Author's response to reviews

Title: A comprehensive representation of the birth-experience: identification and prioritization of birth-specific domains based on a mixed-method design

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Author's response to reviews: see over
Response to the reviewers

Manuscript “A comprehensive representation of the delivery experience: identification and prioritization of delivery-specific domains based on a mixed-method design” (manuscript id: 4858218081187960)

We would like to thank the reviewer and editor for the comments on our paper and for their useful remarks about our manuscript.

The original text of the reviewers is cited in italic and bold font. The response of the authors and statements how and where the paper has been changed are given in normal font. Revisions in the manuscript are shown by italic written citations from the manuscript in which deleted parts are crossed out and newly added parts are underlined. The pages and paragraphs of adjustments in the manuscript are listed between brackets; they refer to the re-submitted version in which the revisions are marked.

Reviewer # 1 (Emma Pitchforth)
I do not consider there to be major compulsory revisions, although the following points would be important to consider. This paper is very clearly written and has few faults to pick up. The domains identified will be used to inform a utility outcome measure which will be where the real value of this study lies. Although the authors point to the differences between women and professionals as being important in this paper, it is unclear whether this paper really makes an important contribution without the further step of developing and testing the new index.
Although very well written a few questions arise.

METHODS
1. It is not clear what the authors mean by ‘obstetric literature’.
Reviewer 1 asks to clarify the term obstetric literature. We have revised this term into “literature about birth experiences”. (page 5, paragraph 2)

2. Information about the literature search could be clearer, for example dates of search or any exclusion based on country. Some of the rationale for inclusion/exclusion criteria are not made clear, for example, exclusion of systematic reviews. It would be helpful for the reader if the authors explained a bit more what they actually did in the data extraction and analyses phases of the literature search. For example, it is not clear what data was extracted to which thematic analysis was applied. Similarly a bit more about how consensus was reached. The level of detail provided around the analysis for focus groups seemed much clearer and the literature review would benefit from this.
Reviewer 1 addresses the lack of some information on the methods of the literature review. We agree with the reviewer and have complemented the methods section “selection of studies” with a rationale
for study exclusion rules. Information on the date the literature search was performed and on exclusion based on language was already included in the section “literature search”. Furthermore in the section “data extraction and analyses of the literature search” we have explained in more detail how data extraction and analyses was performed. (page 6, paragraph 3 & 4)

3. For the online focus groups, it would be useful to understand what information and instructions were provided to participants, for example, regarding when to log on.
Reviewer 1 misses information about the instruction of the focus groups participants. We have added this information in section “procedure”. (page 7, paragraph 3)

4. It may be useful include the open-ended question that was used to asses obstetricians’ opinions.
In response to the reviewers’ question, we have added the question in the method section. (page 8, paragraph 1)

5. In Step 2, it is a bit difficult to know in the five point scale how ‘very relevant’ and ‘highly relevant’ would be interpreted. There doesn’t seem to be much of a difference. It may be fine as scores of 3 or 4 were taken to be ‘substantial’ but it would be good to consider and comment on this.
The reviewer asks for clarification on the response categories used in the prioritizing task and the choice to regard response categories 3 and 4 “as substantial”. To avoid any confusion in the meaning of the response categories and their ordering, we have changed the word “highly” into “extremely”, which might be a more suitable translation of the Dutch word used as a label for this response category (“uiteermate”).

