Author’s response to reviews

Title: Modeling the relationship between women's perceptions and future intention to use institutional maternity care in the Western Highlands of Guatemala

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Author’s response to reviews:

Thank you very much for this opportunity to respond to this set of comments.

Reviewer reports:

Reviewer #1: Overall, I believe that you addressed most of my previous comments, and that this paper offers very interesting information about the various factors that affect women's decisions to seek facility-based maternal health care in Guatemala. However, I have a few comments regarding some of the new additions to the manuscript, which I have listed below.

Writing style

1.) You have improved the clarity of terms, but I think the readability could be further improved, particularly in the new sections that were added. For example, there are some uses of parentheses that are not necessary. i.e., on page 7-8, "The Healthy Motherhood Law includes respect for traditional and cultural practices of indigenous populations and reinforces public services should be free and accessible (geographically, culturally)" when you could just say "should be free and culturally and geographically accessible." In another example, some sentences throughout the new sections begin with the general references "this" or "it," and it is not always clear to what those terms are referring.

Response: We appreciated the reviewer’s critique, it’s always good to have separate sets of eyes on a text. The sentence referenced above was amended as suggested, and edits were made throughout to improve, we hope, readability.
Background

1.) On pages 6 and 7, the authors have added new sentences about: "Prior to the analysis of data, the authors developed a conceptual model to generate the hypotheses to be tested." Were the conceptual model and hypotheses developed before the analysis of data or before the development of instruments, collection of data, and analysis?

Response: This clarification was indeed necessary. The conceptual model was developed based on current theory in the field and prior qualitative work done in the population. The conceptual model and hypotheses were developed post data collection but prior to analysis. This was clarified in the text as follows: “The authors developed a conceptual model (post data collection), which illustrates the underlying hypotheses to be tested.” On page 7 it already stated the following: “The conceptual model was developed in advance of data analysis and reflects the authors’ hypothesis that the combination of these factors contributes to future intention to deliver in a health facility.”

Setting

1.) You mention that 61% of births in El Quiché are attended by trained midwives, 33% are attended by doctors, and 3% are attended by nurses. Does that mean comadronas attend only 3% of births in the region? Or are "trained midwives" and comadronas (which were specified in the paper as "traditional midwives") referring to the same type of birth attendant? And do midwife-attended births happen at home? Some countries have incorporated programs where midwives are available within health facilities, so it would be good to add a brief statement to clarify.

Response: The above statistic referred just to facility-based births. The trained midwives are not the same as the traditional comadronas mentioned in reference to home birth. These two points were clarified in the text on page 8, which now reads: The proportion of women who give birth in health facilities has risen from about 50 to 65 percent nationally, but varies from just over 90 percent in the capital to 36 percent in the predominantly rural Department of El Quiché, where a high concentration of indigenous populations reside [27]. Ninety-one percent of women report attending antenatal care services provided by a nurse or doctor [27]. For facility-based births, El Quiché (compared to other Departments) has the highest proportion attended by clinically trained midwives (61 percent), with the remaining assisted by doctors (33 percent) and nurses (3 percent) [27]. Language barriers, poor access to services, low literacy and historical marginalization reinforce home birth assisted by comadronas (traditional midwives with limited to no clinical training) [28] [29] [30].
Methods

1.) In the first two paragraphs of the Methods section, I am still a bit confused as to the instruments and methodology. You mention "A census and accompanying household survey were conducted in 15 villages in Ixil during a five-week period" and later mention "URC granted permission to use the data for the present secondary analysis." However, you mention that "the authors employed a mixed-method approach...." I think it would be good to clarify what components of the manuscript draw from primary data analysis and from secondary analysis, as right now it remains a bit unclear.

