matters. The statistical technique and the language are compelling. The analysis is based on a data set from well-defined and continuously monitored population. The results and discussion are well balanced and flow in.

Saying these here are my comments:

Major Compulsory issues:

1. Even though many things are not significant, you have done a good trend analysis, yet, you left nothing for programing people, what shall be done then, if the last 22 years nothing is changed regarding neonatal morality and may not change the next 22 years. There must be something done. What is your recommendation out of it?

2. The use of separate proxy indicators for socio-economic status, I think the data is small compared to the person days figure, so it is sparse when you use multiple indicators to show one thing, wealth status. I suggest, you construct socio-economic positioning using the available variables and have one entry variables for analysis. This may change the outcome.

Minor Essential:

1. The writing appears to be soft as compared to the type of data it used to generate analysis; longitudinal data that has been collected for 22 years on a well-defined population. My suggestion, you may think of composing some other variables from exiting variable to make it more academic than programmatic paper.

2. You have used 4 years moving average smoothening techniques and saw no significant variation, how smother is it? If that is not the case, I suggest using more trials to smoothen the line of trend. Because 22 years is very long time, and
I don’t things are all the same in the course of 22 years. Yes I agree the decrement in neonatal mortality is small yet it is not all the same/similar in the course of 22 years.

Other specific comments:


Abstract:

Introduction: I suggest the last statement to be changed like this “….To this effect, the outputs in this analysis are based on a 22 years dataset from Butajira demographic surveillance site”

Conclusion: “Despite an urgent need in reducing neonatal mortality which contributes to more than 40% to child mortality, no significant change was observed in Butajira.” your study is based on the data set ending in 2008, wouldn’t it be difficult for you to reach on such conclusion based on the data ended on 2008, which is 4/5 years back.

Introduction:

Page 4 first paragraph the last word says “However, there is no marked improvement in neonatal mortality did [14]” what is did for???

Page 4 last paragraph: “Information on per natal and neonatal mortality is important to contribute to the effort towards reducing infant mortality [4].” I think the word next to information on shall be perinatal or ????

Page 4 last paragraph: “In countries where there is no civil registration system, it is essential to examine the level and identify the associated factors affecting the neonatal mortality from health and demographic surveillance sites.” you are looking the trend not the level. I suggest you re-write the sentences like …..examine the trend and factors affecting neonatal mortality from health and demographic surveillance site

Method section:

Page 5 third paragraph starting with “For this study, analysis was carried…….” shall come first. The current first and second paragraph shall be next to this paragraph.

Page 5 paragraph 4 line number 5 “…… the date children exited the by death” remove the word the.

Page 5 paragraph 4, line number 3; Remove the statement “Data analysis was conducted using STATA version 11 software.” because it is already stated at the end of the same paragraph.

Page 5 fourth paragraph line numbers 7, the statement “Furthermore, adjusted and unadjusted neonatal mortality, Incidence Rate Ratio (IRR)” remove the comma in between mortality and incidence.

Result section:

Page 7 paragraph 1 line number 1: the following statement is confusing “During
the period 1987 through 2008, a total of 1055 deaths of children aged 0-27 days were identified and contributed 803,370 person-days.” are these person time contributed by the dead child or the total children born in that study site, it appears the dead child contributed this much person time. I suggest first explain the total number of babies born during the study period and mention the person time contributed by the total children and then mention about dead.

Page 7 paragraph 1 line number 2: statement starting with “Of these, 768 [73%]…..” I suggest the line to start “Of the 1055 neonatal deaths, 768 [73%]…..

Page 7 Paragraph 2, I think it is good to start with first the totals IRR for neonatal period, then divide into early and late. As it appears it is somewhat not appealing.

Page 7 Paragraph 2 last statement “In addition, neonatal mortality constitutes 31% of the infant mortality at study period.” what is the purpose of this result. It is not your intention to work on infant mortality or to compare with infant mortality. I suggest removing it.

Page 7 last paragraph line number 5 statement: “Nevertheless, both the increment and decline were not statically significant, since the confidence interval cross over each other.” this statement is repeated in the next paragraph on page 8. Remove either the one on page 7 or page 8.

References:
Reference 1-4, check for appropriateness of the way it is written.
Reference 9, 10, 11, 13, 14, 15; check for the writer of the references
Reference 17, naming of people, check, Byass or Pypass

Figure 1: page 21, I think you need to see this graph again, according to your explanation, and my understanding, early neonatal mortality shall be higher than the others, now all things are the same, how this has happened.

Figure 2: page 22, I suggest you construct it again; the upper and lower limits appear they are separate findings by themselves. You may use shadow to show the 95 % CI.

Level of interest: An article of importance in its field

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

Statistical review: Yes, and I have assessed the statistics in my report.

Declaration of competing interests:
None, But I know the second and third Authors as a Colleague