We chose to not include the middle category “relevant” in the categorization of “substantial” domains, as based on the methods we used for generating this list of 34 domains, we expected all domains to be relevant, however to distinguish within this list of relevant domains, domains should be of extra importance. Thus, only the very and extremely relevant domains are regarded as “substantial” domains. We have added a rationale for this choice in the methods section. (page 9, paragraph 2)

Under procedure in this step it may also be good to explain why additional questions on gender, profession, years of work were needed.
To clarify the reasons for gathering any additional information about the professionals occupational characteristics we have added one sentence in the methods section. (page 10, paragraph 1)

RESULTS
6. Overall the literature is not very evident in the results which is probably understandable but it may be good to give some sense of the literature or analysis between reporting number of papers and presenting the domains. It would be good if the authors could say a bit more about this as it was one of the main steps in the study.
Reviewer 1 addresses that the literature search results should be described in more detail. As she herself writes that due to the high number of included studies, an in-depth description of results is beyond the extent of this paper, but we understand that for the validity of this study more transparency is needed. Therefore, we have added more details on the type of studies included and added that readers can contact the authors for more insight into results. (page 11, paragraph 1)

7. **It is not clear what ‘transmission between medical staff’ means.**

In reaction to this point we have changes the wording of this domain into “transfer between medical staff”.

8. **In general, the authors may want to explain more about their choice of mixed methods approach and in what sense it was mixed methods rather than multi-methods which they refer to later in the discussion. There is a general need to improve the quality of reporting of mixed methods study and this is a good opportunity.**

Reviewer 1 is positive about the mixed-methods approach we applied in this study, but is confused by the use of different terminology *mixed-methods* versus *multiple methods*. It was not our intention to point on different methods with the use of these different terms. To avoid any misunderstandings, we therefore have changed the term *multiple methods* into *mixed methods* in the discussion section (page 16, paragraph 2). In reaction to the reviewer’s comment we have also explained the design with a few more details in the methods section and added a reference for the sequential mixed-methods design applied in this study. (page 5, paragraph 1).

9. **No reference is made to the appendices in the text. This may be a journal requirement but would be very useful for the reader to know for example that they can turn to see the 34 identified domains.**

The tables at the end of the manuscript are not part of the appendix, they are included as tables and referred to in the text as such. The search strategy is meant to be in the appendix, and referred to as such. To avoid any confusion we have places the appendix after the tables now.

**Reviewer # 2 (Emma Pitchforth)**

1. **Is the question posed by the authors well defined? The aim of the study is clear and the research questions are appropriate to achieve this.**

2. **Are the methods appropriate and well described?**

The methods section is described in a step by step manner, which is useful to the reader as with this can be difficult to do with a mixed methods approach. Some comments are:

**Step 1: It is not clear what, if any, restricted time frame was set for the publication of peer reviewed articles included in the literature search. Also, it is unclear why “questionnaire” was used as a search term and no other data collection tools, such as interviews.**

Reviewer 2 asks for clarification about the search strategy of the scoping review in our study. First she asks if a restricted time-frame was handled. We did not restrict the search strategy for time.
Furthermore, she asks about the inclusion of the search term “questionnaire” and wonders why no other term on data collection methods were included. In the search strategy the Mesh term “outcome and process assessment” is included, which should cover all other data collection tools. The reason we included “questionnaire” as an additional term is that also studies on the development and evaluation of new questionnaires are of importance for our research question; however, such papers are not necessarily tackled by the Mesh term “outcome and process assessment”.

“The focus group data was supplemented with keywords that were brought forward by midwives and obstetricians who were part of the network of the research team.” If a health care professional perspective was necessary, then why wasn’t the same research method applied to gathering these, i.e. focus group? It would also be good to explain to the reader why this was thought to be necessary and what these keywords were.

Reviewer 2 wonders why in step 1 we chose a different data collection method for the opinion of professionals than for the opinion of pregnant women, women who recently gave birth and the partners of these women. Reasons for this choice is twofold. First, professionals are very familiar with the topic and are very much used to state their point of view and opinion and therefore, it is less necessary to stimulate reflection during group discussion for the professionals, as is done in focus groups. Second, this was a pragmatic choice, as professionals are very busy and to our experience it often is difficult to find them available for focus groups, although online. We have clarified this in the methods section. (page 8, paragraph 1)

Reviewer 2 asked what the key terms were, professionals broad forward. The key terms provided by the professionals is considered the raw data. As in all the other steps of this study, raw data is not presented in this paper. The key-terms were analyzed together with the transcripts of the focus groups and results are presented in Table 1. We chose to analyze the transcripts and the key-terms together, because we were not interested in the differences between the two groups, patients and professionals in step 1 as this was very explorative in nature and aimed at receiving one list of results.