Response: We appreciate that the original description of the data may have caused some confusion, and the opportunity to revise it for clarity. The data used here are purely survey data. The census discussed in the prior draft was used only to identify women who had given birth in the last 5 years. For this reason, we have eliminated discussion of it other than in reference to that use on page 10. The reference to mixed-methods referred to the use of open-ended survey responses used to contextualize findings of statistical modeling. While definitely within the purview of mixed methods, it may be confusing to some as most often mixed methods refer to a combination of separate qualitative and quantitative data. Text on pages 15 and 16 to clarify that the thematic analysis is derived from these open-ended responses. The distinction of the data used here as secondary is a legacy of drafts of this article prepared for institutional review purposes. In this revision, we have eliminated references to ‘secondary’ data for clarity, as that is clearly what this is, collected for different purposes prior to our analysis, and labeling it as such, to our regret, was an obvious source of confusion.

2.) On page 10, you classify the two study groups as "those with experience using childbirth services" and "those potentially without experience, but who may be influenced by hearsay and experiences of others who have used facility care (home birth group)." I believe that women were grouped only depending on the location of their last birth. Did you consider participants who may have not delivered with a doctor or nurse for their most recent births, but had delivered in a health facility for previous births?

Response: As described in the methods section, our analytic sample refers to women who had given birth in the past 5 years, and the survey questions concerning childbirth venue refer only to their last birth. Thus, it is possible that some home-birth respondents may have delivered in a facility previously. Unfortunately, the data do not allow us to measure that. The relatively low general prevalence of facility birth, and separate focus group discussion data (not included in this paper), indicated that it was relatively rare for a woman to have a facility birth prior to her last
home birth. We have revised the text on page 11 to reflect this, and have noted it as a limitation in the discussion section of the manuscript.

Discussion:

1.) On page 24 - "Another limitation may stem from recall bias when questioning women about experiences that may have occurred within a five-year time-frame. Such biases may be minimal, however, as women's recollections of obstetric events even more than five years later were found to be accurate, though this may pertain to more tangible events rather than subjective feelings" - Please specify that this finding comes from one study in Ghana. The way the sentence is worded now implies you are talking about your same study population.

Response: The text was changed to specify that this finding is from the Ghana study. It now reads: Such biases may be minimal, however, a study from Ghana suggests that women’s recollections of obstetric events were found to be accurate, even more than five years later, though this may pertain to more tangible events rather than subjective feelings [37].

Conclusion:

1.) In the first sentence of the second paragraph, "phenomenon" should either be written as "a phenomenon" or "phenomena."

Response: this was corrected to say a phenomenon.

2.) On page 30, when you say: "There is potential to adapt or build upon these indicators for future population-based or more routine data collection efforts," are "these indicators" referring only to "willingness to recommend" questions or multiple measures that were included in the study? It would help to clarify.

Response: ‘These indicators’ was referring to the willingness to recommend and disrespect and abuse indicators. We replaced “these” with these specific examples in the text.
3.) I believe "For example, the elements related to mistreatment or respectful care outlined by the Healthy Motherhood Law and other existing intercultural care guidelines from Guatemala" is a fragment.

Response: Thank you for catching this. The text was updated: These measures could provide a source of data to monitor the implementation of laws, policies and programs; for example, the operationalization of elements related to mistreatment or respectful care programming and practice outlined by the Healthy Motherhood Law and other existing intercultural care guidelines in Guatemala.

Reviewer 2:

• P. 8, the accent is missing in “Extensión de Cobertura”. It currently reads “Extension de Cobertura”.

Response: Thank you for catching that error. It was corrected.

• P. 10, instead of “The census included 7,557 individuals. Eleven individuals refused to participate. Every woman with a child under five (n=754) was eligible to take the maternal and child health survey. Five hundred and eighty-eight women completed the home birth satisfaction questionnaire (roughly 80 percent) and 153 women completed the facility birth ‘satisfaction’ questionnaire.” It should say: “The census included 7,557 individuals. Every woman with a child under five (n=754) was eligible to take the maternal and child health survey. Five hundred and eighty-eight women completed the home birth satisfaction questionnaire (roughly 80 percent) and 153 women completed the facility birth ‘satisfaction’ questionnaire. Eleven individuals refused to participate.” I have changed the order of the sentence that I have marked in bold.

