Reviewer's report

Title: Menstrual hygiene management among women and adolescent girls in the aftermath of the earthquake in Nepal

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Reviewer: Bethany Caruso

Reviewer's report:

Overview

The authors conducted a descriptive study of women's experiences managing menstruation after an earthquake in Nepal. There are limited studies that document the needs of women after disaster situations, thus this work does fill an important gap in the literature. That being said, the study requires extensive revision and strengthening. Significantly more details are needed in the methods section for readers to be confident in the information reported. The qualitative methods were particularly lacking. The results would be stronger if further analyses were performed to understand if various socio-demographic characteristics influenced women's access and use of MHM related materials. Additional comments are made regarding the results below. Finally, the discussion needs strengthening and editing. The authors make claims of what the results indicate, yet these results are not reported in the manuscript. The recommendations made should reflect the findings reported.

General Comments

1. In many places, approximate fractions (i.e. nearly 1/5th, about 2/3rds) are used (see abstract). Please use percentages instead for readability and greater accuracy.

2. Watch use of MHM as the subject. MHM is a practice. For example, the authors write: "MHM was found to be missing in immediate relief activities by humanitarian agencies." Better to say relief efforts lacked MHM activities. MHM is not missing; women perform menstrual hygiene regardless of agencies. It is a minor detail but an important point. MHM is not a thing that is concrete.

3. In many places, citations seem randomly placed in the middle of sentences without justification. Review citations and have them be at the end of sentences or at the end of one key point that is vastly different than another later raised. Currently, the placement if not at the end seems haphazard.
Abstract

1. The final sentence of the abstract is weak. Don't tell the reader that the findings are new as the conclusion, tell the reader what is new and why that new information is important. Being new does not mean it is important. What can now be done with this new information from this study?

Intro

1. P 3.; Lines 61-64. Better to actually put in the definition of menstrual hygiene management than to put in your own words. As it is defined here, it is not fully accurate and does not capture the completeness of the definition (i.e. water, etc.). Revision needed.

2. P3. Lines 64-66: Regarding: "Menstruation has strong social and cultural dimensions, and young women and adolescent girls in societies with strong traditional beliefs often require psychosocial support. (3-5)."

This statement does not make sense; it makes it seem that girls require psychosocial support just because they come from countries with strong traditions. What does that mean? That is not what these studies say. Girls need support to manage menses in terms of education, etc. But this makes it seem like girls have mental health issues in certain places because of their culture. I suggest a re-read of the articles and a revision of the statement.

3. P3. Lines 66-70: Regarding: "In some low-income countries, menstruation and associated activities are surrounded by silence, shame and social taboos that are further manifested in social practices that restrict mobility, freedom and access to normal activities. For instance, drinking milk, preparing food, interacting with people or refraining from performing religious rituals are restrictions found in many cultures (5-9)."

Be specific as to where these restrictions are.

5. P3-P4. Lines 75-77: Regarding "improper MHM": This is too general. These studies are very specific about what drives or may be associated with these outcomes. Simply saying 'improper MHM is insufficient. There is a need to be more specific.

5. P4. Lines 78-79: "Usually…” Citation needed for this statement.


Methods

Overall, great details are provided regarding ethical review, but all other sections of the methods section are thin and need further detail.

1. Line 115: Regarding: "A total of 117 respondents participated in the study resulting in a response rate of 92.1%." Did you actually try and interview 127? This percentage is only applicable if you actively asked 127 women and 117 said yes. If you only asked 117, then this is not accurate. Further, this number should go in the results section.

2. Line 127-130: Regarding: "A small sample of respondents 128 (n=5) who had their menses on the day or within the first week of the earthquake were invited to participate in an experience sharing session. Detailed field notes were taken to record the experiences of these 5 adolescent girls and women." It is unclear what an 'experience sharing session' is. More details are needed for this data collection activity.

3. Was data double entered?

4. More details are needed regarding the quantitative and qualitative data collection. Who collected data? How were they trained? What language was data collected in? How was it translated, if at all?

