Author’s response to reviews

Title: Knowledge, Attitudes and Practices on Schistosomiasis and Soil-Transmitted Helminths among Caregivers in Ingwavuma area in uMkhanyakude District, South Africa

Authors:
Hlengiwe Sacolo (hnsacolo@gmail.com)
Muhubiri Kabuyaya (muhubirikabuyaya@gmail.com)
Moses Chimbari (Chimbari@ukzn.ac.za)

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Author’s response to reviews:

REVIEWER 1

Query 1.

Line 23, 24 of background states "WHO recently recommended the implementation of robust strategies aimed at controlling or eliminating Schistosomiasis and STH by 2020" What are these strategies?

The sentence has been rewritten as follows:

WHO recommended the combined use of robust strategies to control or eliminate the spread of schistosomiasis and STH by 2020. Such strategies include mass drug administration (MDA), water, sanitation and hygiene (WASH), Targeted mollusciding and health education. Page 2: Line 47-58

Do the strategies involve educating communities on Schistosomiasis and Soil-Transmitted Helminth infections? Was this intervention program already running, I suppose it is, going by the 'ending year' which is 2020

Yes, the strategies involve educating the communities on schistosomiasis and STH. Currently in our study area, there is no educational or health promotion program focussing on schistosomiasis and STH. Hence we took the first step towards designing contextual prevention and control programs by conducting a baseline assessment of the knowledge, attitudes and practices (KAP) in relation to these diseases considering the possible sociocultural influences.

Query 2
It should be mentioned whether other health promoting programmes have been implemented in
the study-area. Without such information, it is not possible to make profound discussion about
the tools for distributing information.

Existing health promotion programs in the study area include immunization campaigns, health
education on HIV and TB. These programs are usually facilitated by community caregivers
(CCGs) who work closely with the local clinics. There is no health promotion program on
schistosomiasis and STH in the area thus the need for such programs was expressed by almost all
participants. Modifications have been made to the revised manuscript to reflect this.

Page 3: Line 108-114

Query 3

PSAC should be defined at first usage in the abstract as well as introduction

This has been done.

Page 2, line 31. Page 4, line 86

Query 4

"Findings reflected inadequate knowledge, attitudes and practices in relation to schistosomiasis
and STH while awareness of schistosomiasis and STH was high (87.1% and 36 79.2%
respectively). Correct knowledge on transmission, prevention, signs and symptoms and life cycle
was below average for both infections among those who had heard of the disease." Isn't this
expected by default especially that the community had not been educated?

The following content has been incorporated into the manuscript to show that our study was a
baseline survey whose findings will be compared with findings following an intervention.

This is the first study on schistosomiasis and STH KAP in uMkhanyakude. The knowledge
levels and sociocultural influences had to be explored at baseline to inform further studies and
interventions. The low level of knowledge among participants may have been expected
considering that there has not been a health promotion or health education program on
schistosomiasis or STH in the study area. However, screening and treatment for schistosomiasis
among primary school children has been taking place in the area from 2015, thus we expected
the community to be at least aware of schistosomiasis.

Page 2:Lines 36 - 38
Query 5

Minor comments:

Page 4 line 67: is SAC a standard abbreviation

Page 4 line 89 and 90: the first part of the sentence has been repeated. Consider deleting

Page 5 lines 104: the statement written as "The study targeted caregivers of PSAC aged 1 - 5 years attending." implies that the care givers who were parents and guardians were aged between 1 and 5 years old. This statement is misleading. Correct it please

- On its first appearance the acronym SAC was explained as ‘School aged children’ and there after SAC was used. Page 4, line 69
- The repeated sentence has been deleted. Page 4, line 92
- The misleading statement has been modified Page 5, lines 101-109

The sample size calculation for prevalence of schistosomiasis and STH yielding 398 is well elaborated but does not justify the 442 for caregivers. The authors can elaborate further to justify how they arrived at 442 logically

This study recruited caregivers of PSAC who were present during the screening of their children for schistosomiasis and STH in preschools and ECD centers. The minimum sample size required based on the Cochran’s formula calculation was 398. However, all caregivers present on the day of PSAC screening in ECD centers and preschools were recruited into the study. In our view this strengthened the power of our study. We have updated the manuscript with clarification on the discrepancy between 398 and 442. We have also included a sampling framework (Figure 1) in the manuscript for further clarification. Page 5: Lines 107-110

Did the authors perform in-depth interviews on all 442 caregivers? What was the sample size for the focus group discussions? And how did the authors arrive at that?

In-depth interviews were conducted among 62 key informants (traditional authorities, preschool teachers, ECD practitioners, community caregivers (CCGs) and nurses within the Ingwavuma area while a semi-structured questionnaire was administered among the 442 caregivers (parents and guardians of PSAC). There were 138 participants who participated in 11 FGDs, averaging to at least 10 participants per FGD. The size of FGDs was within range of the recommended size of 8 to 12 participants for FGDs (Macfarlane Smith, J. (1972). Page 5, Lines 195-200
The authors should state exactly how they conducted the sampling.

As described in response to another reviewer’s query were recruited caregivers of PSAC who were present in preschools and ECD centres on the day of screening for schistosomiasis and STH. The calculated sample size through Cochran’s formula was 398. However, 442 caregivers were recruited into the study and in our view this increased the power of our study without having to significantly increase the resources for carrying out the study. We have updated in the manuscript.

