Author’s response to reviews

Title: Community based reproductive health interventions for young married couples in resource-constrained settings: A systematic review

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Community based reproductive health interventions for young married couples in resource-constrained settings: A systematic review
Archana Sarkar, Venkatraman Chandra-Mouli, Kushal Jain, Jagannath Behera, Surendra Kumar Mishra and Sunil Mehra

Dear Proel Vargas

Greetings!

Thank you so much for reviewing our paper. We have addressed all the comments raised by the reviewers’ in the paper. We have also very carefully checked for grammatical errors and copy-editing of the paper and the tables. An additional figure as suggested by reviewers has also been included.

Please find below the detailed response to each of the comments of the reviewers.

Hope, with these changes, you will find the paper suitable for publication. In case, there are any more comments, we would be happy to respond.

Hoping for a positive response

Sincere regards

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Responses to the Reviewers Comments:

Reviewer 1: Kathleen Deering

Overall, the authors have undertaken an interesting study that looks at a key under researched area of reproductive health relating to community-based interventions and their impact on key reproductive health outcomes. The literature review is well-designed and well-documented. There are some areas of the paper that could be improved or expanded on, which I have detailed below.

We thank the reviewer for finding this study important and interesting. We are grateful for the detailed comments and suggestions provided and have considered and addressed each point to the best of our ability.

Minor

1. Paper should be double-spaced.

   Done

2. Please make sure there are always spaces after periods (e.g., line 216), spaces between words (e.g., line 297), etc...

   Apologies for the mistake; we have carefully checked the text.

3. Please check the language throughout for grammar. I will give examples in the abstract of where grammar could be improved, but please check throughout the paper:

   Thanks for pointing out these errors. We have carefully checked the text and corrected these errors.

Major

1. The acronyms used to identify each of the studies end up being confusing to read. Suggest you use the author/date (e.g., Smith et al 2014) where necessary.
   E.g., line 213 – not necessary

   Ans: We did necessary changes according to your suggestions.

2. Not necessary to add “(when appropriate)” after “safe abortion services” (e.g., line 149)

   Ans: As suggested, we have removed ‘when appropriate’.

3. Missing in the Introduction is context about why the authors are looking at community based interventions – clarify for the reader what a community-based
intervention is, why they are looking at community-based interventions and their effect on reproductive health – moreover, since the study seems to be focused on reproductive health access rather than reproductive health, this should be clarified in the title and the introduction. If it is both (it is a bit unclear), this should be clarified (e.g., reproductive health and health access).

**Ans:** As suggested, we have modified the Introduction to ‘reproductive health access’ rather than reproductive health outcomes. The logic for community based interventions has also been included in the text.

Community based delivery is now widely recognized as an important strategy to deliver key maternal and child survival interventions. Interventions delivered at the community level have not only been advocated to improve access and coverage of essential intervention, but also to reduce the existing disparities and reaching the hard to reach.

4. Description of the larger sample of studies in terms of their geographic locations (Line 183-187) is repetitive with the following paragraph and should be deleted to avoid repetition.

**Ans:** As suggested we have deleted the repetition.

Please clarify what is mean in line 355: “(in the projects- we reviewed)”

**Ans:** We have removed this sentence and modified the paragraph accordingly.

5. The Discussion in general needs more nuanced citation and interpretation of study results. Line 372 – The authors state “Given our understanding…” – this understanding is not shared by all or potentially even most readers. There remains a lot of research that explains health behaviours primarily on an individual level. The authors have a great opportunity here to give some background on the success of community-based studies in other fields because of their integration of effects from multiple different levels of influence, explaining their own results in the context of this broader literature. While this review has shown that there is not much data on the effect of community-based studies on reproductive health access among a limited population, there is a broader literature on community-based studies and their effectiveness in connecting vulnerable populations with care.

**Ans:** As per your suggestion, we have modified the paragraph. We have provided evidence from relevant literature that multi-level interventions in community based projects have the potential to improve access to reproductive health services. However, we refrained from going to the wider literature in other fields, as that might have diluted the focus of this particular review.
7. Given the limitations of this review, since few studies were able to be included and those available were primarily not in peer-reviewed papers, authors should include a summary of what the review can tell us (in the context of the limitations) in the conclusions (since this is what most people will read). E.g., adding sentence in the conclusion of the paper and the abstract to say who the results of the review best pertain to (i.e., geographic location) and the general limitations of the data quality. It would also be helpful to have a summary of the total number of outcomes measuring reproductive health access assessed across all papers in Table 3b and the quality as summarized in Table 4.

