

# Review of: "Determinant of Vaccination Status among Children Under Five years in Mattu Town, Oromia Regional State, Ethiopia"

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Potential competing interests: No potential competing interests to declare.

I appreciate the invitation to review this paper. The study aimed to assess vaccination status and associated factors in children under 5 years in Mattu town, Ethiopia.

Comments for the abstract:

- The method section is missing details regarding the sample collection (year, selection methods etc).
- The result section lists associated factors but it is not clear what the reference levels are. I suggest adding the odds ratios.

Comments for the main text:

Methods:

- The study population is very small. It is not clear to me why the author chose to conduct a study in such a small area – I do not think that the results would be very helpful for policy makers due to the geographical bias
- It seems to me that the independent variables that were included in the questionnaire are likely available in larger indicator studies, such as the DHS or MICS data. These surveys are designed to be country-representative and are therefore a much better data source to look at factors that are associated with vaccination coverage. Since other, more comprehensive data sources exist, the study design for this study could have been improved by adding other questions or open-ended questions
- Which vaccinations are included in “complete vaccination”? The definition of what is “complete vaccination” does vary depending on the country’s vaccination schedule.
- Chi square test: When looking at the dependent variable and their association with an independent variable, it is more helpful to calculate also the odds ratios. It is not so helpful to report the chi-square values and p-values alone.
- Since all independent variables were also included in the logistic regression, I assume that no model selection was performed?
- Table 3 presents the outcome of the logistic regression. However, the explanations for the abbreviations are missing and in general, the table is hard to read. I suggest to look into the literature to find publications that also perform logistic regressions and align Table 3 with what is the standard presentation for logistic regression results
- The pie chart does not add much value to the study

#### Discussion:

- Parts of the discussion reads like a repetition of the result section
- Even though this is already a revised version of the paper, the discussion part and the conclusion section are still limited.

#### General comments:

- The authors are affiliated with the Statistics Department only; were experts in immunisation activities in Ethiopia consulted?
- Implications of this study for policy development are not clear