Author's response to reviews

Title: Results of participatory research approach to improve the relationship between nurses and mothers on a Tanzanian hospital paediatric ward.

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Version: 2 Date: 12 May 2009

Author's response to reviews: see over
Dear Dr Clevenstine

Re: MS ID: 1320086419204916 “Conflicting priorities: evaluation of an intervention to improve nurse-parent relationships on a Tanzanian paediatric ward”, by Rachel Manongi, Fortunata Nasuwa, Rose Mwangi, Hugh Reyburn, Anja Poulsen and Clare Chandler

Thank you for sending our manuscript about the evaluation of an intervention to improve nurse-parent relationships in a Tanzanian hospital for review. We are grateful for the reviewer responses and have made substantial changes to the manuscript and changed the title as a result of their useful comments and suggestions. We feel their comments have significantly improved the paper and we enclose our responses to each.

We hope you will now find the manuscript ready for publication,

Yours sincerely

Clare Chandler and Rachel Manongi
For the authors
Response to reviewers

We respond to each comment from each reviewer, identifying our responses with a double hyphen and italics.

Reviewer's report 1
Title: Results of participatory research approach to improve the relationship between nurses and mothers on a Tanzanian hospital paediatric ward.
Version: 1 Date: 30 August 2008
Reviewer: Melkiory Masatu

Reviewer's report:

General comments
The manuscript addresses an important issue and methodology for which there is limited literature from Tanzania and Africa in general. To a large extent the manuscripts is structured in accordance to the general standards. However, there are areas which need revision in order to improve the quality of the paper and allow easy comprehension by readers. These areas are specified into the following sections:

1. Major compulsory revisions
The specific objectives of the study need to be stated to allow readers to know what were the issues the research aimed at achieving.
--We have inserted this under the heading ‘study objective’ on page 4.

The information in the Methods section is mixed up and need re-organization. For instance, under study design the authors describes the techniques used to collect the data instead of the intervention, which was the workshops.
--We have reorganized the Methods section in line with the reviewer’s helpful comments. The ‘study design’ section now reads, ‘The study evaluated the effect of a workshop intervention (entitled ‘Health Workers for Change’) on nurse-parent relationships on a paediatric ward in a busy regional hospital in Tanzania. The evaluation used before and after questionnaires with parents/guardians and focus groups with nursing staff to assess the effect of the intervention’.

Also, information about the questionnaire and and FGD should be under data collection.
--We have added the heading ‘Data collection’ prior to the methods for the questionnaire and the FGD.

Some important sections of the methodology such as study population should be clearly stipulated.
--We have inserted a section on ‘Study population’ after the ‘study setting’ section. The added section reads, ‘The study population consisted of all nurses on the paediatric ward. 29 of these nurses participated in the workshops and 24 in the post-workshop FGDs 6 months later. The nurses were assessed for interpersonal care by two populations of parents: 144 parents with children on the ward prior to the workshops and a further 144 with children on the ward 6 weeks after the workshops’.
The section on data management and analysis should include description of how both the quantitative and qualitative data were managed and analysed, instead of having two separate sections on data analysis. I suggest that authors use the following sub-titles to re-organize the information; study design, study setting, study population and sampling, data collection, and data analysis.

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We have reorganized the sections as suggested, except that we have kept the quantitative and qualitative sampling and analysis separate. We think that the improved structure suggested by the reviewer enables the reader to identify these sections under the relevant data collection method and we think it would be difficult to include sampling before the details of the survey, and that data analysis would be confusing to have in one section.

Due to lack of specific objectives of the study, the reader has difficulties to judge whether the presentations of the findings (sequence and details) correspond to what the study aimed at. Thus, upon including the specific objectives, the results also should be organized accordingly.

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We have included an explanatory sentence at the start of the Results section to show how the results are organized and how they relate to the objective (evaluation). This reads as follows, ‘We present the proceedings of the workshops, followed by the results of the before and after parent questionnaire evaluation and the post-intervention nurse focus group discussion’.

The manuscripts lacks concrete conclusions and recommendations that relate to the aims of the study, both in the body of the report and in the abstract.

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We have added a conclusion, ‘The aim of the intervention was to improve nurse-parent relationships, previously identified as contributing to poor delivery of technical and interpersonal care. We found that, in spite of the use of an evidence-based participatory approach to tackling this problem, we had little success in achieving this goal. Our evaluation suggests this may be because the priorities of the nursing staff did not match those of the intervention. We conclude that until nurses’ needs in their working environment are met, it is unlikely they will be able to shift focus to the needs of parents’.