Ans: The papers mainly restricted to low income countries in south-Asia and Africa. The socio-economic condition in different study settings is almost similar and access to reproductive health care is poor. The studies fitting the inclusion criteria had limitations in the methodology and evaluation design. The primary outcomes measured in this review include: contraceptive use, delaying first pregnancy, use of antenatal care, delivery care, post-natal care and abortion services. However, we did not find any tangible findings on abortion care.

8. In the limitations of the review, please clarify which key outcomes were missing – i.e., key outcomes that would help fill in gaps about reproductive health and health access of the intended population of interest.

Ans: The outcomes like maternal or neonatal mortality and/or morbidity were not evaluated in the included projects of the review. The findings were mainly focused on access and utilization of reproductive health services by young married women.

Safe abortion services are missing from the findings section, as no study focused on this issue.

9. Perhaps I am missing something, but in the Conclusions, the authors state “Our review suggests that community based public health interventions targeting young married couples, their immediate family members, community members and health service providers contribute positively to improving access and utilization of reproductive health services and reducing maternal and neonatal mortality in resource-constrained settings of low and middle-income countries. “But I don’t see in Table 3a/3b where the mortality outcomes are – it seems like the review includes studies that primarily look at access. Authors need to revise here and elsewhere to really give a good idea of what their review can tell readers and be wary of overstating results. As in 6, I would reframe the conclusions in the Abstract/Discussion to be more cautious about what this relatively small review can tell other researchers.

Ans: There is no numeric evidence in the included studies that the maternal or child mortality had declined as a result of improved access to service delivery, so we haven’t included it in the findings section. In addition, we have excluded it from the conclusion paragraph.
Responses to the Reviewer

Reviewer 2: Zulfiqar Bhutta

Q1: Abstract: Results and Conclusions in the abstract needs to be re-written to reflect the actual findings more comprehensively.

*Ans: We have modified the Results and Conclusions in the abstract.*

Q2: Methods: Although the review has already been completed, there is a probability that the authors might have missed some programs and project reports, based on the list of databases searched. Since the authors aimed to include programmes/project reports, it would have been a better idea to assess country specific ministry of health websites as well. Furthermore, limiting study designs to only to randomized and quasi trials would also restrict the inclusion of large scale program evaluations reported as pre-post design and controlled before after studies.

*Ans: We have also searched the Ministry of Health websites of different countries as well as WHO regional databases to obtain country specific health intervention reports. Moreover, we didn’t limit ourselves to randomized and quasi trials and also included both pre-post design and controlled before-after studies. Since the literature on this is scarce, we included projects with different evaluation designs. We are very sorry for not mentioning it in the text earlier.*

Q3: The authors have used ‘Mirza and Jenkins checklist of eight items’ for study quality assessment. They do provide a reference for it (Mirza I and Jenkins R: Risk factors, prevalence, and treatment of anxiety and depressive disorders in Pakistan: systematic review. BMJ 2004, 328(3): 1-5); however the reference does not relate to the scope of this review. Any reason/justification for using this checklist? Also since the authors have limited the study designs for inclusion to only randomize and quasi randomized trials; it would be a better idea to use some standard quality assessment tools like Cochrane risk of bias assessment tool.

*Ans: We have studied quality assessment of different reports. Our quality assessment criteria are almost similar with the Mirza and Jenkins checklist. As per our study objectives, we used only eight items to check the quality of different reports. Since the projects included in the review were heterogeneous in nature in terms of methodology and outcomes, we could not use any specific quality assessment tool like Cochrane Risk of Bias Assessment.*

Q4: The authors have mentioned that they have restricted their inclusion to only RCT and quasi studies; however in Table 1, study designs for two of the included programmes are stated to be pre-post and end line/baseline comparisons (KEM and ACQUIRE). Please recheck and correct.

*Ans: We had included studies with pre-post design and end-line/baseline comparison. Now we have corrected in the text also.*
Q5: Results: The results section need to be better organized. Currently it appears as a hodgepodge of description of included studies and effectiveness of interventions. Suggest reporting all the results under 3 main headings:

- Characteristics of the included studies
- Intervention Components
- Outcomes

**Ans:** We revised the result section under 3 main headings as per your suggestions:

**A: Characteristics of the included projects**

**B: Components of Intervention**

**C: Behavioural Outcomes of the Included Studies/Project reports**

Further, we also presented the findings under each section as sub-headings such as (i) Project Area and Population (ii) Study Design (iii)Sample Characteristics (iv) Project Goals etc.

Q6: Under the ‘project area and population’ section, it would be interesting to see details on the population as well. For e.g. the target areas were urban/rural, disadvantaged, etc.

**Ans:** We have added a line in this section, All the projects were implemented in rural areas and targeting adolescents/young married women, men or couples.