Response: the suggested change was made.

• P.12, please edit or remove the two words marked in bold: “The non-users’ intentions to deliver in a health facility in the future may by be influenced by their perception of facility care rather than first-hand experience.”
Response: We cannot see what is in bold, but “non-users” was removed as part of a revision to the first reviewer’s second question.

• P. 16, this should be in the results section, not in methods: “Based on the thematic analysis of the 650-plus open-ended survey data responses, ‘willingness to recommend a facility to someone else’ (1=yes, 0=no, “don’t know” responses were not included in the analyses) proved to be a solid proxy for perceived need for institutional childbirth.”

Response: The reference to the specific number of responses was removed, but the authors feel a very brief mention as to why “willingness to recommend” represents “perceived need” belongs here as this is the section that outlines the operationalization of the variables. It says in parenthesis just after the sentence above that this is further explained in the results section.

• P. 16, instead of “the 650-plus open-ended survey data responses”, please be precise and provide the exact number.

Response: this was updated to say 654 in the results section.

• PP. 19-20, similarly to a point raised earlier, the percent responses should be provided in the results, not in the methods: “The home birth group was asked to explain their satisfaction scores (100 percent supplied a response), and the facility group was asked to explain their affirmative responses to the single-item disrespect and abuse question (89 percent supplied a response).”

Response: The references to response rate were moved to the results as recommended.

• I suggest to summarize the results section, as it is too long and somehow hard to read at times.

Response: We understand that the results, particularly concerning the multivariate models, can be somewhat dry. This type of presentation is conventional, and preferred by many readers
(including prior reviewers) in that it serves to separate interpretation of results from their presentation, which, when combined, is often harder to read. That said, we recognize that we did not do an adequate job of presenting the type of summary the reviewer suggests, and appreciate the opportunity to have substantially expanded the summary at the beginning of the discussion section on page 24-25. We believe this change has made this a stronger manuscript.

- In the results section, I recommend not to use vague terms such as “generally the same”, “more than half”, “a large group”, “a few”, “roughly”, or “nearly”. Instead, please provide the number.

Response: In the case of a quantitative figure, the language was amended (e.g. more than half) to include the precise number. In one case “nearly half” was used instead of the exact figure for better readability given the table presents the precise figure. In most of the examples provided by the reviewer, we are referring to qualitative data in which the intention was not to do an analysis that yielded precise quantifications of responses. Instead words such as “a few” or “a large group” indicate relative prominence of a key theme that emerged among respondents.

- P. 30, it’s confusing that “quality” appears also in the first part of the sentence: “Further, the nested logistic regression results suggest satisfaction and quality capture different aspects of client experiences perceived quality”.

Response: Thank you for catching this error. It now reads: Further, the nested logistic regression results suggest satisfaction and the disrespect and abuse measures capture different aspects of perceived quality of care.

- The authors refer to “perceived” as equal to “subjective”, as if these were opposed to a supposed objectivity of the researchers. Instead, I suggest to use “observed” and “perceived” (or “experienced”).

Response: The authors shy away from the use of observed because it implies there is some measurable and agreed upon standard of quality that we are measuring against the women’s perceived/subjective accounts –and that is not the case. Even if that were the desire, we have no data nor describe any way of comparing the women’s perspectives to our own or anyone else’s. We use perceived because we want the focus to be on the women’s subjective experiences and
make it clear the data are derived from the women’s self-reports. We did amend a reference to perceived quality at the beginning of the paper to reinforce the self-report aspect. It reads: This research contributes to the literature by testing two types of self-reported quality of care measures: a ‘global’ measure of satisfaction and specific measures related to poor perceptions of quality that capture disrespectful and abusive service provision.

- The authors may find the paper “Assessing equitable care among indigenous and Afrodescendant women in Latin America“ (Pan American Journal of Public Health 38(2); 2015) useful.

Response: Thank you for the reference, it is much appreciated.