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.

Comments to the Author:

This study aimed to assess the vaccination status and associated factors among under-five-year-old children in Mattu town. Below are some comments and concerns for consideration in revising this work:

1. The English language should be improved throughout the manuscript, as the majority of its contents were not well written and were filled with typographical & grammatical errors. E.g., see lines 133-134, 141-142, 163, 203, 237, and so on.

Abstract:

2. The OR values from the fitted logistic regression need to be added alongside the p-values & CI values of each variable in lines 24-27.

Study design and period:

3. Why consider samples from January 2020 to March 2020? Any justifications to further support this?

Sample size determination:

4. The equation shown in line 130 could have been better written using the Equation tab in MS Word for better display.

5. Why a margin of error value of 0.09 instead of 0.05, given p=0.5? Any justifications to support this?

6. Line 131: What is the value of “N” in no/N<5%?

7. How were the n=118 participants selected for this study? What sampling technique was used for their identification & inclusion in this study?

Method of data collection:

8. More background information is needed about “the structured questionnaire” used to collect the data in this study.

Dependent variables:

9. What is/how were the “who were not completely vaccinated” status defined in this study? What about the “who were completely vaccinated” status?

10. Line 143: The second column of the table should be “Categories” and NOT “Code,” while the third column should be “Coding” and NOT “Values.”

Binary logistic regression:

11. Equation (2) has “p” and not “P”, so what “P” is being defined in lines 155-156? Also, what are the “success” and “failure” with respect to this research study's dependent variable?

12. Line 160 is not necessarily adding any value to the section and should be removed.

Results:

13. Too many grammatical errors and mistakes, starting from the first line of this section, for one to really enjoy the flow of reading the information being discussed in this section.

14. Add the respective p-value to each of the variables mentioned in lines 187-190 for quick confirmation of association (or no association) by the readers, instead of going back and forth to table 2, placed far away from this section in the appendix.

15. Where is the actual cross-tabulation between the independent variables and dependent variable? For example, how many children whose primary caretakers were their fathers completed their vaccination? How many children whose primary caretakers were grade 1-8 educated completed their vaccination? Descriptive information such as these and many more shown in a cross-tabulation would have given much more information about the participants’ profiles in this study.

16. Add the exact p-value in line 199 for quick confirmation by the readers.

17. Quite a lot of mismatch when it comes to the names of the independent variables mentioned within the results section, compared to the study variables table shown under the Study Variables section of this paper.

Discussion:

18. Too many grammatical errors and mistakes, starting from line 207, for one to really enjoy the flow of reading the information being discussed in this section.

19. Lines 205-207: “This study revealed that the percentage of vaccination status for those who completed vaccination was 57.6% as compared to who didn’t complete (42.4%) vaccination”. So why is this the case? Any justification(s) to support this finding?

20. Quite a lot of mismatch when it comes to the names of the independent variables mentioned within the discussion section, compared to the study variables table shown under the Study Variables section as well as within the result

sections.

21. Line 212-214: “The result showed that vaccination status was significantly associated with marital status, education of household head, occupation of household head, income household, and residential area at a 5% level of significance”. Any justification(s) to support this finding?

22. The respective OR value, p-value, and 95% CI value for each of the mentioned independent variable categories within lines 217-228 should also be included, again, for quick confirmation by the readers, instead of going back and forth to table 3 placed far away from this section in the appendix.

23. The interpretation of the odds ratio done in lines 216-228 is a bit off, especially when the dependent variable in this study is vaccination completion vs. incompletion (as per line 142) and not necessarily compliance. Thus, rather stick to vaccination completion instead of compliance as per your definition in lines 140-142.

24. Also, why was the odds ratio interpretation for the significant widowed category in table 3 missing in the discussion section?

25. Line 230-231: “This research paper is limited to the Determinant of Vaccination Status among under five year old-children in Mattu town”. This is NOT the way to write the limitation(s) of the study section in a scientific paper.

Conclusions:

26. Line 237-239: This is a poorly done recommendation. Recommendations are very important in an empirical, scientific study and, thus, need to be done properly by deriving them directly from the key findings of the study. The findings of this study in particular showed that marital status, educational status, income, and residence were major factors related to vaccination completion among under-five age children. So, how do these findings benefit the communities within the study area and policy makers when it comes to tackling vaccination incompleteness?

Table 2:

27. The p-value for the “income status (in USD)” in Table 2 should be “<0.001” and NOT 0.00.

Table 3:

28. The S.E, Wald, and df columns are not needed in a logistic output table of a scientific paper. Only essential columns like the B, OR, p-values, and 95% CI columns should be shown.

Figure 1:

29. Inconsistent in the naming of the dependent variable, line 352-353 Vs. 142 Vs. 151-152.

Overall, the authors need to put more focus on the above so that the paper comes out appropriately. Additionally, conducting an analysis of vaccination incompletion is a worthy exercise but needs to produce new knowledge and ideas on how to tackle this serious public health problem. Thus, the authors may benefit from including a colleague in child

health, primary health care, or family medicine in developing the analysis and reporting of this work, especially the medical and primary health care concepts.