Author's response to reviews

Title: Descending the Sanitation Ladder in urban Uganda: Evidence from Kampala Slums

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Author's response to reviews:

Compliance letter and response to reviewer comments

The reviewers made a number of useful comments on our manuscript which greatly informed the revisions made on the revised and submitted version. The format adopted in the response and compliance letter is that, each comment is clearly stated and the action taken immediately follows below as a 'response'; before a new comment is stated in that manner.

Reviewer 1: Andrea Rechenburg

1. The reviewer noted the need to quantify the data in the manuscript.
Response

The study design and methods have been revisited and we note that a qualitative study privileges the identification of causal processes and mechanisms in a context over quantified responses. Therefore, methodologically, qualitative data has offered the paper an in-depth understanding of slum sanitation in a context of Kampala. This fine grained explanation is the leverage over statistical analysis and presentation. It goes without saying that all designs and methods have strengths and weaknesses.

2. It was noted by the reviewer that citations were placed at the end of our results.
Response

The incongruity of misplacing citations at the end of our own findings has been overcome by rightly showing the relationship with other studies on the same issue. Accordingly, throughout the paper, no more citations are placed at the end of our own finding. Under the findings section, citations are only placed to show an agreement with other studies (for instance see pages 11, 12, 18 and 20). Elsewhere; citations are used to show the original source materials. This has made the manuscript more coherent.

3. Reviewer required us to move quotations to the text where the argument is useful. And should be moved from a long narrative.
Response

All quotations have been revisited to assess where they fit best by beefing up the findings. This also makes reading more coherent and interesting (see pages 13 and 14)

4. The reviewer advised that we go through the manuscript once again so as to correct all minor errors including punctuations, spelling errors, repetitions and any omissions.
Response

This advice was well taken and accordingly we went through the manuscript with a fine toothcomb for instance, the word whitenile is now consistently used and written as ‘white Nile’ (see page 13). All other redundant punctuations and phrases have been expunged. We also used footnotes to enhance clarity.

5. The reviewer advised the use of complete nouns in the text as opposed to the use of the noun in brackets.
Response

We have changed the writing style from using the noun in brackets to use complete nouns for example; ‘because it (UN-Habitat) to because UN-Habitat. (See pages 4 and 5)

Reviewer 2: Leanne Unicomb

Comments on Abstract

Methods
Advised not to describe content thematic analysis
Response
We have accordingly deleted this description in the abstract

Results
The reviewer observed that the results were very light and not adequately reflected in the abstract, with insufficient detail.
Response
We have revised the paper; beefed up the abstract and separated results from discussions.

Conclusion
In the absence of quantitative findings, concluding that poor maintenance leads to open defecation is a big call. There seems to be no reference to the sanitation ladder as such.
Response
We triangulated our data sources for validity and rigor. The study used observational methods, reviewed literature, focus group discussions and interviews with users as well as local leaders and experts. The various data sources indicated the challenges and consequences associated with poor use, lack of cleaning and poor maintenance which caused many users of shared
facilities to abandon the available sanitation facilities for other means of excreta disposal including outright open defecation. All cases where human excreta find its way in the open environment are equivalent to crude open defecation, since in both cases; there is environmental pollution and health risk. In addition, the sanitation ladder has been adequately elaborated in the paper (see page 5, 6, 10, 18, 20-22). We posit that, qualitative methodology and findings are and were rigorous and robust.

Main paper

Introduction

First paragraph lengthy and not a relevant history of slums and their importance to the paper

Response

The first paragraph as an introduction indeed highlights the magnitude of the sanitation problem in slums as a global crisis, clearly showing the proportions and figures. The approach takes on a Global, meso and local description of the challenge. As the reviewer alludes to this paper as relevant for those with similar research interests, this section aims at enabling the international audience internalize the global sanitation trends in slums. The paragraph also shows the response by the UN to the sanitation crisis as well as the inadequacy of this response which is the background of this paper. We then analyze the different latrine categories that are also related to the sanitation ladder that enable the paper to re-think the JMP definitions on improved sanitation as also contingent on facility cleaning in addition to the design and construction of structures. As rightly put, this was the setting of the study, just before the Ugandan picture is presented.

The objective of the paper is to show that beyond the physical presence of excreta management facilities, the proper use, cleaning and maintenance have a central role than previously documented for instance by the JMP and other agencies.

The sentence in the last paragraph of the introduction is ‘results’ and has been accordingly taken to the results section. The end of the introduction now describes the research gap.

Methods

Second paragraph; first sentence should be included in the prior paragraph. The second sentence should be omitted.

Response

The paragraph has been moved to the prior paragraph and the second sentence has been accordingly omitted.

This section should describe selection of participants (inclusion/exclusion criteria and how households were selected). The composition should be part of results.

Response

The selection of participants for FGDs has been explained as well as the
inclusion criteria (see page 7). The final composition of FGDs has been moved to results section.

