Author’s response to reviews

Title: Getting more than “claps”: incentive preferences of voluntary community-based mobilisers in Tanzania

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Author’s response to reviews:

Reviewer #1:

1. The study has a well-defined research question with an appropriate methodology. There was a testable hypothesis, which was implicit in the research objective. The result of the study was to feed an incentive scheme and the choice of attributes and level was from the qualitative study they had conducted in the first phase. The authors should consider the following:

Thanks a lot for your positive comments on this study. We appreciate your specific comments and we react to them below.

2. In the background, authors should justify the use/strength of DCE.

We have stressed the use of the DCE for this study further in the Methods section, page 8, lines 15 and 16.

3. In the methodology, the authors commented "During this workshop, various feasible programmatic incentive scheme options were identified" (lines 11-14, page 8). It would be good to understand what method was employed by MST staff at the workshop to arrive at the incentive scheme options.
The methodology should also include more details on the attributes, levels and choice sets used in the questionnaire development. This information should be clear in the methodology without having to refer first to the results section to get clarity.

We have added some details on the methods used during the reflection workshop (page 8, lines 7-9). The main themes on existing and preferred new incentives from the phase 1 – the qualitative component of the study – were presented and discussed. Based on that, and feasibility of incentives options according to the available budget, attributes were formulated. We acknowledge the importance of more details on the DCE attributes, levels and choice sets. Therefore, we have a reference to Table 2 and Additional file 1 on page 8 in the Methods section. While the DCE attributes, levels and choice sets were derived from the first phase, of which findings are presented in the first part of the Results section, readers who would like more information on the DCE while reading the Methods section are accommodated in this way.

4. There is no information on the inclusion criteria used by MST to select CBM ab initio e.g. educational background, other sources of income etc. The individual characteristics of respondents (e.g. age, sex, length of service, etc.) should also have been considered in analysis of the choices made to see if they made any impact.

Many thanks for this comment, we have added CBM selection criteria in paragraph 3 of the Background, page 4, lines 19-21. The individual characteristics of respondents did not have an impact on the results. This has been stated in the Discussion section, and to make it clearer, it has been added in the Results section as well (page 15, lines 19-20).

5. The authors went to great length to select CBMs from different sites based on performance (clinic and CBM) but there was no appreciation of these selections in the results. We cannot tell which groups were better motivated or differences in values of incentive scheme. What was the original basis for the selection?

This is correct. This selection that was done during the first phase of the study, which intended to introduce maximum variation in the sample, did not reveal differences in perspectives on incentives of CBMs in the three selected clinics. We have added this clarification on page 10, lines 1-2.

6. There was a reference to p<0.05 in the abstract as being statistically significant. This is not evident in the results. Level of significance is also not mentioned in the methods.

Thanks for this observation. We have addressed this in the Methods and Results sections.

7. The authors in the last paragraph under discussion had addressed issues around uncertainties, validity and generalizability of their study. The study implications and importance were noted. Could the study findings also have been limited by information being gathered/facilitated by MST staff who possibly supervise and provide any existing incentive to the CBMs?
This could be true, however, the DCE was distributed by head-office staff in 7 of the 11 clinics and the head-office staff was not in direct contact with CBMs. We have clarified this in the Methods section. Still, it could be that CBMs felt they should respond in certain ways because of the head-office staff being present. We have added this possible limitation in the Discussion section, page 19, lines 19-21.

8. There are a couple of places where unnecessary brackets were used within text e.g line 51, page 5; lines 21/22 page 7.

This was done to reduce text, but we follow your advice and have deleted the brackets and written it in full.

Reviewer #2:

Dear authors,

Thank you so much for your submission to the Human Resources for Health. Please find my comments below to improve your manuscript.

Many thanks for your comments, we have responded to them below.

1. Too many abbreviations in this Manuscript.

We think that in comparison with other work, the abbreviations are not too many. The majority of the abbreviations are well-known abbreviations. We considered to put all MST – Marie Stopes Tanzania references in full, but decided not to do so to remain the flow of the text. We hope the abbreviation list is useful for the readers.

