Reviewer's report

Title: Factors associated with health facility childbirth in districts of Kenya, Tanzania and Zambia: a population based survey

Version: 3  Date: 3 March 2014

Reviewer: Terhi Lohela

Reviewer's report:

MAJOR ESSENTIAL REVISIONS

The results section needs some re-writing as the reported results do not always fully correspond to the data presented in the tables.

- In general, when discussing the results, it should be mentioned whether the authors refer to crude or adjusted results.

- Based on the data presented in the Tables, it can hardly be stated that “SEP was strongly positively associated with facility childbirth in all the three districts as well as rural and urban areas (Tables 3-5).”

• The authors report that the odds of health facility birth were higher for the highest SEP (OR 2.35) compared to those belonging to the lowest SEP in rural areas of Malindi. However, none of the OR´s presented for the association of SEP and facility birth in rural Malindi show a significant association (Table 3). Also, the confidence interval is very large and it includes the value OR 1 (95% CI 0.52-12.33). Therefore, it is unlikely that the association would be statistically significant (what is the p-value?).

• Similarly, it is reported that the odds of facility birth increased with increasing SEP in urban Mbarali. Based on Table 4, the adjusted OR for SEP in urban Mbarali (in the full model) is not significant. Furthermore, the 95% confidence interval is large and includes the value OR 1 (95% CI 0.85-18.49) indicating that the association is not significant (what is the p-value?).

- The authors state (Discussion):
  “Furthermore, there were indications that repeated exposure to ANC services and to HIV related counselling and testing increased health facility deliveries.”

The authors imply that HIV related counselling and testing increases facility deliveries. Due to the methodology used in this study, it cannot be known whether delivery in a facility increased HIV related counselling and testing or vice versa. Rephrase the sentence as it is implying causality. A similar revision was already requested in my previous review.

- Show p-values for Tables 3, 4 and 5.
The authors state (Discussion):

“This study showed educational attainment as the most important of the two indicators of SEP in influencing place of giving birth.”

If the importance of education is to be highlighted in the discussion section, education should be presented in the results section as a separate variable. Now the importance of education is only reported in the methods section where the construction of the SEP variable is described.

DISCRETIONARY REVISION

- Reporting of the results could be made clearer by reporting them separately for underlying factors and proximate factors (as they are presented in the tables). Why are SEP and proximate factors reported together in the results section?

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

Quality of written English: Acceptable

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

Declaration of competing interests:

I declare that I have no competing interests.