Author’s response to reviews

Title: Improving post-partum family planning services provided by female community health volunteers in Nepal: A mixed methods study

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Author’s response to reviews:

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Editorial Board
BMC Health Services Research

Dear Editor,

We are very grateful for your positive response and constructive comments to our manuscript. As suggested by the reviewer we have shortened the title of the manuscript to “Improving knowledge and counseling coverage of post-partum family planning among female community health volunteers in Nepal: a mixed method study”
We hope our responses and revised manuscript will meet the publishable quality standards. Attached herewith is our revised manuscript with the changes highlighted. The co-authors with English as their native language have proofread the revised manuscript. Below please find our responses to reviewers’ and editor’s comments.

Sincerely yours,

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Responses to the editors

Editors' comments

Thanks for submitting your manuscript to BMC HSR.

You will find hereafter the responses of the 3 reviewers.

I suggest you to focus particularly on the following comments:

Response

Thank you for your valuable suggestions. We have revised the manuscript as per your suggestions.

Comment

1- you should work further in the analysis and synthesis of qualitative data (see reviewer 1 suggestions)

Response

Thanks, we have now worked further on the analysis and synthesis of the qualitative data.

Comment
2-you may decrease the size of introduction section and develop more the methods (see reviewer 1 suggestions+ reviewer 2 suggestions on setting and participants)

Response

We have decreased the content of the introduction and provided more details in the methods section.

Comment

3- Proofreading for the English is needed.

The co-authors with English as their native language have proofread the revised manuscript.

Reviewer 1 Blair Darney

Overall comments to author

This is an interesting and useful study that triangulates data from Female Community Health Volunteers (FCHVs) and women delivering and uses quantitative pre/post design and focus groups. I think this paper provides interesting insight into community volunteers as health educators in Nepal. The intervention to expand PPFP knowledge and education is important and admirable.

Response

Thank for your interest in this research and your encouraging comments. We appreciate your thorough review of our research.

Comment

I encourage the authors to do more analysis and synthesis with their qualitative data. The results list a very long list of themes. Perhaps present all the themes in the Table then highlight the most salient ones? The analysis and synthesis feels underdeveloped.

Response

Thank you for your suggestion. We have now listed the themes in the table and presented the most salient ones in the description.

Comment
The analysis section of Methods needs to be substantially revised and expanded to fully describe the analysis. See below for comments.

Response

We have now elaborated the methods section and provided more details on data analysis.

Comment

A lot of space is devoted to the Introduction and not a lot to the methods - the different sources of data, the timing of data collection, analysis. It is hard for a reader to understand the study.

Response

We have now shortened the introduction and expanded the methods section. We have moved the intervention part from the introduction to methods.

Comment

Authors need to emphasize the scope of the study better - conclusions to scale up seem to go beyond the data. Reference to the fact that this is an initial exploratory step in looking at FCHVs and their role in the community should be made.

Response

Thanks for the suggestion. We have now removed the statement on the need to scale up from the conclusion. We have also elaborated the scope of this study in the introduction section.

Comment

Title: Please shorten the title

We have now shortened the title as

Improving knowledge and counseling coverage of post-partum family planning among female community health volunteers in Nepal: a mixed-method study

Comment

Abstract

Line 56: clarify these are multivariable results
Response

We have now specified that these are multivariable analysis. (Line 58 of the revised manuscript)

Comment

If FCHVs counseled 83% of pregnant women, how come only 18% of women report they were counseled? I found this result confusing in the manuscript and the discrepancy is not addressed in the discussion. How to interpret this?

Response

Sorry for the confusion,

- The denominator for 83% is the mothers in different stages of pregnancy from the communities.
- Not all of them had given birth during the study period.
- Not all the women who were counseled by FCHVs delivered in the two referral hospitals.
- Not all the women who were counseled had gone to these two hospitals as there were other facilities as well.

The denominator for 18% is the mothers who delivered in the two hospitals.

- The hospitals had a wide coverage and not limited to just the mothers from the selected communities in this study.

In the abstract, we have revised the sentences as follows (Line 55)

“After the orientation, the FCHVs were able to counsel 83.3% of 1872 mothers in different stages of pregnancy from the communities.”

(Line 56)

In the facilities, the proportion of mothers in their immediate postpartum period reporting that they were counseled by the FCHVs during their pregnancy improved from 7% before the intervention to 18.1% (P<0.001) after the intervention.

Comment

Line 38-41: "Despite the importance of Female Community Health Volunteers (FCHVs) in improving community health in Nepal, their knowledge of PPFP and role in improving the
community-based services on PPFP methods remains unclear especially when there is an increase in institutional deliveries."