A description of the participants who were health care professionals would have been useful to ensure transparency and the interpretation of results.

Reviewer 2 asks for more detailed description of the professionals sample. Of the professionals participated in step 1 we have no details on their demographic characteristics. But for more transparency, we have complemented the description of the procedure in the methods section. (page 8, paragraph 1). For step 2 of our study, professionals characteristics were already presented in Table 2.

Step 2: I would suggest that the authors should include a statement about whether or not any of the participants from Step 1 also participated in Step 2, as it is unclear.

Reviewer 2 asks for clarification about possible overlap in the samples of step 1 and step 2. We have not controlled for any overlap. However, for the sample of women who gave birth, overlap is only possible for subjects who have given birth in 2011 and again at the end of 2012 or beginning of 2013,
which is not very likely. For the sample of professionals we cannot control for any overlap in response between the step 1, expert opinion, and step 2 prioritizing task, as the online questionnaire was answered anonymously. It would be reasonable that professional respondents overlap to some extent, as the recruitment in both steps was done in the personal network of the obstetricians and midwives of the research team. We do not regard it necessary to state that a small overlap in respondents is possible, as we cannot think of a way this would have led to any bias or change in results.

I would also question why “relevant” was not included in the “substantial” category, when the relevance score was dichotomized.

Reviewer 2 asks for more clarification about the dichotomization of response categories in the prioritizing tasks. We have addressed this point in our reaction on point 5 of reviewer 1.

I am also not sure what the justification is for not including women who were pregnant in this phase of the research process, as prospective experiences and expectations are also relevant, not just retrospective.

Reviewer 2 addresses that no pregnant women were included in step 2 of our study, the prioritizing task. We agree with the reviewer that prospective experiences are relevant, however our research question points on the experiences during labor and birth. In step 1 we did include women who were pregnant, as their thoughts and expectations for the upcoming birth enriches the list of domains that resulted from this inductive phase. However, step 2 aimed to narrow this list and aimed to derive a small number of domains that are most important for the experiences during labor. To be as determined as possible in this deductive phase of the study, the selection of domains was based only on experiences and not on expectancies, and thus only women who gave birth already were included in this step.

It is unclear why ‘7’ domains had to be prioritised and not anymore or less, so more justification is required.

Reviewer 2 misses a rational for the restriction on seven definite domains that is handled in this study. We agree with the reviewer that an explanation is missing and therefore have added a paragraph in the Introduction section, why a maximum of seven items is regarded maximum. (page 3, paragraph 3)

In the last step, there is a lack of clarity about the process and this could be improved by who was included in the consensus discussion, i.e. it would appear that women were not involved and this needs to be justified. Also, it states that the results of the sample of women who had recently given birth were prioritised, but there is no explanation about how this was done, i.e. were their priorities weighted differently etc.

Reviewer 2 asks for more transparency on the assembly of the expert meeting and the process of their decision making. In the methods section we did already describe the assembly of the expert meeting “For the expert meeting, we invited midwives, obstetricians, and researchers in the field of obstetrics, health economics, or clinimetrics. Experts were recruited from the personal network of the researchers
and partly, they were members of the research team.” (page 10 paragraph 5). We agree with the reviewer that the process of decision making could be presented in more detail, therefore we have added a list of the decisions and their rationale in the results section (page 13, paragraph 3)

