

Reviewer's report

Title: Participant experiences in a breastmilk biomonitoring study: A qualitative assessment

Version: 1 **Date:** 29 July 2008

Reviewer: Amy Kyle

Reviewer's report:

Major Compulsory Revisions (which the author must respond to before a decision on publication can be reached)

1. Introduction -- This paper deals with an important topic germane to the increased use of biomonitoring in a variety of settings. How people react to information about biomonitoring in general and to their particular results when shared is an important research question. The strength of the paper is that it addresses an important topic. As the authors note, it took advantage of an existing study to address this question, and, as a result, the findings are limited in their scope as a function of the design of the study.

2. Defining the questions -- The questions posed in the study could be treated more consistently. The key objectives identified early on do not match the presentation of results.

a. Page 9 – the description of the new study does not include anything about investigating how the women preferred to receive their results, even though this was mentioned in the introduction as one of the key objectives of the new study. The discussion of the purposes and methods for the study should be consistent throughout.

3. Length and clarity -- The paper as a whole could be significantly condensed. The findings are important, as noted above, but the amount of space devoted to describing the original study and the more interpretive aspects of this study seem to be out of proportion to the significance of the findings. This journal does not have a review criterion related to length of article, as many do, so perhaps this is not a concern for the editors, but it would seem to be likely to increase the impact of the paper if it were concise. Also, the paper should be written so that it is clear what was done in the underlying study and what is new.

a. Page 6 and following. The discussion of the underlying study could be significantly condensed.

b. Page 7 and elsewhere: it would be helpful to manage the pronouns and tenses in such a way as to clearly distinguish between the underlying study and this study. It is confusing when, as on page 7, line 20ff, the paper puts actions from the underlying study into the first person (plural). That makes it hard to distinguish which is which, especially since the discussion of the new study is written in a passive voice.

c. Page 11, lines 14 to 23. This seems to be partly about the underlying study and it is confusing to figure out which part is which. This could be clarified. If new questions were included in the new study questionnaire about these issues, that should be described in the methods.

d. Page 17. This discussion of the literature should be consolidated with the prior discussion of the literature. This seems too protracted here.

e. Discussion. Overall, the discussion section could be better integrated with the rest of the paper. It seems to add new information that should have been addressed in prior sections and to not be cognizant of what has been said before. It could be substantially condensed.

f. Page 19, line 12ff, and Page 20. These sections seem again to go back to the point of view of the underlying study. It is difficult to determine what is part of the original study and what is part of the new study. Results should be presented in the results section rather than here.

4. Abstract -- The abstract should reflect the paper. The results as presented in the abstract do not quite seem to reflect the findings of the paper. The more significant findings seem to be that neither the general information about biomonitoring and potential contaminants in breast milk nor the provision of results to individuals affected duration of breast feeding. This is presented as a secondary finding in the abstract. The conclusions in the abstract also do not seem to follow very closely with the results and findings of this particular study.

5. Representativeness of findings -- One unacknowledged limitation of this study is that it includes only women who decided to breastfeed. One had to decide to breastfeed in order to be included in the underlying study. So, the study design is better able to determine the impact of receiving specific, individual results on women's decisions to continue breastfeeding than it is to assess the impact of receiving general information about contaminants in breast milk on decisions for women who have not yet decided.

a. Page 5, line 9 to 18. This paragraph characterizes the study as addressing the attitudes of the public about breastfeeding. As noted elsewhere, this study actually addresses the attitudes of women who have decided to breastfeed, which is a subset that would have views that differ from those of the general public.

b. Page 10, line 4 to 11. Here the data presented distinguish between those who were definitely planning to breast feed and those who were very likely or considering breastfeeding. But the presentation of data in table 1 says that the questionnaire does not distinguish between these categories. This apparent discrepancy should be explained. Also, as noted elsewhere, it seems that the underlying study was trying to recruit women who were breastfeeding or planning to breastfeed, so the population that is included in this study is limited to women with some significant level of commitment to breastfeeding. This should be clearer.

c. Page 21, line 13ff. It would seem to be important to also point out that the population recruited this way would not be expected to represent the general population with regard to impact of general information about biomonitoring and breast milk because the women selected had already decided or nearly decided to breastfeed. Consequently, this study is most informative with regard to the provision of individual results to women who are breastfeeding.