Response

Thank you for the suggestion. We have reworded the sentences accordingly. (Line 37-40)

Comment

Line 45-46: Would reword as "The intervention involved training FCHVs on PPFP methods."

Response

We have reworded it accordingly. (Line 44)

Comment

Line 46-47: Would reword as: "We collected quantitative data via a survey of FCHVs, assessing their knowledge before and after the intervention. We conducted six…"

Response

It has been revised accordingly. (Line 44-49)

“We collected quantitative data from three sources via a survey of FCHVs, assessing their knowledge before and after the intervention, from their monthly reporting forms on counseling coverage of women in different stages of pregnancy from the communities, and mothers in their immediate post-partum period from two selected hospitals. We also conducted six focus group discussions among the FCHVs to understand their perception of PPFP and the intervention.”

Comment

Line 52: "for quantitative results and content analysis for qualitative data

Response

We have revised it accordingly. (Line 50)
Line 56: Is it necessary to report the B here? The p value should suffice? Are we specifically describing the mean knowledge scores before and after and finding a significant difference? It is unclear here what exactly we are comparing for differences.

Response

We have reanalyzed the data using logistic regression and now we have presented adjusted odds ratio. (Line 54)

Comment

Line 57-58: The key takeaways from the qualitative analysis need to be more clear. They can simply be stated in summary form but should be addressed.

Response

We have now added the key take away messages of the qualitative analysis in the abstract. (Line 58-61)

“The qualitative findings suggested that the intervention helped in improving their knowledge and facilitated in their PPFP counseling. However, they also shared the impression about the way the orientation was delivered and the challenges they face in the communities.”

Comment

Line 60-61: The impact of just getting access to the counseling from FCHVs does not seem clear importance. What did this really mean for women --did they understand their PPFP options more? Where is the impact?

Response

As suggested by you, this is an initial exploratory study and it is too early to conclude its impact on women. Further, follow up study is necessary to assess the impact.

Introduction

Comment

Line 78: "often neglected by users" - why? Describe?

Line 79: "various factors" - such as? Describe?

Response
We have elaborated the statement as follows (Lines 78-79):

PPFP helps to space pregnancies and prevent unintended pregnancies but is often neglected by users and providers due to sociocultural influences and lack of knowledge and availability of services [4-6].

We have also added the finding of our previous qualitative study. (Lines 89-92)

A qualitative study from the previous phase of implementation identified societal norms, peer’s and health providers’ influences as factors that affected women’s behavior on choosing a PPFP method [11]. The community level awareness of PPFP in general and in particular on PPIUD was very low [11].

Comment

Can the use of "orientation" in the paper be changed to "intervention"?

Response

It has been changed to “Intervention”

Comment

Line 79: The copper IUD is only one possible postpartum IUD, language here should be changed to reflect that this is one option. Since this is the sole PPIUD option available in Nepal, this should be made clear.

Response

We have revised the sentence to provide more clarity. (Line 87-88)

In Nepal, PPIUD is currently the sole reversible PPFP method available in the immediate postpartum period.

Comment

Line 86: IUDs are often considered long acting and not "temporary", I think you are referring to the fact that IUDs are reversible, would reword this to indicate is reversible nature.

We have used the term “reversible” instead of temporary. (Line 87)

Response
The institutional delivery refers to the deliveries in health facilities including hospitals, health posts and birthing centers.

To make it clearer, we have revised the sentence as follows (Line 96-97):

The women giving birth in health facilities such as hospital, health posts, and birthing centers have increased from 18% in 2006 to 57% in 2016 [8].

Comment

Line 88-89: Some background information related to the preponderance of home births and new trends leading to institutional delivery in the this paragraph might help the reader follow along. I assume institutional delivery refers to hospital delivery, however I am not familiar with all the possible delivery locations in Nepal and a few sentences to clarify this can help set the stage for this hospital based PPIUD intervention.

Response

We have now tried to make it consistent and used FCHV consistently.

Line 112-113: Would reword to: "FCHVs are not certified health providers, instead, they are women of different educational levels…"

Response

We have reworded it accordingly. (Lines118-119)

Comment

Line 119: "meeting" should be plural

Response

It has been changed to plural form.

Comment

Line 121: should be reworded as "communities related to FP, birth preparedness and advantages of institutional delivery"

Response
It has been changed accordingly.(Line 126)

Comment

Line 127-128: Can the positive effects of the FCHV be described with some numbers here? Has there been quantitated impact on maternal or neonatal outcomes?

