Author's response to reviews

Title: Prevalence of intestinal parasitic infection and risk factors among schoolchildren in University of Gondar community school, Northwest Ethiopia: a cross-sectional study

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Author's response to reviews: see over
To: BMC research notes editorial office

Subject: MS 7883754668031755, Prevalence of Intestinal Parasitic Infection and Risk Factors among Schoolchildren in University of Gondar Community School, Northwest Ethiopia: a cross-sectional study

Dear editors and reviewers of BMC public health, we the authors of the manuscript really appreciate your valuable comments and suggestions that can help us to improve the clarity of our manuscript. The comments and suggestion from each of the reviewers were crucial. Hence, we incorporated each of them to the new version of the manuscript. Thanks for addressing a number of important points by in-depth reading of our manuscript.

The manuscript is already revised in the light of the reviewers comment. The point-by-point response and correction are listed below.

With best regards

Aschalew Gelaw

Corresponding author, Aschalew3@gmail.com, Gondar Ethiopia
Point by point response

Title: Prevalence of intestinal parasitic infection and risk factors among schoolchildren in University of Gondar community school, Northwest Ethiopia: a crosssectional study

Reviewer 1: Yvonne Ai Lian Lim

Dear reviewer, we the authors of the manuscript really appreciate your comments, critics and concerns about our work.

In the introduction part, we explained that many studies were done regarding prevalence of intestinal parasites in this locality. In addition, interventions were made based on the findings of these researches. Nowadays, the focus of research in the area is becoming on HIV, TB and malaria. Hence, we want to assess the status of IP prevalence after these previous interventions. In our study, we tried to assess the effect of previous interventions. Those children who were Postive for intestinal parasites were treated accordingly. We tried to explain this in the ethical consideration part of the manuscript.

As you suggested, it would have be good if we include some localities. However, our intention was to investigate the rate of infection in school children who are from a well to do family, have better nutrition, clothing’s including shoes, good personal hygiene etc. These conditions attract us to analyze their relation with infection. Besides, we do have financial problem to include some other localities. Our intention to publish this article in international journals is for better communication to researchers, policy makers and other interested. Sorry to say, publishing in local journals takes at least two years. The accessibility of published articles is so poor after publication.

Regarding grammatical and typographic errors, your suggestion is well taken and incorporated. The name of the parasite were critically seen and corrected. Please look at the new version of the manuscript to ascertain the corrections and improvement made.
Reviewer 2: Peter Steinmann

Dear reviewer, we the authors of the manuscript appreciates your important comments and suggestions that can help us to improve the clarity of our manuscript.

As you indicated, there was a problem in expressing the word prevalence in the abstract as well as the result section of the manuscript. These discrepancies were because of the coinfection of a student with two or more parasites. Now the mistake is identified and it is corrected elsewhere in the document as per you suggestion.

According to your suggestion, citation of some local literature was done to increase clarity and need of the manuscript for readers.

In the sample size calculation part the letter z= standard score corresponds to 1.96, d= margin of error (0.05) and p= prevalence from previous study (72%) were explained and incorporated in the document.

As per your suggestion, Giardia lambilia was corrected as Giardia intestinalis throughout the manuscript.

The rate of coinfection in this study was not significant as compared to previous studies.

Sorry to say there was an error in the summation and calculation of percentage in the data tables because of the coinfection. This is identified and corrected. Hence, the highest prevalence is still found in the age range between 10-12. This is already corrected and incorporated into the new version of the manuscript.

In the discussion part, as you have said the level of education and age seems closely related. However, we are interested to show the effect of education level on intestinal parasites. Hence, we feel it is informative. Moreover, in our locality educational status and age may vary among group of students. Relatively older students may be in the same class with young students.

The intervention measures such as water supply, sanitation and treatment are incorporated into the conclusion part of document.

The age classification which was described as <9 and >13 in some part of the document is corrected as ≤9 and ≥13. The grammatical and typographical error were seen by different readers and corrected.
Reviewer 3: Oystein Haarklaw Johansen

Dear reviewer, we the authors of the manuscript appreciates your in-depth reading and giving us invaluable comments and suggestions that can improve the clarity and relevance of our manuscript.

The writing – General comments

Grammatical error, typographical error and unusual phrasings throughout the document were critically seen by senior experts and corrected accordingly. In addition vague phrases were clarified and if not deleted. I hope that you will find it easily to read and understand the new version of manuscript.

Title

The vague phrase “associated” is deleted and the title is corrected as Prevalence of Intestinal Parasitic Infection and Risk Factors among Schoolchildren in University of Gondar Community School, Northwest Ethiopia: a cross sectional study. The word crossectional in the title is also corrected as ‘cross sectional’.

Introduction

As per your important suggestions, vague statements in the introduction part are clarified. Some found irrelevant is deleted. A poor language such as the major diseases of public health problem is rephrased.