2. Please clearly identify the meaning that you conducted your research. What are the research gaps and development in your selected topic nowadays? Has it ever closed any research gaps in this study field? Any call for a similar qualitative study like yours?

Thanks a lot for this comment. In the Background section, page 5, paragraph 4-6, we provide evidence on what is known about our topic – CHW incentive preferences, and the potential influence on CHW motivation. On page 6, lines 12-14, we added an explicit reference to the research gap.

3. How was your sampling in your mixed-method research? Have you ever considered whether this sample is representative? Any evidence to support it? If not representative, how did you handle this problem in your study?

Thanks for these questions. We describe our sample for the first phase, the qualitative study component, in the second paragraph of the Methods section. As explained in the text, we included participants from different geographical areas and clinics, to be able to detect potential
differences in perceptions based on this. We are of the opinion that authors can never say that a qualitative sample is representative (for a whole district/country).

With regard to the quantitative sampling, we have described the process in paragraph 7. We have clarified that all CBMs who work in Tanzania were targeted for the DCE, and that 5 of the 66 were missed because of unavailability. The paragraph preceding this paragraph (number 6) points out that or minimum sample size was calculated to be 50.

4. How did you organize your interview and text analysis in this study? Any criteria? Is it possible to draw one picture for your steps of this study?

Paragraph 4 of the Methods section explains how we went about the qualitative data analysis.

5. How did you make sure the size of your sample enough for this study? Have you ever calculate your sample size? How? Why did you calculate it in this way?

As indicated above, we calculated the minimum sample size to be 50, and the methods we used for this are outlined in references 18 and 19. We trust that this answers your questions.

6. Have you ever considered a control group in this study? Why?

No, we did not. Both study components, the qualitative study and the DCE, ask participants about their perceptions and preferences on incentives. Therefore, a control group would be irrelevant. We did not compare different groups of CBMs, exposed to different contexts/incentives which each other.

7. When conducting your pre-test, how did you control the confounders and biases in your study?

The pre-test intended to assess the selection of attributes and their levels, respondents’ understanding of the questionnaire’s content and process and feasibility of self-administration in this context. By conducting the pre-test, possible confounders and biases could have been detected. The pre-test actually went very well, and we have added a specific note that only the instructions given to the CBMs before they filled in the questionnaire were slightly improved based on the pre-test (page 9, lines 6-8). Further potential biases are discussed in the Discussion section, paragraph 5.

8. How did you design your questionnaire? Have you ever conducted a pilot study before your pre-test and post-test? Why?

The DCE questionnaire was designed based on findings from the qualitative component and input from MST and Marie Stopes International staff. We conducted a pilot, which we referred to as pre-test in the manuscript. We hope this clarifies the issues you have raised. We did not conduct a post-test, as we only administered a DCE, on preferred incentives of CBMs.

Reviewer #3:
1. The author used Mixed method design. The paper focused and give more emphasis on qualitative part in the method section and the author should incorporate all components of qualitative and quantitative study components (population, sampling, sample size, data collector, data management, quality assurance, analysis). For qualitative part the author should follow and incorporate "COREQ (Consolidated criteria for Reporting Qualitative research) Checklist" criteria for quantitative part use strobe checklist.

Thanks a lot for pointing out the checklists that we can used for complete representation of the Methods section. We are aware of these checklists and we have used them. We have added details in the whole paper, as appropriate.

2. What kind of mixing is the paper used? the author clearly show, weight, timing and how it was mixed, is that in the result section or analysis section?

In this study, a qualitative study component inputted in the design of a DCE (quantitative component). As such, the findings are a result of this mix of methods.

3. Method part: How data was managed and how quality was assured? The author should incorporate in the method section, Who collect the data for both quantitative and qualitative?

As for the qualitative study component, a pre-test of the instruments was conducted and data were collected by a team of two researchers experienced in qualitative research methods, as explained in paragraph 3 of the Methods section. For the DCE, data collection and those involved as described in paragraph 7 of the same section. Here, some more details on the pre-test, sample and data collectors have been added.