Response

We have elaborated the positive effects of FCHV with some quantitative impacts as follows (Line 134-137):

“A post disaster health promotion intervention study involving FCHV in an earthquake affected district in Nepal showed that their involvement helped in improving the facility delivery among the mothers from 63% to 83% [21]. The same study also identified the improved odds of mothers having better knowledge and behaviors related to MNCH after the intervention [21]. Another cohort study found that those who received follow up visits by FCHVs’ had 84% less relative risk of infant deaths due to low birth weight compared to those who had no FCHVs’ involvement [19].”

Comment

Line 134-138. It is not immediately apparent how the political climate influences the interventions. These sentences should be restructured to describe the ways in which the new government design impacts and is related to the FCHVs.

Response

We have now removed the sentence to avoid the confusion about the political climate and to shorten the introduction section as this paper doesn’t assess the impact of change in the political structure.

Comment

Line144: 9-10 should be spelled "nine to ten"

Response

It has been changed accordingly.
Line 147: add "the after using "using the FCHV User's Guide…"

Response

It has been added. (Line 185)

Comment

Line 161-162: The aims of the study are unclear from this description. Is the primary outcome knowledge increase on behalf of the FCHVs and the number of individuals counseled by them? Some specifics related to the outcomes would be helpful here.

Response

We have now elaborated the aim of the study specifying the outcomes. (Line 139-142)

“This study assessed the effect of an intervention in improving the knowledge of FCHVs on PPFP as a primary outcome. We also assessed the early effect of the intervention on PPFP counseling coverage in the communities and in the major referral hospitals as secondary outcomes.”

Methods

Comment

Lines 165-167: Study design: Please describe the study a bit more in broad terms to clarify that the study consists of 2 quantitative pre/post 1 group samples (FHCW and women delivering) and 1 qualitative sample (FCHW). This will help prepare the reader for the methods section

Response

Thanks. We have elaborated as follows. (147-151)

“The study comprised of three quantitative results which include FCHV’s knowledge in the same group before and after the intervention, their counseling coverage in the communities of mothers in different stages of pregnancy, and their counseling coverage reflected in the hospitals among mothers who have given birth. The qualitative results include focus group discussions of FCHVs who had participated in the intervention.”

Comment

Line 170: Ensure that FCHV is made plural where appropriate (as it is here)
Response

We have made FCHVs plural.

Comment

Line 172: What were the purposeful criteria by which the six facilities were selected for the qualitative study? A brief reference should be made here or this can be excluded for now if it will be addressed later.

Response

We have elaborated the purposeful criteria for selecting six facilities.(Line 302-306)

The data collection for qualitative study was conducted in late February 2019 and was guided by the quantitative study. After initial review of the quantitative results on FCHV’s knowledge and the counseling coverage, we selected six peripheral health facilities where the intervention had taken place. Each facility represented a unique group of FCHVs who had participated in the intervention representing different levels of knowledge of PPFP.

Comment

Line 177: The use of "triangulate" here may not be appropriate. It appears that you are trying to validate the FCHV reported number of women counseled and trying to verify that with the report by women of how many received counseling from FCHV. Using the terms triangulate with linkage is confusing.

Response

We have used the term to “validate” instead of triangulate.

Comment

Line 181: Remove redundant language, eg this should be reworded as: “The study participants were comprised of FCHVs from the communities…”

Response

Thanks, we have removed redundant words.
Line 183-187: Delineate inclusion and exclusion criteria more clearly. With one sentence describe that women were selected through random sampling and had to be willing to participate in the survey. Then elucidate the reasons why women were excluded from the survey.

Response

We have revised this section as follows (Line 204-208)

“From the hospitals, mothers in their immediate post-partum period, who were still admitted and willing to participate were eligible for the study and were selected through simple random sampling. The mothers who had suffered any major post-partum complication, those who were physically unable to answer the questions and those admitted to intensive care units were excluded from this study due to ethical reasons.”

Comment

Line 190: You had previously described that all FCHVs were eligible for the study and that it was requested that they participate in the sampling. This is followed by a reference to convenience sampling. These suggest two different methods. If you simply had a reduced response rate from all your FCHVs please indicate this. If you did in fact only sample a portion of these FCHVs this should be made clear. If methods varied for the qualitative and quantitative portions, please make this clear here. In addition, please make clear if the same FCHVs were sampled before and after the intervention or if it was two different groups.

Response

Sorry for the confusion. Intervention is part of the study so the actual sampling was done for the intervention.