5. More details are needed regarding the qualitative data. It is unclear how this data was collected, what was asked. Were these sessions recorded and then transcribed? The analysis description is thin. More info needed.
Results

As noted above, percentages need to be reported, not fractions. This gets challenging to read.

Further, it does not seem necessary to have multiple tables as these are all descriptive. It may be better to have all the tables be condensed as one easy reference.

Table formatting could be improved (see other published papers and match formatting).

1. Provide percentages and raw number only. Do not provide percentage and fraction (i.e. 77/117).

2. Table 1 and associated text: The table does not make it clear if the absorbent type or the changing behavior reported is pre earthquake or current. Needs to be more specific.

3. Menstruation timing in relation to earthquake: Why is this reported? It is unclear as to why this is important. What purpose does this data serve?

4. Paragraph starting at line 180-181: Unclear what the following means: "About 12% of respondents remembered adsorbents for menstrual hygiene management on the day of the earthquake". Does this mean they remembered to use them that day (before or after earthquake)?

For "Almost three quarters (89/117) of respondents resorted to using reusable cloths for managing menstrual bleeding, made mostly from old clothes (78.7%, 70/89)." Does this mean they do not normally use cloth under normal circumstances? The term 'resorted to' infers that this is a last resort. However, women may be using these normally. Do you know what typical practices were and how they changed?

For "About85% (24/28) of respondents who could use disposable sanitary pads disposed of them at a nearby location after use."
5. Overall, I think further analysis should be done to learn more about the women and their needs. These analysis could provide better insight about whether or not certain women have greater needs than others and should be prioritized, or if women in this situation are the same and all need materials equally. Specifically, the authors report socio-demographic data like age, marital status and education. It would be useful to understand if there were differences in practices, access, etc. based on these characteristics. For example, were more educated women more likely to get pads if they wanted them? Were married women more likely to receive soap? Etc.

6. The qualitative data is very interesting, though I remain unclear how the data was analyzed. The quotes are powerful, but I also remain unclear if these are direct quotes from recordings. The authors mention note taking. In that case, are these really to be trusted as word for word or were there actual recordings? Further information and support on methods needed here. Otherwise, I remain unclear about the integrity of the quotes.

Discussion

1. It seems that the discussion does not match the findings well. There are claims made in the discussion that do not seem to be fully supported in the results. It is important for the discussion to draw specifically from the results and only make claims and recommendations that are supported by the results. I encourage the authors to review the discussion and results to confirm the claims made.

For example, the authors write: "We found gaps in information, education and communication efforts on menstrual hygiene management during and in the aftermath of the earthquake in Nepal." At no point in the results do the authors report on information, education and communication. The results focus on absorbent types largely.

2. Line 252: For "While this seems to be the only option during emergencies, other improvised adsorbents might not be hygienic and could potentially also be a source of infection." This needs to be cited as this is a big claim.
3. Line 254: For "The soap received by half of the respondents was not primarily used for maintaining menstrual hygiene." Does it need to be? Why can soap not be used for other purposes?

Minor comments:

Abstract:

1. The following should have a comma, not a semi-colon: "Despite being an important issue in humanitarian situations such as earthquakes; menstrual hygiene management is often overlooked in post-disaster responses."

2. The word 'need' redundant in the following sentence. Consider re-wording. Also, use percentages instead of '1/5th': "Menstrual hygiene needs were perceived as an immediate need by nearly 1/5th of the respondents and it was rated as the sixth highest overall need."

3. In the following sentence, it should say 'women' completely depended on as the subject of the sentence. Fix. "In the immediate aftermath of the earthquake, menstrual hygiene management completely depended on the use of locally available resources by women and young girls."

Intro


Methods

1. Line 101: Space needed: "amongst117"
Results

1. Remove commas from the following:

- "One respondent reported to have started her menstrual period, immediately in…"

- "As an issue, not openly discussed in society and pertaining just to…"

Are the methods appropriate and well described?  
If not, please specify what is required in your comments to the authors.

No

Does the work include the necessary controls?  
If not, please specify which controls are required in your comments to the authors.

Yes

Are the conclusions drawn adequately supported by the data shown?  
If not, please explain in your comments to the authors.

No

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