Author's response to reviews

Title: Maternal postpartum morbidity in Marrakech: What women feel, what doctors diagnose?

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Author's response to reviews: see over
Author’s covering letter for response to reviewers

Title:
Maternal postpartum morbidity in Marrakech: what women feel what doctors diagnose?

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Version: 2  Date: 27 September 2013

Dear Editor,

We are pleased to warmly thank the reviewers for their constructive and helpful comments. We hope that our answers are satisfactory and that the manuscript is now ready for publication in BMC Pregnancy & Childbirth.

We have attached:

- Our original research article entitled, “Maternal postpartum morbidity in Marrakech: what women feel, what doctors diagnose?”, with the track changes highlighting the revisions made according to the reviewers recommendations
- Original article with accepted changes
- Answers to reviewers questions and clarifications

We look forward to hearing you

Yours sincerely,

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Dear reviewers,

I would like to express my sincere gratitude for your constructive comments that have helped us to improve the quality of our manuscript.

**Answers**

**Version 2**: 11 September 2013

**Title**: Maternal postpartum morbidity in Marrakech: What women feel, what doctors diagnose?

**Version 1**: Date: 11 July 2013  
**Reviewer**: Susmita Mukhopadhyay

1. The manuscript addressed the research question in well-defined manner. However, the research methods need little more elaboration, especially in case of the measurement of psychological morbidity.

   The information in Appendix 1 has been taken and adapted from WHO report 2001 [31]. However, we added a sentence in the manuscript: “psychological morbidity was identified through symptoms representing mental distress, as for example feeling negative towards yourself, crying easily, decreased interest or pleasure, disturbed sleep, diminished ability to think or concentrate…”, and this in a period of 2 weeks representing a change from normal”.

   More care should be taken to report the results, using appropriate subheadings.

   **We improved the sub-headings.**

2. The tables need modifications especially Table-3 (what is ‘psychological’? Is it combinations of one or many symptoms?)

   Psychological categories gather combinations of symptoms of psychological distress as explained in appendix 1.

   Table-4 also needs modification.

   **We have modified table 4 in the manuscript.**
Review: Sahar Hassan

Reviewer comments

Congratulations for the authors for an important study exploring a neglected area in maternal health in the Arab world. This descriptive study reports maternal morbidity after birth as reported by women compared to diagnosis by physicians. Some revisions are required.

Background:

1- After I read the manuscript, many questions came to my mind regarding the context of maternal health in Morocco which could have been helped to understand the findings and implications of this study in Morocco. It will be useful for the readers to add briefly some context of maternal health services in Morocco to the background. For example: Place of birth for Moroccan women? Who are the birth attendants? Who attend births at home? Who provides antenatal and postnatal care for women? Is there a system for postnatal care in the community? Any home visiting programs by midwives or other health professionals during the postpartum? Who runs postpartum services in the primary health care? Physicians or midwives or nurses? If physicians: female or male? What is the difference between a “delivery house” and a regional hospital?

We added a paragraph summarizing the context in the manuscript (under Methods): “In Morocco, antenatal (ANC) and postnatal (PNC) care are provided in all the 2689 public health centers and in the private sector. The ANC coverage is around 77% (92% in urban areas and 63% in rural areas). About half of the pregnant women turn to the private sector for their prenatal consultation. Most deliveries take place in the 96 public hospitals (51.5%) or in the 606 first level public delivery houses managed by midwives and general practitioners (12%) but 26.8% women deliver at home. Only 9.2% women deliver in private hospitals” [DHS 2011].

2- Paragraph 1: Authors mentioned some prevalence rates of near miss. Are these prevalence rates from Morocco or which countries? These needs to be clarified.

We added the countries in which these prevalence rates come from (Benin, Cote d’Ivoire, Morocco, and Indonesia) [Filippi & al, 2005; Adisasmita & al, 2008].

Methods:

We took into account all your questions and suggestions in the manuscript.

1- Postpartum consultation: paragraph 2: Authors mentioned using short questionnaires to collect socio-demographic and postpartum complaints. Table 1 showed 22% and 37% of women had no education in both groups. Also, 34% had a primary level education. This is almost ½ of the population! This reflects the poor education level of Moroccan women (the national average is 48.5% women illiterate according to the DHS 2011).