We have provided more details under study participants as follows

Study Participants (Lines 201-204)

“FCHVs from the communities within the major catchment areas of the two referral hospitals, residing within the same area during the time of intervention, and willing to participate in the intervention were considered eligible for this study.

Comment

Line 191: be clear about what the intervention under study is - the orientation program, I think, but it was not clear.

Response
The intervention is on orientation of FCHVs on PPFP.

We have moved the “intervention” section from the introduction section to methods section to improve the flow and provide more clarity. (Lines 171-198)

Comment

Data collection: when was the pre-test? The post-test? Were the immediately before and after the intervention? Please clarify.

Response

The pre- and posttest were done immediately before and after the intervention. We have now clarified it in data collection. (Line 280-282)

The intervention for FCHVs was conducted in the month of December 2018 across 23 peripheral health facilities. The data to assess FCHVs’ knowledge of PPFP was collected on the same day of the intervention, before and after the training.

Comment

What is the FCHW logbook like? How did they assess PPIUD uptake?

Response

We have changed the term from logbook to monthly reporting forms and elaborated the contents as follows (226-235):

The FCHVs also provided their monthly reporting forms that had information on their PPFP counseling coverage in the post-intervention period between January and February, 2019. The information included total number of mothers in different stages of pregnancy from the communities and the proportion of these mothers counseled by FCHVs on PPFP. The numbers also represented the women who had already given birth after they were counseled. It also included the proportion of the counseled mothers who chose PPIUD after giving birth in different facilities. The FCHVs obtained these information based on their individual interaction with the women within their catchment areas in the communities.

Comment

Line 210-212: I think this repeats what is in study setting line 171

Response
We have removed the repeated parts.

Comment

Line 211-213: sample size: what effect size/magnitude of difference are you powered to detect? Line 211 says "statistically significant result" which is not clear.

Move the sample size information below variables so they reader already knows your dependent variable/outcome and independent variable/intervention. Then state them clearly here as well so we understand what you are powered to detect.

Resp

Line 218: "provide statistical significance" - but about what? What difference? This is not clear.

Response

Originally, we had calculated the sample size using the formula for the finite population.

However, following your advice we re-calculated the sample size based on the formula used for comparing two proportions and revised the description of sample size calculation accordingly. We have also moved the sample size information below study variables. (Line 262-268)

For FCHV, we calculated the size using the formula to compare two proportions [23]. We assumed that FCHVs would have a minimum of 22% knowledge before the intervention and would increase by to a minimum of 35% after the intervention. The minimum required sample size was calculated to be 201 for each phase of the intervention with 80% power for two groups to have significantly different proportions at a 5% level of significance. However, considering incomplete response rates, the sample size was extrapolated and in total data of 230 FCHVs were included in the analysis of data of both pre- and post-intervention. For post-partum mothers from the two referral hospitals, we used the same formula to compare the two proportions. We assumed that the intervention would increase the proportion of mothers being counseled by the FCHVs by 5% to at least 15% after the intervention. The minimum required sample size was calculated to be 157 for each group before and after the intervention, with 80% power for two groups to have significantly different proportions at a 5% level of significance. However, considering incomplete data and response rates, we extrapolated the sample size and attempted to collect the data of 250 mothers from each hospital [23].

Comment

Line 222: Reword as: for "the" quantitative portion of the study”. Also it is still unclear what exactly was measured, was it the percent of questions on the survey? Specific details are needed.

Response
We have revised the study variables section, and have also added study tools as a new section, and provided details on the data analysis section.

Under data analysis section, we have provided the details of our measurement as listed in each table. (Line 313-329)

• For FCHVs, we conducted the descriptive analysis of their general characteristics, and bivariate and multivariable analysis to assess their knowledge of PPFP. We used chi-squared test to assess the change in proportions of FCHV correctly answering questions on each of five key messages on PPFP before and after the intervention using chi-squared tests. We used logistic regression model to assess the factors associated with the knowledge score on PPFP. The outcome variable for knowledge was dichotomized to less than 4 correct answers and 4 or more correct answers out of 5 questions on key messages of PPFP.

• For the counseling coverage by FCHV in the communities, we conducted descriptive analysis.

• For the post-partum mothers from the two referral hospitals, we used chi-squared test to assess the differences between the pre-intervention group and post-intervention group of mothers on their responses if they had ever interacted with and counseled by an FCHV during pregnancy.

Comment

Lines 224: please reduce the number of acronyms. I got lost.

