Author's response to reviews

Title: Prevalence and severity of anemia among school children in Jimma Town, Southwest Ethiopia

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Point-By-Point Comments Accommodation of Reviewers

Title of the manuscript: Prevalence and severity of anemia among school children in Jimma Town, Southwest Ethiopia

MS: 1012666058102802

Acknowledgement: Authors are grateful to the reviewers for their genuine comments.

Reviewer 2: (Amol Dongr):

A few queries which still need clarifications are:

1. Who were the respondents? Ethically, consent was taken from children's parents/guardians to take small amount of blood and to measure anthropometric parameters. All those questions related to the sociodemographic, dietary and economic variables were answered by parents/guardians.

2. The sensitivity and specificity of the portable hemoglobinometer to strengthen the study findings.

The HemoCue hemoglobinometer, which is currently on use in health institutions worldwide, has been demonstrated to be a reliable and valid method of screening for anemia. The HemoCue hemoglobinometer is also simple, quick and easy and is a more acceptable test than a venous blood sample. It has high sensitivity, specificity and positive and negative predictive values. Mills and Meadows found that the HemoCue hemoglobinometer used to detect anemia had a sensitivity of 85% and specificity of 94% after compensation for a fixed positive bias.


3. The calculation of the different grades of anemia needs clarity on the Denominator used.

- In order to calculate the severity of anemia, the total number of anemic children (152) was taken as the denominator in the initial version of the manuscript. Accordingly, 48% children had mild and 52% moderate anemia. This was
incorporated in the document.

4. Statistical analysis to be mentioned elaborately regarding logistic regression.

The reason why multiple logistic regression model was applied was to identify those independent variable that predict anemia the outcome variable.

Those independent variables that have shown marginal and significant association with anemia in the Chi-square test as well as binary regression analysis were taken and tested by multiple regression analysis to identify the powerful predictor variables and to reduce confounder variables.

Reviewer 3: (Marly A Cardoso)

Data analysis

The reason why multiple logistic regression model was applied was to identify those independent variable that predict anemia, which is the outcome variable.

Those independent variables that have shown marginal and significant association with anemia in the Chi-square test as well as binary regression analysis were taken as candidates to be tested by multiple regression analysis to identify the powerful predictor variables and to reduce confounder variables. P-value was the criteria used to select variables.

Reviewer 4: (Emily Rousham)

Major compulsory revisions

The row totals were taken as denominator to calculate the percentage of prevalence of anemia. It is marked as red in table 1 and corrections were incorporated in the in the texts of the document.

Grammatical Errors: Proof reading was made by obtaining assistance from Canadian Internal Medicine specialist and Consultant, who is native English speakers.

Additional Changes Made

1. The English language of the manuscript was not that much bad. Anyways we have given due attention to improve it. To improve the quality of written English grammar of the manuscript, assistance was obtained from
   a. Canadian Internal Medicine Specialist and Consultant, who is native English speakers. Changes were highlighted in red in the manuscript.
   b. Experienced English language instructor at Jimma University, College of Social Sciences
   d. Those changes were highlighted red in the document

2. Please include the full name of the relevant ethics committee.
a. Prof. Abraham Haileamlak, Dean, College of Public Health and Medical Sciences, Jimma University. He is Editor-in-Chief of Ethiopian Journal of Health Sciences.

b. Dr Beyene Wodafrash, Coordinator of Research and Postgraduates Training Program, College of Public Health and Medical Sciences, Jimma University.

c. Dr Getenet Beyene, Coordinator of Academic and Research Quality Assurance, College of Public Health and Medical Sciences, Jimma University.

d. Mr Teshome Gobena, Head, Department of Biomedical Sciences, Member of the Ethical Review Committee.

3. Modifications were made in the reference section in accordance with the BMC format

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