My concern is: Can authors explain how the data was collected? i.e. were women interviewed or women themselves filled out questionnaires? If interviewed, who
conducted interviews? If both methods were used: how many different people participated in filling up the questionnaires?

Women who were initially included in the study were interviewed by a midwife about their socioeconomic and demographic characteristics using a pre-tested questionnaire. They were invited by the midwife to attend postpartum consultation at the nearest delivery house at six weeks postpartum, after a prepaid laboratory blood examination. The consultation consisted of a 30 minutes interview following semi-structured and open-ended questions about any postpartum complaint women had experienced, as well as a physical examination by a doctor.

What kind of questions used in both questionnaires used to report women complaints and to diagnose complaints? Are they the same or different tools?

Yes, it was the same questionnaire with two parts; a first part (filled by the midwife at the time of delivery) on socio-demographic variables, monitoring of pregnancy, circumstances of delivery, and a second part (filled in by the doctor at the time of the postpartum consultation) for complaints and diagnosis.

How authors think that this variation in data collection method, collectors and tools would affect the validity and quality of their data used for comparisons? Could this be another limitation in your study?

Yes, we agree it may be a threat to the validity but we tried to limit this by carefully training the personnel together to applying the same procedure. Moreover, we wrote clear standard operating procedures to be followed by each investigator and we organized a regular supervision of the data collection by the Principal Investigator and the Professor of Obstetrics who trained the health personnel.


We used semi-structured and open-ended questionnaires.

3- Postpartum consultation: paragraph 3: Clarifications required about the consultation: average time (duration) for a consultation?

The duration of a consultation was 30 minutes on average (sometimes longer if the woman’s complaints required it).

4- Author mentioned: consultation included filling up a questionnaire and clinical exam. Was there any treatment or advises provided for women during these consultations? I would not imagine this was not done?! If yes, please mention this.

Women diagnosed with any morbidity/disability were treated by the doctor or referred to a specialized hospital where she received care free of charge. We mentioned it.

5- Data analysis: paragraph 2: Authors mentioned logistic regression, but they did not include tables of analysis in their findings. I suggest to delete this sentence from the analysis.

Right, we have deleted it.

6- Data analysis: paragraph 3: Authors mentioned: “if a woman had several complaints,” Does this mean that you took only the first reported complaints?
If yes, it may be useful if authors can mention the total number of complaints reported by all women.

Yes, we mentioned it in the results section; postpartum complaints: “During the postpartum consultation, among the 1,210 women, 538 (44%) expressed at least one complaint, and 608 cumulative complaints were reported by women.”

7- Data analysis: paragraph 3: In the sentence mentioning using cumulative number of complaints. Did you mean that you added all complaints reported by all women under the same category i.e. psychological, etc. in table 2: there were 124 psychological complaints reported by women, am I correct? If yes, please clarify this in your description.

We clarified it in manuscript:
For the analysis, we calculated the cumulative number of these complaints, and we added all complaints for a category reported by all women under the same category.

8- Data analysis: paragraph 3: last sentence: can you mention some examples of those excluded complaints from your analysis? Such as?
We excluded complaints without a direct link to the delivery and/or complaints related to previous diseases such as asthma or goiter.

Results:
1- Paragraph 4: “last sentence: Near miss represents 6%......etc. needs a reference at the end”.

We clarified it in manuscript; 6‰ (per thousand) is the incidence of population based near-miss in our study. As it does not come from another source, there is no need for a reference.

Table 1: Age: the total does not equal 1210. Please re-check and correct.
Many thanks, we corrected it

Table 1: Educational level: Is it a coincidence that none of your population has a higher education (more than a high school)? I doubt it! as the total does not equal 1210 ?! Can the authors re-check the data and correct this?
Many thanks, we corrected it. In fact, ‘high school’ means University or similar in Morocco and we changed it to avoid language ambiguity.