3. Are the data sound?
Yes.

4. Does the manuscript adhere to the relevant standards for reporting and data deposition?
Yes.

5. Are the discussion and conclusions well balanced and adequately supported by the data?
The discussion, I think, makes rather bold and overzealous statements about the findings, and they should be more hesitant, in that this work can only suggest what domains are most relevant for the woman’s experience.
Reviewer 2 finds the conclusion too optimistic. We agree that the statements made can be a little more modest and therefore have made a few textual changes, such as “are regarded” is changed into “might be” and “guarantee” into “promote”. (page 18, paragraph 2)

   The last sentence in the paragraph under “interpretation of results” doesn’t have a clear meaning, i.e. what do the authors mean by certain circumstances jeopardize a safe birth?
Reviewer 2 asks for clarification of the sentence in the discussion section. We have added further explanation to clarify this part of the discussion. (page 15, paragraph 2)

   The discussion about why “involvement of parents in decision making” wasn’t prioritised is interesting and begs the question as why the researchers did not collapse the domains that were related to this, as they have done with others during the process, as this might have lead to different results.
Reviewer 2 addresses the choice of the experts in the expert meeting (step 3) and wonders why the domains on personalized care was not deleted from the final list. To avoid any confusion, this choice should not be seen as adding a new domain but as combining existing domains. With some textual changes we have further clarified this. (page 15, paragraph 1) Also, in reaction to the reviewers comment about the transparency of the expert meeting we have given more detail in the process of decision making during the expert meeting by adding a new paragraph in the results section. This should also give more clarity on the issue addressed in this point. (page 13, paragraph 3)

   In the conclusion, again, the authors are overzealous, particularly the last sentence. I would suggest they change the work ‘guarantee’ to ‘promote.’
We agree with the reviewer and have followed her advice.

6. Are limitations of the work clearly stated?
Limitations regarding the inclusiveness of the sample of women was highlighted and addressed well. This is perhaps were the authors could be more realistic about the ‘conclusive’
Reviewer 2 comments on the conclusive nature of our findings and asks for more caution about the application. We agree with reviewer 2 that the generalizability of the results needs to be discussed. For this reason we included one paragraph on the generalizability of the results outside the Netherlands already. But reviewer 2 is right that also within the same cultural context a replication of the study with a larger sample sizes would strengthen the validity of results. We have added this point in the section about methodological considerations. (page 17, paragraph 2)

7. Do the authors clearly acknowledge any work upon which they are building, both published and unpublished? When reading the article, you get a sense that it is part of a bigger project, but this is not explicit, so perhaps this could be clearer.

Reviewer 1 addresses the presumption that this study might be part of a bigger project, however she misses any explanation about it. Reviewer 1 is right, this study is the first study of a bigger project with the overall aim to develop and evaluate a preference based utility measure. We assumed that the overall aim was made clear in the Introduction section and also in the section “Implication for future research and practice” where we explicitly discussed the further steps that are needed for the development such a composite outcome measure and therewith refer to the bigger aim or our project. Apparently we were not clear enough, therefore we have adapted these sections. Besides, we would like to clarify that this study is the first study of that bigger project and no published or unpublished work preceded this study. (page 3, paragraph3 until page 4 paragraph 1 and page 17, paragraph 3)

8. Do the title and abstract accurately convey what has been found?

Well written abstract that is an accurate summary of the paper.

9. Is the writing acceptable?

Yes, but I would probably renumber the tables as Table 2 is cited before Table 1 in the document.

We thank reviewer 2 for this rectification. We have corrected the numbering of the tables in the manuscript.

Also, I would recommend using the term ‘birth’ as opposed to ‘delivery’, which is now more commonly used as it is more empowering and respectful to women role in childbirth.

We agree with the reviewer and have replaced the term ‘delivery’ with ‘birth’ in our manuscript.

Additional Minor Essential Revisions:

Page 12 Interpretation of results section, the sentence should read, “these findings led us TO assume”.

Conclusion: The sentence "the results of our study" should have the words AS A useful ....”

We thank reviewer 2 for these comments and have adapted the sentences in the manuscript.