

Reviewer's report

Title: Factors Associated with Complete Immunization Coverage in Children Aged 12-23 Months in Ambo Woreda of West Shewa Zone in Oromia Region, Ethiopia

Version: 1 **Date:** 6 June 2012

Reviewer: Mirkuzie Woldie

Reviewer's report:

Major Compulsory Revisions

1. The authors need to include more literature review while minimizing the details about immunization coverage in Ethiopia in the introduction to indicate predictors of complete immunization as found by earlier researches in country and elsewhere in the world. Articles such as the one that can be accessed at <http://www.biomedcentral.com/1471-2458/9/150> are available for free. Search also reveals more articles from other developing countries.
2. In the sample size calculation p was assumed to be 20%. What was the source of this assumption? Please give the reference for that proportion.
3. In the sampling procedure it is not clear how households with children in the age of 12-23 months were identified. Did you conduct census to identify the households or used other means? Please, indicate what you did clearly. Why were the kebeles considered to have exactly the same number of households? This is not the reality. Please, justify why you chose to allocate the total sample size equally to the kebeles rather than proportional allocation based on the total number of households in each kebele.
4. The authors have to indicate how the data collection tool was developed and provide reference if it was adapted/adopted from earlier works.
5. Please, also indicate what was done when more than one child in the age between 12-23 months were found in a household.
6. In the analysis to identify independent predictors of complete immunization the authors have used separate 'final' models to identify predictors from the socio-demographic and other variables. This seems problematic since there was significant difference, for example, in the knowledge of the mothers with place of residence. Therefore, I suggest putting all variables which showed significant association with in the initial binary logistic analysis in the final regression model which ultimately provides independent predictors of complete immunization by removing confounding effects of all variables. Then it will be possible to present predictors of complete immunization in one table as a product of one final model.
7. In the results section there is a need to have a table that gives full information about the study participants (the mothers and the target children).

8. Aren't these two reports confusing? "Of 536 surveyed children aged 12-23 months, vaccination card was only seen and confirmed for 224 (41.8%) children." And "The card retention rate was only 54.8%" please, attend and revise for clarity. I suggest putting the description of coverage under the card plus recall subsection and omit the later part as this clearly reports the dependent variable.

9. In the fifth paragraph of the discussion the name of the district in Southern Ethiopia is Wonago not Wanago and note that the reference is number 23 in the reference list not 15. Please, make sure that all of the references are not cited wrongly as in this case.

10. In the six paragraph of the discussion the explanation given for difference in completion status among children born at home and in health facilities need to be reconsidered to make it shorter and clearer to the reader. In its current state there are repetitions and grammatical errors.

Minor Essential Revisions

1. The authors need to indicate the specific dates (start and end) of data collection during January- February, 2011

2. I suggest indicating somewhere what kebel and woreda imply in understandable terms to the general audience

3. Please, state consistently either population based/ community based cross sectional study design. Don't use both. That may be confusing for the reader.

4. This operational definition adds little values "Immunization coverage: proportion of children took vaccination"

5. This sentence in the results section is not completed "OPV3 (54.3%) and pentavalent3 (47.9%) coverage were the least of all the vaccines". Least for what? Please, attend.

6. This sentence in the first paragraph of the discussion adds little value "Immunization coverage was assessed using vaccination card and maternal recall."

Discretionary Revisions

1. I suggest to modify the title as "Predictors of Complete Immunization Coverage in Children Aged 12-23 Months in Ambo Woreda, Central Ethiopia". This is because the advanced statistics has enabled identification of not only simple association but its direction and magnitude which is better termed as predictors. I also suggest referring to the factors as predictors throughout the manuscript

What next?

Unable to decide on acceptance or rejection until the authors have responded to the major compulsory revisions

Level of interest

An article of importance in its field

Quality of written English

Needs some language corrections before being published. I have given some examples below. The authors need to address all the editorial and language problems before this gets published.

Subject verb agreement as in this sentence in the discussion "The current findings was..."

"Both authors are contributed equally"

The last sentence of the conclusion in the abstract needs to be rewritten as, "local interventions should be strengthened to raise awareness of the community on the importance of immunization, antenatal care and institutional delivery.

This sentence in the result section has to also be revised for clarity. "... 45% knows the age at which child immunization begins and 67.5% knows the age at which the child should finish and only one fourth (25.9%) of the respondents know the session needed for full immunization."

Don't you think this sentence in the discussion needs revision for clarity? "These indicate that mothers who delivered at health institution are likely to aware about the benefit of vaccination than mothers who delivered at home."

This sentence in the discussion also requires revision for clarity. "knowledge of objective of vaccination have no association, this is may be mother going to vaccinate their child if they felt that it is good, in addition there may be social influence."

How about this one? "Because mother may forgot the doses of vaccine the child took"

This also needs the attention of the authors. "Although this study assessed full immunization coverage among children aged 12-23 months with regard to the recent immunization program performance,

It has certain limitations."

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

Declaration of competing interests: I declare that I have no competing interests

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:

I declare that I have no competing interests