A sampling framework has also been included in the manuscript. Page 5: Lines 107-110

It is prudent during interviews for such studies (qualitative) to also use recording devices. These help to maximize accuracy of information captured during FGDs. If the authors did not use any recording devices, they should state thus and perhaps include it as a limitation. An audio recorder was used to capture verbal responses during FGDs to maximize accuracy of information captured.

This has now been mentioned in the manuscript. Page 2: Line 32-33

The authors do suggest on line 144 under data management and analysis that there was a recording done. I suggest they write this earlier. This is similar to the comment above. Such information has been included earlier in the manuscript as suggested by the reviewer, and in the abstract. Page 2: Line 32-33

Line 163 under results: consider rephrasing this statement to remove association. Check "Most CCGs had a long association with the study area having been born there”

This has been modified as follows:

“More than two-thirds of CCGs were born in the study area and had spent much of their time in the areas.” Page 8: Line 166
General comments

Did the caregivers receive any prior knowledge/education through some awareness programs about schistosomiasis? If the caregivers were not schooled or trained, we expect their knowledge on schistosomiasis and STH to be limited. If the study was comparing or assessing intervention or awareness program before and after educating the community, then this study would be more pragmatic. In this state, the study seems to report already expected results.

As explained above our study was a baseline survey. There was no prior education program/intervention among participants on STH and schistosomiasis. The establishment of the level of knowledge and misconception prior to an intervention program was important to design context specific educational programs on schistosomiasis and STH. We have made changes in the manuscript to explain the importance of our baseline findings. Page 12, Line 269-272

Also, it is not clear whether there was any intervention in the area to warrant or test its success. An explanation is required. I am not sure if the authors wanted to just find out if the caregivers had knowledge and the competence to care for the victims adequately so that they can propose an intervention to train caregivers in the programs to combat schistosomiasis and STH?

Prior to the study, there were no educational programs/campaigns focusing on the prevention or control of schistosomiasis and or STH.

Findings on the knowledge level were critical for the following reasons:

- To design caregiver context specific educational program
- To inform government programs on schistosomiasis and STH

To follow up on this, apart from the study by Sacolo, H., M. Chimbari, and C. Kalinda, Knowledge, attitudes and practices on Schistosomiasis in sub-Saharan Africa: a systematic review. BMC infectious diseases,2018. 18(1): p. 46-46. Authors may need to add some more studies to justify the need for their study. Was there a problem already existing that they wanted to tackle, or they simply wanted to explore? The justification for the study has been enhanced with the following text.

The study was conducted to explore the knowledge, attitudes and practices at baseline.
Moreover, “According to recent findings, caregivers have become critical in the control of schistosomiasis and STH among PSAC. Recent studies suggest that caregivers predispose their children to schistosomiasis through risky water related practices [1, 2]. There is however lack of detailed understanding on the underlying reasons for such behaviour among caregivers. Several studies have recommended that caregivers be included in schistosomiasis and STH prevention and control programs. To structure contextual programs, the KAP of caregivers needs to be established at baseline and this is what our study sought to do” Page 4: Line 82-93

Table 1 on results. The 55+ should state a precise range in years

This has been corrected in table 1. Page 22

Table 3 and 5. The chi-square test alone may not be appropriate for the type of data and the way it is presented. The authors should consider involving a statistician here perhaps a post hoc test to discriminate the type of caregiver group contributing to the lower than 0.05 p values. The data has been further analysed, findings from the reanalysis have been included. Pages 32-34

REVIEWER 2
Query 1

If the abbreviation is KAP this cannot be defined as Knowledge Practice and Perception, this requires correction

This has been corrected. KAP has been written to represent the knowledge, attitude and practices. Page 1

Query 2

Similarly School going children cannot be abbreviated as SAC

This has been corrected. The acronym SAC stands for school aged children. Page 4: Line 71

Query 3

The expression describing data analysis need to be corrected or expressed in full where the authors say the data was analysed using SPSS and thematically. What does this mean?

The narrative on data analysis has been modified as follows:
“Quantitative data were analysed using bivariate and multivariate techniques while qualitative data were analysed thematically.” Page 2: Lines 32 - 34

Query 4

Some expression even though qualified need to be simple and straightforward like below average. What is below average?

We have made the following revisions “Correct knowledge on transmission, prevention, signs and symptoms and life cycle was low (below 50%) for both infections among those who had heard of the disease.” Page 2: Line 38

Query 5

Further I would recommend that the use of abbreviation in the abstract be removed and terms are used in full.

All abbreviations have been removed from the abstract as suggested by the reviewer. Pages 1 - 2

Query 6

One major challenge throughout the manuscript is proper using of English language just as an example where lines 89-90 repetition of study in the sentence

for at most for 5 years....

We have proof read the whole manuscript to ensure that proper English is used throughout. Page 4, Line 90-1

Query 7

line 176 could describe the life cycle...

Further the authors need to be consistent in usage of terms like caregivers or guardians.

In our study the term “caregivers” includes both parents and guardians. This has been clarified in the text. Page 4, Line 77
Query 8

Generally, this is an interesting aspect of work reporting in detail an aspect usually missed and outlined clearly. However, care must be taken in the presentation on typos and English usage.

This query has been addressed throughout the manuscript.

References