2. Minor essential revisions
The title need to be revised to connote the main finding of the study.

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We have changed the title to ‘Conflicting priorities: evaluation of an intervention to improve nurse-parent relationships on a Tanzanian paediatric ward’.

There are few spelling errors observed which need correction.

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We have checked through the document and made spelling corrections.

Figure 1 lacks proper label on the X-axis. This should be included.

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We have changed the labels on both axes, the Y-axis reads ‘Number of parents’ and the X-axis reads ‘number of problems reported’.

**Level of interest:** An article of importance in its field  
**Quality of written English:** Acceptable  
**Statistical review:** No, the manuscript does not need to be seen by a statistician.  
**Declaration of competing interests:**  
I declare that I have no competing interests.
Reviewer's report 2

Title: Results of participatory research approach to improve the relationship between nurses and mothers on a Tanzanian hospital paediatric ward.

Version: 1 Date: 11 April 2009

Reviewer: Katherine McGilton

Reviewer's report:

1. Is the question posed by the authors new and well defined?
   Onyango-Ouma et al. (Health Policy and Planning, 2001 Sep;16 Suppl 1:13-8) conducted a similar study in 2001. They describe a similar intervention to explore interpersonal relations among health workers and between health workers and female clients. They used participatory methods to explore the provider-client relationship. The findings of this study are very similar to what Onyango-Ouma et al. found: staff identified many constraints to the provision of adequate health services.

   --The study conducted by Onyango-Ouma et al in Kenya was situated in a rural health centre. That study, along with others evaluating the HWC intervention, did find success in improving the provider-client relationships on the whole. Our setting was a busy in-patient ward where we'd previously conducted research with both mothers and nurses, finding that the relationship was poor. We wanted to see if the HWC approach would work in this different setting. In addition, our methodology differed, using questionnaires with parents actually on the wards rather than with community members who may have a different perception of the attitudes of health workers and the success of the workshops. Our sample size of parents was significantly larger, at 144 before and 144 after the intervention.

   The aim of the study was to assess the ability of the workshop series to improve the quality of relationship between nurses and parents. Based on the results provided, the aim of the study was also to i) discuss the revision of the PPE scale, and ii) discuss how the intervention was developed based on the focus groups from staff and iv) understand factors influencing the intended outcomes (ie. problems leading to poor attitudes towards patients and carers).

   --Thank you for this summary. We have added the latter objective to our 'study objectives’ section. This now reads, ‘In addition to the impact of the intervention, our study evaluated the process of the intervention and ventured to understand factors affecting the intended outcomes of the intervention’.

   The workshops were not designed from the focus groups. We have removed the sentences in the study design section in the methods that may have led to this impression.

2. Are the methods appropriate and well described, and are sufficient details provided to replicate the work?
   The methods could be better articulated. Specifically:
   1) What do the 6 Health Workers for Change workshop sessions involve and are they based on theory? Without clearly understanding what the intervention was, it is difficult to know what outcomes should be collected.

   --We have included the titles of each workshop on page 6. ‘The workshops addressed the following topics: (1) ‘Why I am a health worker’, (2) ‘How do our clients see us?’, (3) ‘women’s status in society’, (4) ‘unmet needs’, (5) ‘overcoming obstacles at work’, and (6) ‘solutions’. In addition, the introduction outlines the theory and evidence behind the workshops.
2) Why is this study referred to as a pilot study?
--The study was intended to be a pilot for a larger intervention. However the results discouraged larger-scale roll-out. We have removed the phrase ‘pilot’ from the paper as we agree this is confusing.

3) No design type was mentioned. In the abstract the term “participatory research approach” was used but there is little detail in the manuscript on what this approach was in this study.
--We have attempted to clarify this in the ‘study design’ section. The design of the study was a before-after evaluation with parents, and after-intervention evaluation with nurses. The design of the intervention was following an existing intervention that has been well documented and we have attempted to clarify this in this section.

4) The revised Picker Patient Experience scale was not pilot tested prior to its use. However, the researchers did mention the need for further reliability and validity testing in the limitation section.
--We discussed this under the limitations section, ‘In addition, the questionnaire survey was not validated. However, attempts were made to improve validity and reliability. The problem-based approach to the questionnaire may avoid classic problems of positive ratings in satisfaction surveys and insensitivity to problems with the specific processes that affect the quality of care delivery [34, 35].’

5) The Picker Patient Scale is a patient satisfaction scale and is more inclusive than just focusing on the nurse-patient relationship scale. The focus tends to be on improving the mothers satisfaction with care (ie. ‘mothers expected to clean the ward and toilets’ could be argued that it is not focused on the nurse-patient relationship)
--The focus is on improving mothers’ satisfaction with the nurse-parent relationship. We adapted the PPE scale to gain this focus.