Background:
1. Line 20 "While many governments are in the process of establishing a formalised cadre of CHWs" The idea focus on many governments but the reference focus only in Tanzania (Tanzania TURo. National Community Based Health Care Strategic Plan 2014-2020. In: Welfare MoHaS, editor. 2014.) It needs additional reference?

This specific reference is applicable to the second sentence of the paragraph, which reads: “This is also the case in Tanzania, where the government is in the process to implement the National Community Based Health Care Strategic Plan 2014-2020, which includes reviving and integration of paid CHWs, trained for one year, into the health workforce.” Therefore, in our opinion, the reference is appropriate.

2. Line 38 " Motivation can be defined as "an individual's degree of willingness to exert and maintain an effort towards organizational goals" (6, p. 1255)." The citation is Vancouver, for further explanation it is possible to see in the reference list, better delete it P.1225.

We have followed your advice and deleted the page number.
3. Line 56 "Tanzania, Greenspan et al. (2013) found", it seems Harvard style better to use uniform reference style and concentrate on ideas and acknowledge by citation using Vancouver style.

This has been noted and we have adjusted it throughout the manuscript.

Method

1. Line 53 to 59 "combination a deductive approach, using pre-existing themes based on literature (6, 7) and topic guides, and an inductive approach, which allowed new themes to emerge from the data (14) was used to develop a coding framework." This means the method of analysis is thematic content analysis not thematic analysis; because the author used the predetermined theory, for content and thematic the new formed team used.

Thanks for this suggestion. In the Methods section, we have described what was done during analysis, and you have rightly summarized it. In the abstract, we used the overarching term ‘thematic analysis’. Thematic analysis is a principal technique that is used by qualitative researchers to analyse data. This process may be based on prior categories, or on categories that become clear to the researcher only as the analysis proceeds. Therefore, broad reference to ‘thematic analysis’ in the abstract is appropriate according to us.

2. Page 9 line 19 "conditional logistic regression models, the sample size is small and 50 is the minimum for a rule of thumb. Did you check model fitness, it needs checking model fitness?"

The minimum sample size was determined based on the minimum size required to test for the main effects of five attributes with two level each. As the model in explanatory rather than predictive, the model goodness-of-fit was not reported. In line with the reviewers' comment and to provide full transparency of the validity of the results, the GoF statistic was added to the results and methods sections respectively (page 8, lines 1-3 and page 17, line 17).

Result

1. Page 13, Line 33 "During the refection workshop" It is not clear " refection"?

The reflection workshop has been explained and further clarified in the Methods section, paragraph 5.

2. Page 14 Line from 46-56 "The univariate models show that an incentive scheme including two T-shirts, a bag and an identity card was preferred over a package with two T-shirts and a bag alone (OR[95%CI] = 1.64[1.28-2.09]). Similarly, respondents showed a clear preference for schemes which include capacity building seminars at least once every two months (OR[95%CI] = 0.42[0.33-0.54])." It is not clear that the two ideas are different finding the first is aggravating and the second is protective is it possible to say similarly?

Thank you, we have deleted the word ‘similarly’ and replaced it with ‘in addition’.
3. Page 15 Table three tables "Conditional logistic regression results" tables are self-explanatory by containing, what, why, where and when, better to add them in the title.

Thanks for the suggestions, we have added: ‘CBMs’ incentive preferences in Tanzania, December 2017’ in the Table title.

4. Page 15 line 33 "1.3E-04" Which one is simply easy to understand for readers ? P=0.0013 or 1.3E-04? Better use simple one

We agree and have adjusted it in the Table, except for the p under ‘training’, as this would affect the lay-out of the Table too much.

Discussion
1. Better to start summary finding paragraph, Discussion is a deductive approach,

As for the Discussion section, we have tried to provide further insights into the meaning of our findings, and connect them to current debates on CHW remuneration and incentive types.

Reviewer #4:

This paper addresses an important gap in our knowledge about what types of job incentives might improve motivation and retention of CHWs. I have some minor feedback for you to consider:

Thanks a lot for your review, we appreciate it.

1. The authors have captured important background information and references in the introduction. The recent WHO CHW Guidelines also emphasized the need to go further from our current understanding of the value of financial and non-financial incentives to the types of incentives and packages that would be beneficial for CHW programs. Consider including this to strengthen your study rationale.