Response

We have removed the acronyms. To simplify we just stated that it developed by the government of Nepal. (Line 222).

Comment

Line 225: specify how many items are on the knowledge survey. Be explicit that the outcome is each response and also a sum of correct responses - and the possible range for that outcome (0-5, I think)

Response

We have now added “Study tools” as a separate section to provide more clarity. (Line 211-239)

• FCHVs’ pre-posttest questionnaire: For FCHVs, the quantitative study tool comprised of questions related to their general characteristics and their knowledge of PPFP. The
general characteristics included their age, level of education, number of years working as FCHV, and their exposure to FP related trainings in the past. For knowledge, we adopted the questions from the FCHV User’s Guide on PPFP developed by the government of Nepal. The questionnaire had a list of five questions that assessed the key concepts of immediate PPFP and specifically on PPIUD (Table 2). The FCHVs had to choose either “true” or “false” for each question. Considering the possibilities of limited literacy of the FCHVs, the tools were designed with pictorial responses for each question. Others could read out the questions to FCHVs and they could choose a happy face for a “true” response and a sad face for a “false” response. The same tools were used before and after the intervention.

• FCHV’s monthly reporting form on community counseling coverage: The FCHVs also provided their monthly reporting forms that had information on their PPFP counseling coverage in the post-intervention period between January and February, 2019. The information included total number of mothers in different stages of pregnancy from the communities and the proportion of these mothers counseled by FCHVs on PPFP. The numbers also represented the women who had already given birth after they were counseled. It also included the proportion of the counseled mothers who chose PPIUD after giving birth in different facilities. The FCHVs obtained these information based on their individual interaction with the women within their catchment areas in the communities.

• Mothers’ interview questionnaire: We used mother’s questionnaire to assess if the effect of community counseling coverage was reflected among the mothers giving birth in the two referral hospitals. For the purpose of this study, we asked two specific questions to the mothers in their immediate post-partum period. The questions focused on if they had ever interacted with FCHV during their pregnancy and if they had ever been counseled by the FCHV during their pregnancy. The mothers were required to answer either “yes” or “no” to these two questions.

Comment

Line 29: the main independent variable is the intervention. Clarify this, then also list other covariates.

Response

We have now clarified this under study variables as follows (Line 245-254)

The primary outcome was FCHV’s knowledge of immediate PPFP. The intervention was the main exposure variable. The other covariates included FCHV’s age, level of education, number of years working as FCHV, and their exposure to FP related orientations in the past.

The secondary outcome was the counseling coverage on PPFP by FCHVs. The counseling coverage in the communities was measured directly based on FCHVs’ reports. It included
number of mothers in different stages of pregnancy being counseled by FCHVs and uptake of PPIUD among the counseled mothers who had recently given birth in different facilities including the two hospitals. Not all the mothers counseled by FCHVs had delivered during the study period. Moreover, not all the mothers who had given birth had gone to the two referral hospitals as there were other health facilities too.

Comment

Line 231-234: Timing of the survey with women delivering in hospitals? How long before and after the intervention? Was the pre period at least 9 months prior so no women were pregnant after the intervention?

Response

We have now elaborated the data collection as follows:

(Line 281-295)

We collected both quantitative and qualitative data between November 2018 and February 2019. The intervention for FCHVs was conducted in the month of December 2018 across 23 peripheral health facilities. The data to assess FCHVs’ knowledge of PPFP was collected on the same day of the intervention, before and after the orientation program.

(Line 285-288)

We collected the data for FCHV counseling coverage from two different sources. As the FCHV’s monthly reporting form for PPFP was introduced after the intervention, the form comprised of the information from the post-intervention period only between January and February 2019.

(Line 289-292)

The data from the post-partum mothers in the facilities was collected before and after the intervention. The mothers recruited in the study during November and December 2018 was considered as pre-intervention group and those recruited during January and February2019 was considered as post-intervention group.

Comment

Lines 235-241: Analysis: Please expand the analysis section to describe more fully what you did with your data. When I looked at the tables I understood, but the analysis section did not prepare
me for what I read in results. Use the analysis section to prepare readers for what will follow I results. Start by describing what you did with the data to get Table 1, for example.

Response

We have now expanded the explanation in analysis section (Line 313-336)

Comment

Model: what is the distribution of the summed scores? I am wondering is most respondents are clustered up at 4 and 5 - if this is not really a continuous variable or has very sparse data down at 0, 1, 2. Did you try collapsing (say score of 4 or 5 vs not) and running a logistic model? I'm not sure linear regression is really appropriate for the distribution of the outcome.