6) It would be helpful to include a reference and more information on construct validity discriminate testing which was done on this Picker Patient Experience scale. It is not clear who the extreme group is and how the one item from the scale was selected.
--The discriminance analysis was conducted on the variable ‘mothers expected to clean’, as discussed on page 11, ‘Validity testing using the discriminance method suggested the questionnaire was valid, for example mothers who reported having to clean the ward or toilets themselves were statistically significantly more likely to cite problems (p<0.001 for both surveys).’

7) Please provide some descriptive data on the patients as well, length of stay, age, diagnoses.
--We have added this on page 11, which now reads, ‘The demographics and diagnoses of children were almost identical at the two survey times. The median age of children was 12 months (IQR 7, 24); the median length of stay at the time of interview was 3days (IQR 1,4); 38% children were diagnosed with malaria, 33% with diarrhoea and 22% with pneumonia.’
8) It should be stated that the research study received ethics approval
   --This is stated on page 21, ‘Ethical approval was given for the study by the National Institute of Medical Research, Tanzania’.

9) Did all staff on the unit participate in all workshops, and if not, how did you take this into account?
   --The results on page 8 state that almost all staff took part in all workshops, ‘Between 26 and 29 of the 31 nurses scheduled to work on the paediatric ward attended each of the workshops’.

10) How many focus groups were completed and how many participants participated per focus group
   --We have clarified this in the methods section: there were two focus groups. The results section states that in one there were 15 nurse attendants and in the other 9 trained nurses.

11) It would appear that the focus groups helped to tailor the workshop and the solutions the groups decided to focus on. Therefore, this information is not really the results, but should be part of the procedures section and how the information was used to guide the intervention.
   --We agree this was confusing. We had originally planned to include earlier focus group discussions in the paper, but we have now removed all reference to these. These focus groups did not inform the design of the intervention, only the selection of this existing intervention.

12) Table 4 is interesting and lists many relevant action points. What was the role of the researchers in following up on these action points? The author describes that there was a six-week follow-up visit, when the action points had mostly been addressed. However, table 4 reveals that about half the action points were not addressed.
   --The researchers were not involved in following up the action points as this may have biased the results. By the follow-up meeting, the action points made by the participants had mostly been addressed, although not necessarily with the desired outcome. We have clarified this on page 11, which now reads, ‘A follow-up visit was made six weeks after the last workshop to find out what action had been taken by the nurses in the study. Researchers were not part of the process of requesting changes at the hospital level as this may have biased any response from the administration. At the follow-up visit, nurses reported that the action points had mostly been addressed, although largely without the desired outcome. Meetings were reported to have been held amongst the ward staff to address issues of respect and assistance to colleagues, and some improvement was reported. However, the result of the meeting with the Regional Administrative Secretary was less successful. Many of the issues raised were reported to be in the control of the government rather than region and therefore could not be addressed locally’.

13) The demographics of the mother participants is missing
   --This has now been added on page 11 which now reads, ‘Demographics of the questionnaire respondents were not significantly different in the two surveys: in 95% cases the respondent was the mother; the median age of the respondent was 26 years (IQR 23, 30)’.

14) There is a disconnect between the items that parents rate on the main outcome scale for the study and the problems and solutions staff focused on to improve their work environment as part of the workshop. Again, a better
explanation of how the work environment of the nurse (low salary, inadequate equipment) that staffs’ ability to deliver adequate care, and how this will influence the mother’s perception of care and/or relationship with the nurse is how this paper could be refocused.

--This is a useful point: the perceptions and priorities of mothers and nurses differed, as we found in a previous study. We have brought out this point in the discussion on page 18, ‘However, this did not translate into better interpersonal relationships as perceived by mothers. The mismatch between parent and health worker priorities has been reported elsewhere’.

15) A major limitation which should be mentioned is that the mothers who completed the questionnaires prior to the workshop were different than the mothers who completed the questionnaires after the workshop, so sample bias may have influenced the findings.

--We feel that the bias would have been greater with the same group of parents. If they had seen the form before they may respond differently to new parents, and the sample was sufficiently large at 144 to reduce the likelihood that a significant number of the participants would respond differently.

16) On page 12, under ‘evaluation II’, the difference between NAs and nurses is an interesting finding that should have been discussed under the results of the workshops.

--The workshops were run with both NAs and TAs which made it difficult to analyse the proceedings of the workshops by these two groups. However, the facilitators felt that there was tension between the two groups and this was the rationale behind separating them for the FGDs.

3. Are the data sound and well controlled?
Sample size and selection of staff and mother participants appears to be sound.
1) There is little mention of Table 3 in the manuscript. Not clear how the ‘average’ ranking of each problem was calculated, nor what the value means.