6. Study design and guidelines -- The paper discusses how study design can affect attitudes and discusses guidelines have addressed these issues. This could be improved by being clearer about what aspects of study design are relevant and how these relate to the guidelines cited.

a. Page 3, line 21-23. The paper says in several places that it is the design of biomonitoring studies that can affect breastfeeding rates. However, it is not clear what aspects of the design would affect this. The connection should be explained more specifically.

b. Page 7. The question of the adequacy of the guidelines cited here would seem to be something to assess in light of the results of this study. To do this would require that the guidelines be presented with some precision and then that they be discussed in light of these results. That would require revisions to this page and to later sections of the paper. This might also be something to discuss in the introduction to the topic.

c. Page 15, line 17 to 21. This discussion again raises the issue of the design of biomonitoring studies but does not specify the ways that design can address these concerns. This needs to be done. It would be most helpful if the findings could be specifically related back to the recommendations from other sources that are cited but not completely described, as noted elsewhere.

d. Conclusion. It should be clarified what aspects of design are key to affecting participants' experiences. This appears to apply to messaging, rather than what would usually be considered to be design. It does not appear that the study supports a conclusion that breast milk biomonitoring supports breastfeeding by providing participants about everyday environmental exposures and thereby creating a more informed citizenry. The conclusions could be focused more directly on the key issues for the study.

7. Focus -- The paper might be strengthened by focusing more on its key findings and less on commentaries.

a. Page 10, line 13 to 15. One of the key results in this paper is that none of the women contacted decided to change their breastfeeding because of general information about biomonitoring. It should be clear how this result was obtained. What question did they answer and what did they say?

b. Page 12, line 13 to 14. The second key finding of this study is here. This should also be clarified, as the finding above. It should be clear how this result was obtained. What question did they answer and what did they say? The narrative of the manuscript seems to conflict with the finding of the survey in

suggesting that information might affect attitudes, even though the finding is that it did not affect actions. This seems contradictory.

c. Page 10, line 18 to 22. The authors have included a great deal of interpretive information about general attitudes to breastfeeding in this paper. This may not be the strength of the paper, and it may be appropriate to re-assess the balance between the results that pertain to the main objectives of the study and this supplemental interpretive information.

d. Page 14. At line 9 to 12, the discussion about how personal choices can affect one's health would seem to be somewhat contradictory to other findings of the paper suggesting that it is difficult to avoid exposure to contaminants through personal actions. The discussion at lines 15 to 23 about actions that people might take do not seem to be related to PBDEs, so the connection to this research is unclear.

e. Page 16, lines 4 to 9. This interpretive information does not seem to add to the manuscript.

f. Page 16, line 11 to 14. The discussion of the lack of participation of the Lowell group is important and probably deserves more attention. The comments of the center director do not seem relevant.

Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

8. There are numerous punctuation errors that should be corrected.

9. Page 3. The point that the authors are trying to make in the 3d sentence is not quite clear: clinical trials do not result in recommendations to improve health for individuals, either, but either biomonitoring or clinical trials can result in recommendation to improve health that are applied through public policy or through medicine. The distinction being drawn here is not clear.

10. Page 19. The issue of the timing of the provision of results seems quite important and should probably be discussed as an element of the study design. If you provide results after women have completed breastfeeding, then is that a better approach to avoid impacts on breastfeeding? Or not? This would seem to bear some additional consideration and discussion.

Discretionary Revisions (which are recommendations for improvement but which the author can choose to ignore)

11. Page 2 and elsewhere – the use of the term “body burden” to describe results of biomonitoring might be worth considering. This term makes sense when applied to bioaccumulative substances or those that persist in the body. However, other contaminants, such as phthalates, that have also been detected through biomonitoring do not achieve a “body burden.” It is not entirely clear whether the authors intend to focus only on the types of contaminants for which a body burden might be achieved, but this might be a point to clarify.

12. Page 3, first line – the comment that it is technological development that creates the challenge for ethics seems somewhat doubtful. Methods have been developed because of the interest in biomonitoring, rather than the other way around.

13. Page 3, line 4 -- should say human subjects rather than human subject.

14. Page 3, Impacts of breastfeeding – it might be helpful to clarify to whom the benefits accrue. All of the discussion of the existing literature would seem to belong here. (There is some additional literature review much later in the paper that would seem to be better presented here.)

15. Page 4, Communication of results. The paper discusses a debate about how and when to provide results. I am not sure that this quite captures the fundamental philosophical differences between those who believe the medical model and those who believe in the right to know. There isn't really that much to debate between these two views. Rather, people mostly fall into one camp or the other, and there isn't much middle ground.

16. Page 4, line 18ff. It seems like this section needs a different subheading.

17. Page 5, line 6. This may be simply an unfortunate choice of words, but it seems to say that the purpose of studying participants of biomonitoring studies is to corroborate expert findings.

18. Page 5, line 13-14. Perhaps it would be more accurate to say that because PBDEs are lipophilic, they partition into breast milk.

19. Page 9 – the questions used should be included in an appendix.

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Needs some language corrections before being published

Statistical review: Yes, but I do not feel adequately qualified to assess the statistics.