Response

Thank you for your suggestion. As suggested, we have now used logistic regression model, using the cut off scores as less 4 correct answers and 4 or more correct answers as the two categories.

We have this new information in Table 2 and have revised Table 3.

Comment

Line 237: state how many individual items/key messages about PPFP

Response

There were 5 key messages as shown in table 2.

Comment

Line 238: state the range of overall knowledge score

Response

We have removed the linear model.

We added the new information in Table 2. The proportion of FCHVs answering 4 or more correct answers increased from 46% to 95.2% after the intervention. (Table 2)
Line 242-244: qualitative analysis. Were all these emergent or did you have a priori themes? "generated 5 major themes" sounds more like results to me, unless you had 5 a priori themes you organized the data into. I got confused about the qualitative analysis. If there is any more detail about the methods used for the qualitative analysis, eg grounded theory etc this should be described here.

Response

We have elaborated qualitative data analysis as follows (Line 327-336)

“We used thematic analysis [24] for qualitative data based on the five priori themes generated from the findings of quantitative data. We first transcribed the audio records and field notes that were taken in Nepali language and then translated it into English Language. The translated information was then entered and then analyzed with the use of Dedoose software version 8.0.42. We first read and re-read the transcripts to familiarize with the initial idea and generated initial codes. We then gathered all the coded data and collated the codes with relevant priori themes. The themes were then reviewed by the authors and assessed if it is line with the overall objective of the study and the research question that was derived based on the initial quantitative study. We then selected original and vivid quotes from FCHVs for each theme to provide more insights.”

Results

Comment

Line 257: Does this mean that the participants had no understanding of PPFP generally or specifically the ways in which FCHVS should message PPFP.

Response

Sorry for the confusion. The findings from Table 1 does not tell if they had knowledge on PPFP. It just indicates that 73% of FCHVs responded that they have never attended any training or orientation related to PPFP specifically.

(Line 348-349)

However, the majority of them (73.9%) responded they had never had any orientation related to PPFP.

Comment

Line 274: Interpret the beta estimate for the reader - what does a beta=0.56 mean in terms of the units of your outcome?
Result

We have now used logistic regression model instead of linear regression. We have used adjusted odds ratio to interpret the data. The intervention increased the knowledge of FCHVs by 24 folds (AOR=24).

Comment

Line 306-Line 311: The text of these paragraphs repeats the Table 5 information. Either the table should be left with summary statements in the paragraph or the table is unnecessary.

Response

We have left the table with summary statements only. (Line 392-395)

The proportion of mothers reporting that they had ever interacted with FCHV during their pregnancy in the communities was significantly higher in the post-intervention group. Similarly, the proportion of mothers who have been counseled by FCHV on PPFP methods was also significantly higher in the post-intervention group.

Comment

Line 346-347: This paragraph on misconceptions seems to conflict-- the quantitative data that suggested that there was significant change in the way FCHVs understood PPIUD (via the 3 survey question re c/section and IUD insertion). If you are trying to convey that there were some FCHVs who had misconceptions re c-section and IUD, this should be made clear.

Response

We have revised

“On further probing, some FCHVs reflected misconception on some of the key aspects of immediately available PPFP methods such as PPIUD

Comment

Table 1. What does the distribution of years working as a FCHW look like? Large range. Was it skewed? Would median be a better metric than mean?

Response

Thanks, we have added median in the Table 1
Comment

Table 3: add N for the model. Any missing data?

Response

We have added N for the model. It is a pooled data of both pre-intervention and post-intervention responses.

Comment

Table 5: would this be better as a graph/figure? Timing of data collection for the pre and post surveys?

Response

We have elaborated in data collection section that the data was collected between November 2018 and February 2019. The data was collected from the mothers between November and December 2018 is considered as pre-intervention group and the data collected between January and February is considered as post-intervention group.

Comment

Table 4 & 5: I am struck by the discrepancy between the 83% of mothers that were counseled per the FCHW report and the 23% of mothers who report an interaction with a FCHW. Are these different settings? Is there overlap? How to interpret this difference?

Response

We have tried to clarify the difference in data sources in data collection and data analysis.

Table 4 explains represents the findings of direct counseling coverage by the FCHVs in the communities. The 83% represents the women in different stages of pregnancy from the communities that were counseled by FCHV (as reported by FCHV in the monthly reporting forms). Not all women have given birth during the data collection period and not all women would necessarily choose to deliver in the hospital that we were studying.