--The legend to the table indicates the method for the ranking. ‘Each nurse ranked their top five most important problems from 5 (most important) to 1 (less important). The ranks for each problem were summed and divided between the 28 participating nurses.’

2) The author needs to provide additional information on the calculation of the ‘scores’ of the patient satisfaction questionnaire.

--We have given detail of this on page 7, ‘Analysis of the questionnaire used a dichotomous problem score, indicating either the presence or absence of a problem, with a simple additive scoring algorithm, following Jenkinson et al.21. Z-tests were used to compare demographic variables and then the additive scores before and after the workshops as well as to compare results for individual problems’.

3) Require cut offs for if the problem got worse, stayed the same, or got better (page 11).

--We are not sure what the reviewer requires here. The criteria for whether the problem was reported differently before and after was based on statistical significance of a Z-test.

4. Are the discussion and conclusions well balanced and adequately supported by the data?
1) Page 17: 2nd paragraph: the author describes that the participants were
successful in critically analyzing their own actions but this result was not reported under the findings section.
--We feel this is displayed in the ‘workshops’ section as well as ‘attitude change’, where nurses identified their weaknesses before the workshops compared to at the follow-up FGD.

2) Not clear how the authors concluded the workshop promoted greater empathy. No evidence of this happening.
--This is demonstrated by the sections under ‘evaluation II’

3) There is no conclusion section which would be helpful to summarize the most important findings.
--We have added a conclusion, ‘The aim of the intervention was to improve nurse-parent relationships, previously identified as contributing to poor delivery of technical and interpersonal care. We found that, in spite of the use of an evidence-based participatory approach to tackling this problem, we had little success in achieving this goal. Our evaluation suggests this may be because the priorities of the nursing staff did not match those of the intervention. We conclude that until nurses’ needs in their working environment are met, it is unlikely they will be able to shift focus to the needs of parents’.

4) Would like to have had more discussion on how the intervention appears fluid and is based on the problem identification and solutions which come from the workshop. How then can outcomes be picked until the focus of the intervention becomes known? None of the strategies written about in the paper actually focused on patient care or nurse-patient relationship, but focused on the work environment of the nurse.
--The intervention intended to improve nurse-mother relationships but we found that it was difficult for nurses to work on this when they were dissatisfied with other things in their working environment. We have tried to bring this out in the discussion, e.g. page 17, ‘but the majority of the factors identified during the workshops as hindering positive relationships remained after the workshop series had finished. The participants in this study may have had less power to impact their working environment in comparison to other less complex health facility settings’.

5. Do the title and abstract accurately convey what has been found?
1) The title does not convey what was found. This study focused on the development of the HWC intervention, the revised picker scale, and factors influencing quality of patient care on a paediatric ward. The information from the focus groups and the workshop is valuable and needs to be presented more clearly.
--We have changed the title to ‘Conflicting priorities: evaluation of an intervention to improve nurse-parent relationships on a Tanzanian paediatric ward’.

2) The abstract could be more clearly articulated. State a clear objective at the end of the background section, indicating how participatory research methods are beneficial to this study (which are not described in enough detail in the paper). The methods section needs to identify the methods used for this study and there is missing information on the setting and the sample sizes. The results section can be shortened, while the conclusion section needs to be expanded and clarified. The sentence currently stating that ‘empathy is not enough to provide care that is satisfactory to clients’ does not seem to capture the objective or the content of the study.
--The objective is stated at the end of the background as suggested, ‘We evaluated the HWC approach for improving the relationship between nurses and parents on a paediatric ward in a busy regional hospital in Tanzania’. We describe that the intervention methods are participatory but do not focus on this because these have already been described in detail elsewhere. Our intention was to evaluate these methods.

--We have now included sample sizes in the methods section, ‘Methods: The intervention consisted of six workshops, attended by 29 of 31 trained nurses and nurse attendants working on the paediatric ward. Parental satisfaction with nursing care was measured with 288 parents before and six weeks after the workshops using an adapted Picker questionnaire. Two focus group discussions were held with the workshop participants six months after the intervention’.

--We have expanded the conclusion, which now reads, ‘Conclusions: The intended outcome of the intervention was not met. The priorities of the intervention, to improve nurse-parent relationships, did not match the priorities of the nursing staff. Development of awareness and empathy was not enough to provide care that was satisfactory to clients in the context of working conditions that were unsatisfactory to nurses’.

Level of interest: An article whose findings are important to those with closely related research interests
Quality of written English: Needs some language corrections before being published
Statistical review: No, the manuscript does not need to be seen by a statistician.
Declaration of competing interests:
I declare that I have no competing interests