The missed information regarding deworming activity and others in the country is incorporated into the new version of the manuscript.

Study area, design and period

The reason why we selected this school among some other elementary schools were as follows. The students are coming from families with different economic background. The school is founded in an area, which is surrounded by rural residents where open air defecation may be common. The economic backgrounds of children at other school in the town are mainly from poor income families.

Sample size and sampling technique
As per your suggestions, the sample size calculation is described before mentioning the sample size. We tried to rephrase the unclear statement, which is about prevalence of intestinal parasite from previous study. This prevalence value is used for calculation of our sample size. The need of mentioning the percentage in the sample size section is to clearly show how the sample size is calculated, \( n = \frac{1.96^2 \times 0.72(1.0.72)}{0.05^2} \). After calculating the total sample size, this number was distributed to each class (grade 1-8) based on the number of students. In brief, 326 students are going to be selected from 720 students in the school. It is possible to calculate the number of students to be selected from grade one if there are 40 students. That is \( 326 \times 40 / 720 = 19 \). The class roster consists of the list of students in each class. Hence, this list can be randomly selected.

Data collection and laboratory processing

All of the comments indicated in this section are corrected and incorporated.

Pretested questionnaire refers to questioner, which is checked for validity by asking few students prior to the actual study. This helps to modify if there are vague questions.

The number of technologists and other issues are as follows. Two trained laboratory technologists who were recruited for this purpose performed the stool microscopy. Three slides for direct microscopy and one slide for the concentration techniques were used. Both 10x and 40x magnifications were used. For identification of cysts iodine solution were used. However, modified acid-fast staining and serological tests to identify Endameba histolytica were not done. This missed information was incorporated in to the revised manuscript.

Data management and analysis

The illogical specimen in this section is deleted and other clear statements are incorporated

Ethical consideration

A medical doctor from the University of Gondar was communicated to treat the students according to the specific parasites identified. The treatments were given at the school in the presence of their teachers and guardians/parents.

Result –general comments and data tables

As you presumed, Most of the \( E. \) histolytica detected were in cyst stage. Identification between histolytica and dispar were not done. Each of them is corrected as \( E. \)
*histolytica/dispar.* Name of intestinal parasites that was consistently misspelled is corrected. The synonym of Giardia lambilia, G. intestinalis, is used.

The word frequency in second column of table one is changed to **number of**

In both Table 2 and Table 3 the subtotal for helminths and protozoans were calculated and provided in the revised manuscript.

As you have identified there were error in the calculation of sum and percentage of some of the variables in table one and table two. The mistake was occurred because of the double infection and triple infections. Unless carefully calculated double and triple infection can increase the prevalence of intestinal parasites. Table 2, Table 3 and Table 4 were revised in the light of your valuable comments. Hence, the mistakes were corrected.

In Table 4, the column under the heading of the number 304, were revised and the percentage is recalculated by changing 100% for each cells.

The meaning of regular hand washing in this study was opertionalyzed as washing of hand with soap and water **always** after defecation and before eating. The sum error is also corrected. We the authors of the manuscript want to assure you that there were no major calculation errors that can affect the result and conclusion of this study.

Family income was calculated per month with Ethiopian Birr. Family income refers to the total income of the family per month. This is corrected in the Table 4.

Nearly half of the students replayed **no** about their swimming habit. If a student answered no to this question he/she would never swim at all. As you said, it seems illogical but it is a real fact in an area where accessibility of swimming pool or other equivalent is absent.

**Result – prevalence of intestinal parasites**

All of your concerns in this section were important. We tried to rephrase the vague statements. Subtotal for helminths and protozoans are provided in table 2 and 3. The last sentence in this section is rewritten to avoid confusion between protozoans and helminths.

**Result – Univariate risk factors analysis of intestinal parasitic infections**

Because of the previous problem in calculating the percentage, the highest prevalence occurred in the age range greater than 13. However, when it is corrected the highest
prevalence occurs in the age range between 10-12. This correction is incorporated in the document.

**Discussion**

As per your comment, the methodological shortcomings such as blind rechecking, seasonal variation, and some special techniques are discussed as separate paragraph at the end of this section.

As you indicated, the first sentence in the fist paragraph seems a repetition of the introduction. However, we fill this is important view to start the discussion part of the manuscript.

Your comment here is well taken. The second paragraph is corrected to make it logical.

Improved sanitation of the community school compared with Azezo elementary school and others in the locality. This is corrected in the document.

The comment in the six paragraphs is well taken. The calculation error that occurred made the finding inconsistent. After careful calculation of the sum and percentages, the fact indicated earlier holds true.

**Conclusion**

The vague sentences in the conclusion section are corrected. Environmental hygiene meant to say environmental sanitation. As it was not correct to use it, the document is corrected using environmental sanitation.

**Abstract**

The comment is well taken to be honest this discrepancies were because of the coinfection. The discrepancy between the abstract and the result is corrected