Author's response to reviews

Title: Effect of community-based health management on the elderly health: a prospective randomized control trial from China

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Author's response to reviews: see over
Dear Ms Flory Mae Calumpita,

I would like to express my deep appreciation to you and the reviewers for suggestion to improve our manuscript entitled “Effect of community-based health management on the elderly health: a randomized control trial from China” (MS:1209090524625395). We have read the comments carefully and revised our manuscript accordingly, hoping that the revised manuscript is now suitable for publication.

Here we will respond to the reviewers’ comments point by point and all changes in our revised manuscript are highlighted in red text.

Once again, thank you for taking up your time reading our revised manuscript. We are ready to answer any further question from you.

Best regards,

Sincerely yours,

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Respond to Reviewers’ Comments Point by Point

Reviewer: Irena Draskovic
Major compulsory revisions
1. Is the question posed by the authors well defined?
Abstract: It is not clear to me what exactly was the research problem. In other words, why do we need this research? This is not to say that there isn’t any relevance to this study only, that this isn’t clear from the manuscript. What I miss in the Background section (Abstract) is something like: ‘..Providing affordable and good quality care for the growing aging population in China, poses problems. Several studies have shown that managed care (MC) can be effective yet, also efficient in solving at least some of these problems. The advantages of managed care are that it improves accessibility of care which improves its quality and effectiveness while, at the same time, reducing the costs of care… However, the findings on the effectiveness of MC are inconclusive so far; there have been too few RCT studies to draw reliable conclusions. Therefore,… research question as to what extent is managed care effective in reducing medical cost, and in improving clients’ health in an urban setting in China.” Something like that. In general, a clear statement of the problem often leads to a clear research question.
Introduction: The same (see above) should also be more clearly stated in the introduction section of the manuscript. The final part of the Introduction section is difficult to understand. A more clearly stated reasoning would be helpful. Perhaps something along these lines: ‘So far, reliable empirical findings show the following: …..1. 2. 3. …. What is still not clear is how/what.... ? We will focus on the question of …. Hypotheses (expectations): if ‘so-and-so’ than we would expect 1. xx to increase and 2. yy to decrease…due to….<something>’
Furthermore, a possible causation path is from xxx via yyy to zzz…’

According to the reviewer’s suggestion, the abstract and introduction have been amended (Please see the abstract Line 1-8 of page 1 and the background Line 8-10, Line 13, Line 5-9 from the bottom of page 2, Line 1-15 of page 3).

2. Are the methods appropriate and well described?
   It is difficult to understand the methodology used in this study. The second subtitle in the methods section does not properly match the content. In “Investigation method and community-based health management measures”, the design and the measures are not sufficiently described. The information on the design and the measures is mixed with partial information on the intervention components. I do understand that an RCT design was used in this
study. However, to be able to understand how this is done it would be helpful to enclose a graphical depiction (a flow diagram) of the study design. (see e.g., Reporting of participant flow diagrams in published reports of randomized trials. Sally Hopewell*, Allison Hirst, Gary S Collins, Sue Mallett, Ly-Mee Yu and Douglas G Altman, BMC, Trials 2011, 12:253)

The with all the comprising components should also be clearly outlined. Preferably in a chart (see e.g., Perera R, Heneghan C, Yudkin P. Graphical method for depicting randomised trials of complex interventions. BMJ.2007;334:127–129. doi: 10.1136/bmj.39045.396817.68.)

We amended the Methods from page 3-6 and change the second subtitle into the Study Design. We added a flow diagram of the study design in page 4 and a chart of actual intervention in page 5 according to the reviewer’s reference.

3. Are the data sound?
The data seem to be sound. However, there are no reports on blinding. It would be helpful to include this kind of information in the manuscript.
There is no information on (at least) the reliability of the self made instruments.

We added the description of blinding in line 1-3 from the bottom of page3.
We added the description for the reliability and validity of the self made instruments in line 5-12 from the bottom of page 5.

4. Is the writing acceptable?
- Unfortunatelly, the writing is rather imprecise. Often the wrong terminology is used (e.g., ‘decease’ instead of decrease in Discussion section) and grammar is often incorrect. I do understand that the differences between Chinese and English are huge and that it is not easy to write in English as a non-native speaker (I know this from my own experience). I tried as much as possible to see through the difficult language and estimate the relevance and the quality of the study regardless of the quality of writing. I have an impression that the study is conducted correctly although the exact design (graphical depiction) should be enclosed and the components of the intervention should be outline before this conclusion can be made. Furthermore, the methodology section should mention ev. blinding procedures. I guess, what I’m saying is that writing should be thoroughly revised and checked by a (near) native speaker

We have tried to improve the language by ourselves and checked by a near native speaker.

Minor essential revisions
1. Does the manuscript adhere to the relevant standards for reporting and data deposition?
- I’m not sure if the multiple t-tests were performed in a single analysis, in which
case I believe that some method of correction for multiple comparisons would be appropriate; as I’m not sure about this, the authors should preferably consult a statistician on this issue.
- Some guidelines for data and analyses reporting (e.g., CONSORT) could be consulted by the authors in order to improve the quality of the manuscript.

We consulted the biostatistician in our University about t-test using in the study. Single comparison t-test was appropriate because only management group and control group was compared for different health-related indices respectively such as subjective grade items and objective measurement items in Table 2.

2. Are the discussion and conclusions well balanced and adequately supported by the data?
- I find it very difficult to follow the line of reasoning in the discussion. I suggest that the authors rewrite it and let it be corrected by a (near) native speaker of English. Also they could consult guidelines on writing a discussion.
- I have an impression that the data could be more thoroughly/deeply discussed. What I miss is a on the consequences of the findings for the existing theories/practice. In the present version of the manuscript the previous findings are simply summed up without relating the new findings to the existing ones.

We amended the discussion in page 9-10

3. Do the title and abstract accurately convey what has been found?
- Please see the comments on the abstract above. The title conveys what has been done but not what has been found; I think that’s ok. However, in the title and throughout the manuscript, the word ‘prospective’ is used in combination with ‘Randomized Controlled Trial’ which is redundant.

We have deleted the ‘prospective’.

Discretionary Revisions
1. In this kind of studies, with many outcomes, it could be helpful to determine the levels of outcomes (compliance to the intervention, cognitive effects, behavioral effects, health gains) and try to perform a path analysis testing a theoretical model of the possible chains of effects (moderation, mediation). A presently reported series of Regression analyses obscures more than it illuminates.

Because regression analysis could adjust covariables effectively and are widely used in this kind of studies, it is performed for multivariables analysis in our article. We have tried to explain the results from regression analyses more clearly in the revised manuscript.
**Reviewer:** Roberto Forero

This is an important paper; however it is not clear what the intervention was. The authors need to explain in more detail about the level on intervention and how the different outcomes measures relate to the intervention. The authors also need to indicate how they adjusted for confounders. What about selection bias? The statement about family participation is not clear and requires clarification. Did the authors adjust for clustering/multilevel variables?

We added a chart of actual intervention in page 5 about the detail on intervention. We explained the confounder adjustment and family participation in line 1-3 from the bottom of page 3.

**What about selection bias?**

In this study, we paid considerably attention to avoid some potential selection bias by careful design and strict randomization. The results showed that various indices under general conditions between the management and the control group were of no statistical significance (see Table 1 in our manuscript).

**how the different outcomes measures relate to the intervention. Did the authors adjust for clustering/multilevel variables?**

We added the explanation about the different outcomes measures relate to the intervention in the line 1-3 from the bottom of page 9. In this study, we randomized individuals not clusters to management and control group, so it is not necessary to adjust cluster/multilevel variables.