This is very true. We added a reference to this at the end of the Background section, page 6, lines 12-14.

2. In the methods, you describe how the clinics and CBMs were selected. It would be helpful to contextualize the role of the CBMs in the clinics and speak briefly about the emphasis of their work (presumably FP focus but please state it for those unfamiliar with Marie Stopes). Also mention whether they distribute/sell contraceptives and other commodities.

This information on the tasks of CBMs is provided in the Background section, page 4, lines 16-18. CBMs they are tasked with raising awareness, generating demand, and providing referral to potential clients for MST services, such as family planning, comprehensive post-abortion care and cervical cancer screening. The do not distribute or sell commodities.
3. It would also be helpful to know how many CBMs are present per clinic, and how many were sampled for each phase of the study per clinic.

In the Background section, we indicate that there are 6 CBMs per clinic (Page 4, lines 21-23). We describe our sample for the first phase, the qualitative study component, in the second paragraph of the Methods section. CBMs of 3 clinics were selected, and out of the 18 CBMs, 17 were available.

With regard to the quantitative sampling, we have described the process in paragraph 7 of the Methods section. We have clarified that all CBMs who work in Tanzania were targeted for the DCE, and that 5 of the 66 were missed because of unavailability.

4. Inclusions of the pre-test data in the final survey can be tricky. Were any changes made to the attributes based on the pre-test?

No, there were no changes made in the attributes of the DCE. On page 9, lines 6-8, we have clarified that the pre-test did not lead to changes in the questionnaire, but led to slight adjustments in the instructions given to the CBMs prior to filling in the questionnaire.

5. On page 8 in line 80- Sounds like a "fractional" factorial design was used

In this study we used a factorial (orthogonal design) to test for all main effects in the model. We did not test for interactions as this would have exponentially increased the number of choice options and hence the time required to generate a representative unbiased sample. We did not use blocked fractional design.

6. A bit more detail on the quantitative analytic approach would be helpful in understanding the results

We added a few details in the last part of the Methods section with regard to the approach and analysis of the DCE.

Results:
7. In the results Table 1, it is not clear to me what the +, +/-, and - is referring to. Whether these factors are present in their jobs currently?

This is correct. It is explained at the beginning of the Results section, page 9, lines 21-23.

8. Did you observe any differences in the results based on the 3 combination of how the clinic was performing versus how the CBM was performing?

No, we did not. We have added this clarification at the beginning of the Results section, page 10, lines 1-2.

9. Page 11, lines 46-50- the point on community members thinking of the CBM as a prostitute is shocking. Is this an isolated incident? If so, perhaps it does not have specific
relevance for this study. If not, please qualify that statement with what led to such general misconceptions.

This was said by various CBMs from 1 of the 3 clinics. It was related to CBMs’ tasks in promotion of contraception, including condoms. We have added this.

10. Page 12, lines 27-40: In my experience, the requests for more training often has roots in the per diems or certificates received for training. Please mention whether MST CBMs receive either to help contextualize this information.

This is true. Although CBMs did not stress this point, they sometimes did receive transport allowance and per diems when attending trainings. We have added this information on page 13, lines 9-11.

Discussion

11. Page 17, line 40; Often ideas and value of pay-for-performance and insurance schemes are not understood by populations who have had no experience with these concepts.

Despite that in the qualitative component, a few CBMs recommended a pay-for-performance option, this is indeed possible. We have added this reflection (Page 18, lines 6-9).

12. Were multiple versions of the paper survey administered to avoid positional bias in responding to the choice sets? If not, please identify this as a limitation, present the order in which the attributes were presented and reflect on the findings and potential for positional bias.

This was not done, and the reviewer is right to say that this could have introduced bias. We have added a reflection on this (Page 19, lines 17-19).

13. As HRH does not typically read by economist, I would recommend elaborating on the limitations of DCE as an approach, as well as specific limitations of this study.

Thanks for this suggestion. We have added 2 limitations specifically related to this study, and one general limitation in the last paragraph of the Discussion section.