Table 5 intends to validate if FCHV’s counseling activities in the communities have started to reflect among the women who have given birth in facilities. 23% represents the mothers who have given birth in the hospital.

Comment
The qualitative results feel underdeveloped. The tale is a useful way to show all the major and sub-themes. But the results present too many themes - it is hard to see the forest for the trees with so much detail - what is the story here? Please do more synthesis and analysis of results and revise this section.

Response

Thank you for your advice. We have now removed the subthemes from the description and presented in the tables only to provide more clarity. We have also elaborated the qualitative data analysis.

Discussion

Comment

Line 480-482: here you say within 2 months of the intervention - clarify timing of data collection in methods. And the percent reporting they were counseled went up but was nowhere near the % of pregnant women the FCHW say they counseled. Comment on this/explain why these are different?

Response

We have clarified timing of data collection in methods. We have also clarified the differences in the results between the counseling coverage of mothers in different stages of pregnancy in the communities and the mothers who gave birth recently in the two hospitals. We have clarified this in the discussion as well.

Comment

Line 485: your data do not support what you say about the qualitative data here (that PPFP was a new concept). Many FCHWs knew about PPFP prior to the intervention and 26% had already received training. It feels like you are using a one-off qualitative quote to draw large conclusions that your own data contradict.

Response

We have restructured the paragraph. We have removed the statement on “new concept”

Comment

Is a 5% PPIUD rate high or low for Nepal?

Response
5% PPIUD rate is a high number for Nepal. Nepal do not have specific data on PPIUD insertion only. However, the overall uptake of IUD is just 1.4%. We have added this in the discussion.

(Lines 575-579)

“In this study, FCHVs reported that 5% of the pregnant women they had counseled had chosen PPIUD when they gave birth in different hospitals including the two study hospitals. Nepal does not have a nationally representative data specifically on PPIUD, however, the overall uptake of IUD was found to be just 1.4% [13]. Therefore, the early findings of the effect of FCHV’s involvement in PPFP is quite encouraging.”

Comment

Discuss changes in in-facility birth rates in Nepal over time to provide context for the potential to scale up PPIUD?

Response

We have elaborated the facility birth rates and its implication for PPFP in both introduction and discussion.

(Line 585-589)

The increase in institutional delivery provides an increased opportunity for women to receive PPFP services such as PPIUD [12]. This enables women to receive both obstetric care and PPIUD services in the same setting around the same time. Thus, FCHVs role in PPFP provides an opportunity to increase the demand and access to PPFP services in the health facilities.

Comment

Please put your results in the context of any previous literature, even if there is no literature in Nepal. Are there other studies of community health worker interventions? Even if not for PPFP? Reading the discussion, I have no idea how this experience you report on is similar or different to other community healthworker interventions or other types of interventions designed to improve PPFP. Possible outline for the discussion:

1) Summarize key finding

2) 3-4 key points. Each a paragraph - State each key point in terms of your findings and then what we know in the literature

3) Limitations

4) conclusion
Response

We have restructured the discussion as suggested.

The literature on CHWs role in PPFP is scant. However, we have tried to compare the challenges faced by CHW.

Line 592-594

Some challenges faced by FCHVs were similar to the challenges faced by community health workers (CHW) in other countries such as Brazil which included lack of understanding among the people and lack of respect of their work in their communities.

We have also discussed the role of CHW in family planning interventions in general.

Line 602-606.

A systematic review on CHW’s role in family planning services in LMIC have indicated positive results in improving the use of modern contraception and in improving knowledge and attitude related to FP [27]. However, role of CHWs specifically for PPFP remains scant. This study provides an important baseline information on CHW’s role in PPFP.

Comment

Overall, the discussion goes beyond the data - this is a great exploratory initial study to show that training FCHWs about PPIUD is feasible and can change knowledge and has the potential to reach women. Recommendation to scale up: based on this study is it premature to scale up this program?

Response

We have revised the discussion section. We agree that it is premature to recommend to scale up this program. Thus, we have removed this statement from the recommendation.

Blaise Joy Bucyibaruta, MBChB, MPH, FCPaed, MMed (Reviewer 2):

Comment

Thank you for a well-written paper which
sicks to address a very important issue of Maternal Health System in Nepal. There is no doubt that the findings will have positive implications for public health systems and policies in developing countries.

Indeed, it is a relevant article striving to contribute in improving Maternal Health in Nepal by highlighting the importance of postpartum family planning and the key role of female community health volunteers. The authors address a topical issue of inadequate uptake of postpartum family planning and their intervention seems to be successful.