Ethical considerations section is too detailed. Describe approval and type of consent taken. Is verbal consent considered adequate by BMC Public Health?

Response
This section has been cut down and only reasonable details have been given. The study was approved by the Research Committee for the College of Humanities and Higher Degree Committee which considered all technical and ethical issues of the study. Verbal consent was taken from respondents before eliciting their participation. There are a series of studies published by BMC Public health with verbal consent.

Results and Discussion
This is way too long and lacks focus.

Response
The results section has been disentangled from the discussion. The separation of results from discussion has given the study more focus while also cutting down on the length of the section (see pages 10-18 and pages 18-22).

Results and discussion section on sanitation ladder
There is unnecessary text here that fits in the introduction. The entire section lacks results and just includes context that fits better in the introduction.

Response
The misplaced text on the sanitation ladder in results and discussion has been moved to introduction; while the results and discussion sections are now separated. The sanitation ladder has been given context with reference to where it has been used elsewhere (see page 6)

Second Paragraph
I don’t find any data on ‘data showed that open defecation was mostly practiced by those with no latrine access.’ Are these quantitative data? Then there is a discussion about overt and covert open defecation but no references to support these definitions. The authors do not mention whether these data come from FGDs, among whom. These need to be more clearly spelt out so the reader can discern what the informants are telling us. There seems to be a mixture of opinion (discussion) and results, but it is difficult to determine which is which.

Response
The data presented is qualitative. ‘Overt’ and ‘covert’ open defecation are our own conceptualization and findings and therefore does not need any reference or citation. All quotations are in the findings section and every quotation is attributed to the source. All findings are now confined to the findings section (see page 11).

Third paragraph
This commences with findings from previous studies and not that of the current
study. It is not clear what are results and discussion.

Response

Like elsewhere in the revised manuscript, all text from previous studies has been moved to background or contextualized to have meaning. Results and discussion sections have been separated.

Fourth paragraph

This seems to contain the range of issues described by informants. This should likely go at the start of the results section. A discussion on the validity of the FGDs is not warranted and should be omitted.

Response

This text has been moved to the start of the results section as advised by the reviewer. The discussion on the FGD validity has accordingly been deleted.

5th paragraph

The quotes are a mixture which goes to the issue of the focus of the manuscript. Not sure what flying toilets are.

Smell, heat and poor maintenance: this section is about cleanliness and impact on latrine use. It is better organized commencing with a summary of respondent findings and then a quote. Quotes are disparate.

Response

The quotes have been revisited and thematically re-arranged by; latrine disuse, access and security, cleanliness, space constraints and cleaning habits, pit filling rates, landlords, impact of flooding on latrine cleanliness, inappropriate waste disposal into the latrine, tenants perceptions of landlords attitude to latrine use and payment for latrine facilities.

Flying toilets have been elaborated and contextualized.

The section on smell, heat and poor maintenance has been re-organized and now commences with a summary of respondent findings followed by a quote with the inappropriate quotes deleted.

Safety

The focus of the paper should be stronger and to this end, safety would likely comprise a separate publication. The same goes for ‘indiscipline’ section.

Response

This section is not without context. Data analysis showed various emerging themes and subthemes (see page 8). Among others; respondents showed what occasioned shared latrine shunning and abandoning as inclusive suspect structures over safety concerns and bad user practices and behaviour. The process of abandoning latrine facilities is the central piece of this study and therefore should be clearly understood. Therefore, the sections on safety and indiscipline cannot be expunged.

Photographs

Not sure that the journal supports as many as 8 photos. Some are not clear.
Reviewing these to include two that show major points and incorporate the use of arrows or circles to draw attention to the salient points should be considered.

Response

All photos have been revisited and only 3 photos have remained. The major points are emphasized by the use of arrows in the respective photos (see the attached file).

Conclusion

There are no limitations described anywhere and I suggest that these are included. The aim of conducting a study like this should not only be to describe a problem but also, based on data, propose some potential steps towards a solution, keeping in mind problems, that are found in other low income slum settings, of limited space, high cost of building latrines, and the subsequent need to share these facilities.

Figure 1. I am not familiar with this diagram. Unless it is a standard diagram I don’t find that figure 11 adds anything.

Table 1 should be omitted and a brief summary included in the methods.

There should be a table that provides some information on the participants. It is helpful to have page numbers.

Response

The study incorporated a section on study limitations (see page 22). There are potential steps that have been suggested by the study as well in the context of slums in developing countries (see page 23)

The sanitation ladder diagram is a standard diagram that has been widely used; see for instance;


Having demonstrated that the sanitation ladder is a widely used concept; in order to make the point clearer, that there is evidence of descending the ladder in Kampala slums the evidence of descent has been diagrammatically presented by fig 11 along the key thematic findings of disuse, access, cleaning and abandoning. This visual format talks to the visual representation of the ‘ladder’ that has been alluded to in scaling up sanitation especially human excreta management.
Table 1 has been replaced with a brief summary on age, income and education.