Q7: Although the author clearly stated in the methodology section that meta-analysis was not considered due to the heterogeneity in interventions, outcomes, study methodologies, and populations; it would be interesting for the readers if the results could be presented more comprehensively under the “behavioral outcomes section”. Some form of quantification of the results will add some perspective to the findings. Currently the results are all over the place. Authors should consider providing some estimates for example, “Ranges” for the outcomes reported to be significantly improved to give the readers an idea of variation in impact rather than providing intervention and control estimates from every included program.

**Ans:** As per your suggestion, we have presented the results more comprehensively under each section. Even though any type of statistical inference was not possible in this heterogeneous data, we have still tried to provide ranges of the effect on outcome variables.

Q8: A figure or a matrix depicting the impact of interventions directed at three levels (direct, family members and community and health system) would be very beneficial in presenting the results so that the readers can get the gist of it in a glimpse and this would also help highlight the gaps and areas for future research. Table 3 summarizes the results; suggest presenting it in a better way to depict effectiveness of various
interventions reviewed using a life cycle approach (interventions targeting preconception period (contraception), ANC, delivery, PNC and abortion care).

Ans: As suggested by the reviewer, we have provided a figure to show the stages of life cycle in which the interventions were targeted. We have also provided a matrix to depict the interventions at different levels, like individual, family members, community and health system.

Although the interventions delivered were at multiple-levels, the effect of the intervention was measured at the young married women’s level only. The findings that could be derived at the level of family/community were: increased spousal communication, increased discussions about spacing and family planning with husband/mother-in-law, discussion on timing of next pregnancy, increased mobility of young married women and decline in violence. At the level of health system, increased capacity of medical doctors/ health supervisors/program managers and frontline functionaries to improve service delivery to young married women was observed. This is now being incorporated in the result section.

Table 3 A provides the effectiveness of interventions on ANC, Institutional delivery and PNC for young married women, whereas Table 3 B provides information on the effectiveness of intervention on contraception use.

Q9: If the authors could add a component under the results section on the contextual factors (if reported) reported in the included programs that might give more perspective to the review findings. Since this review is more of a descriptive analysis from a very limited pool of included studies, the authors could extract data on the reported program enablers and barriers. This would add an insight on the existing programs and a roadmap for future implementation in low resource settings.

Ans: As suggested, we have provided a brief description of barriers that affected program implementation. The enablers or the facilitators of the project have already been discussed in the result section.

Q10: Discussion: Are there any existing similar systematic reviews? It would be interesting to compare their findings with the author’s findings in the discussion section.

Ans: Though we did not find any systematic reviews on reproductive health of young married women in low income settings, there is a literature review report available on ‘Reaching Young First Time Parents for the Healthy Spacing of Second and Subsequent Pregnancies’ by Evidence 2 Action, Pathfinder International, July 2014 and another systematic review on modern contraceptive use among young women in developing countries (Williamson et al, 2009). The findings have been incorporated in the discussion.


Q11: Conclusion: Under the conclusion, authors report that “…….reducing maternal and neonatal mortality in resource-constrained settings …”; however no data on neonatal mortality has been presented in results section. Please correct.

*Ans:* We agree with the reviewer, and have corrected the statement by removing both maternal and neonatal mortality.

Q12: Minor Essential Revisions (such as missing labels on figures or the wrong use of a term which the author can be trusted to correct)

*Ans:* We have carefully checked the corrections and missing labels. We have also given author’s name and year where required.

Q13: The methods section in the abstract mentions that studies targeting “young married women aged 15-24 years” will be considered while reproductive health interventions targeting young married couples (both men and women) have been reviewed. Please correct for uniformity.

*Ans:* We corrected it as young married couples.

Q14: The introduction starts with the objective of the review. Suggest moving it towards the end of the introduction once the case is made for conducting the review.

*Ans:* We have changed the introduction, as suggested.

Q15: Spell out the acronyms used for the projects in text and also with the tables-Discretionary Revisions (which are recommendations for improvement but which the author can choose to ignore)

*Ans:* The acronyms have been spelt-out in the text.

Q16: The current title of the review includes redundant terms like “community based” as well as “public health”. Consider simplifying the title to: “Community based reproductive health interventions for young married couples in resource-constrained settings: A systematic review”. I think it delivers the same message more precisely and without redundancy.

*Ans:* Thanks for this suggestion; we have changed the tile accordingly.
Q17: Throughout the text, authors have used “studies/project reports” to refer to the included programs. Authors may choose to refer to these included studies as “programs” or “projects” for better readability.

Ans: *We have changed them as projects.*