I understand that the interest of the current study was very specific (postpartum family planning), but keeping in mind that the Maternal and Child Health in broader sense and wider role of female community health volunteers in the context of Nepal Maternal and Child Health System, I think there was a missed opportunity to extend a bit the focus of this study and to include the well-being of both mother and baby in postpartum period such postpartum haemorrhage, fever, nutrition, breastfeeding (some first-mothers are not aware how to breastfeed the baby for example), baby handling including their hygiene, recognising jaundice in new-borns at home in the community, etc. I would suggest to be also considered for the future studies.

The mixed method is appropriate for this article. The results are well written and easy to read and understand. The findings quantitative and qualitative analysis are well integrated in the discussion section.

Response

Thank you very much for your encouraging comments.

We will try to broaden the FCHV’s role in MNH and also improve the study design in our future research.

Comment

My main concerns including lack of comparison group to substantiate that the success could irrefutably attributed to the intervention and not by a mere chance have been acknowledged in the limitations of this article.

Therefore, I recommend the publication of this article subject to following minor essential revisions:

1. The article needs to be proof read again, ensure spelling check and small errors. For example:
   a. The term “postpartum” is spelled sometimes as “post-partum” and other times as “postpartum”. While both spelling are corrects, the authors could chose on spelling to keep the consistency.
b. The year “2019” should be added after February on line 206 to make sense. This is at the last sentence of ‘Data collection’ section. Otherwise it would not be clear what the post-intervention period was; something is missing and I guess it is the year (2019).

c. In the table 6 on line 321, there words starting with ‘capital letters’ in the middle of the phrases while others start with ‘small letters’. Please keep consistence for publication purpose.

Response

Thank you for your recommendations.

1. The researchers with English as their native language have proofread the revised manuscript.
   a. We have now maintained the consistency in the revised manuscript.
   b. We have added it accordingly.
   c. We have now corrected it.

Comment

2. Study settings and participants. While the mothers who participated in this study have been selected randomly, it is not clear how the facilities have been chosen. It worth to note that the female community health workers sample was constituted based on convenience. Was there any reason (s) not to select them randomly as well?

Response

2. We have now elaborated how the facilities were selected as well as about FCHVs. The FCHVs were not selected randomly due to feasibility issues.

Lines 166-173

Though KZH and NMCTH were the two major hospitals in the district, there are many other private hospitals, non-for profit hospitals, and birthing centers where women from the same district would go for childbirth. Similarly, the two study hospitals also provided obstetric services to a wider population of mothers from different regions across the country. However, these two hospitals were selected specifically for this study as these were the only two hospitals in the district that had implemented the PPFP/PPIUD initiative which was supported by FIGO and NESOG. Some other birthing centers and a non-profit hospital in the region also provide PPFP/PPIUD services through the government, however, the exact data is not available.
Comment

3. I suggest moving the “Recommendations” after “Discussion”. In fact the recommendations make sense after understanding and discussing the study results.

Response

3. The recommendations from FCHV was one of the themes of qualitative findings. To avoid confusion we have renamed the theme.

Comment

4. I strongly recommend adding “Limitations” as a stand-alone heading because it appears the “limitations section” is part of “Discussion”. Identifying and recognising the limitations are of very important implications because without that, the findings from this study would have been mostly biased and I would not have recommended this particular study for publication.

Response

4. We have now added limitation as a stand-alone heading. (Lines 607)

Comment

Should you get another opportunity in the future, please consider to broaden the focus of interest to include other aspect of well-being for both mother and child in postpartum period that the female community health volunteers should consider when visiting mothers in postpartum appropriate to the Nepal context. More importantly, consider the comparison group to convince the readers and public health decision makers about the strength of the success of your intervention.

Hoping to read the follow-up studies from your intervention,

Thanks and kind regards,

Dr Blaise

Response

Thank you for your advice. We will definitely keep these in mind for our future research.
Vrijesh Tripathi (Reviewer 3):

Comment

There is discrepancy in the stated data collection period between page 10 and page 11. Correction needed

Response

Thank you for pointing this mistake. We have now corrected it.

Comment

On page 11, the sub-title "Sample size" should specify that this is the sample for the FCHV, not the mothers.

Response

We have elaborated the sample size for FCHV and mothers separately. (Line 261)

Comment

On page 12, line 231-234: It is unclear which questionnaires where? how? recruitment procedure? Details needed.

Response

We have now added study tools as a separate section to elaborate on the questionnaires used for this study.(Line 201)

We have also elaborated on the recruitment procedure in the revised manuscript under Data collection. (Lines 278)