Reviewer’s report

Title: Strengthening health systems response to violence against women: protocol to test approaches to train health workers in India

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Reviewer: Kim Madden

Reviewer's report:

Thank you for this interesting protocol for a mixed-methods study on implementing a violence against women response program in LMICs. The protocol is very well-written with an excellent literature review. This is a very important topic globally. I am a bit concerned that there is a lot going on in this study and it is a bit hard to follow. Some specific comments to improve clarity include:

1. In the objectives section: "To validate approaches to roll out the training and service delivery improvement activities...". I don't think validate is the right word here. It implies a more quantitative and definitive approach I think. Perhaps say "demonstrate feasibility of..."

2. At the end of the objectives section there is a paragraph about the agencies/organizations involved in the study. This seems odd to put in the introduction/objectives section. Perhaps put it in the methods.

3. There is a lot going on in this study. The objectives could each be a separate study on their own. Perhaps a diagram would help readers visualize the study process, timelines, etc.

4. It is unclear whether this pre-post KAP questionnaire has already been completed/started. Based on the timelines listed at the end of page 13 it seems that it might have already started. In fact, it is unclear exactly how much of this whole study has been complete and how much is still ongoing.

5. Page 15 "Exploratory data analysis will be conducted to identify whether baseline levels of attitudes, knowledge and practice vary by sex, role and professional background of respondent, and changes between pre and post-test, and 6-month follow-up will also be explored by relevant socio-demographic variables". More details on the statistical analysis is needed here (at minimum, which statistical test will be used).

6. Page 15, there is a paragraph on psychometrics to be analyzed. There needs to be more detail here. Psychometric measurement studies are complicated and this is the only paragraph explaining the methods of this part of the study. Will this feasibility study be large enough to assess these measures of validity?

7. The sample size is 170 providers. This paragraph needs more details on how this number was reached. Typically pilot studies do not need a formal sample size calculation like a definitive
study would, but there should be a clear rationale for the sample size estimation. I think table 1 was meant to explain the sample size but I cannot figure out where the numbers came from.

8. Page 18: Qualitative assessment plan. There needs to be more information here on the qualitative methods used. For example, maximizing trustworthiness, data analysis methods, sampling methods, and all of the items on the SRQR or COREQ qualitative reporting guidelines.

9. Qualitative sample size calculation: I don't think this is how qualitative sample sizes are supposed to work. Usually the process is iterative and the researchers stop sampling once saturation is reached. While purposively sampling for maximum diversity is great, this needs more justification and/or explanation. Also there needs to be a justification for the number of participants per focus group. Some researchers believe that 10 is too many people for a focus group.

10. Page 18: "we will conduct IDIs with a sample of women who disclose violence during a visit with a health care provider who underwent training, approximately 6 months after the training." This sentence could be revised for clarity. Do you mean the HCPs underwent training or the women who disclosed violence?

11. The authors state that they used the SPIRIT checklist. SPIRIT is a good start but this is not a trial. I think SRQR or COREQ could be included as well.

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