Table 1: It will be useful if authors can add the followings (if available): Type of delivery, birth attendant and if women were breastfeeding or not.
Ok, we added the type of delivery. In the public sector, midwives deliver all ‘normal’ deliveries (including episiotomy and/or vacuum extraction) and doctors perform deliveries only when a cesarean section or a forceps is requested. In the private sector, there is no rule but most of the time the doctor performs the delivery (normal or not). As we do not have the exact birth attendant in the private sector, we did not put this information in the Table. In Morocco, all women are encouraged to breastfeed and except if there is a problem (seldom) they all breastfeed (97.2% of women in Marrakech region according to the 2011 DHS).

2- If I understand your numbers correct in table 2: is it possible to show in the table the number of women who reported these complaints? For example:
124 psychological complaints reported by how many women? the 29 prolapse complaints reported by how many women? etc. This can be useful to understand the magnitude of these complaints. I think that if we had 124 complaints in psychological categories that’s means, it’s reported by 124 women and the same think for prolapse or other complaint but if you want what’s the first one you can see it in this table:

Please, find this information in the Table below. We decided not to add it in the manuscript to avoid confusion.

<table>
<thead>
<tr>
<th>Categories</th>
<th>First complaint categories reported by women during postpartum (6-8 weeks after delivery)</th>
<th>Cumulative complaint categories during postpartum (6-8 weeks after delivery)</th>
<th>%*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Psychological</td>
<td>109</td>
<td>124</td>
<td>10</td>
</tr>
<tr>
<td>Vaginal discharge</td>
<td>93</td>
<td>98</td>
<td>8</td>
</tr>
<tr>
<td>Hemorrhoids</td>
<td>67</td>
<td>70</td>
<td>6</td>
</tr>
<tr>
<td>Breast Problems</td>
<td>56</td>
<td>63</td>
<td>5</td>
</tr>
<tr>
<td>Weariness</td>
<td>27</td>
<td>35</td>
<td>3</td>
</tr>
<tr>
<td>Problems of Episiotomy</td>
<td>26</td>
<td>29</td>
<td>2</td>
</tr>
<tr>
<td>Prolapse</td>
<td>12</td>
<td>29</td>
<td>2</td>
</tr>
<tr>
<td>Sexual problems</td>
<td>22</td>
<td>27</td>
<td>2</td>
</tr>
<tr>
<td>Anal problems</td>
<td>23</td>
<td>25</td>
<td>2</td>
</tr>
<tr>
<td>Urinary burning</td>
<td>21</td>
<td>22</td>
<td>2</td>
</tr>
<tr>
<td>Bleeding</td>
<td>15</td>
<td>20</td>
<td>2</td>
</tr>
<tr>
<td>Vulvar itching</td>
<td>16</td>
<td>19</td>
<td>2</td>
</tr>
<tr>
<td>Pelvic problems</td>
<td>14</td>
<td>17</td>
<td>1</td>
</tr>
<tr>
<td>Hypertension</td>
<td>15</td>
<td>15</td>
<td>1</td>
</tr>
<tr>
<td>Urinary leakage</td>
<td>11</td>
<td>11</td>
<td>1</td>
</tr>
<tr>
<td>Others 1</td>
<td>11</td>
<td>21</td>
<td>2</td>
</tr>
<tr>
<td>Total</td>
<td>538</td>
<td>608</td>
<td>50</td>
</tr>
</tbody>
</table>

*The proportion was calculated on the 1210 women who had a postpartum consultation. However, a woman could report more than one complaint.

3- Table 2 and table 3: Why the complaints in table 2 were not categorized to similar categories as in table 3? This is confusing. Is there a reason? As if both tables are using same categories will make easier for the reader to compare. Table 2 and Table 3: on the basis of symptoms expressed by women, we tried to stick to the wording of women and labeled their complaint categories according to the way they expressed them. Then, we organized the diagnosis categories in a similar way in order to facilitate the comparison (complaints of women and diagnoses of doctors). Example, we categorized as ‘urinary incontinence’ the diagnosis of ‘urinary leakage’ as expressed by women; or ‘gynecological’ is the diagnosis for ‘vaginal discharge, sexual problem, vulvar itching, uterine prolapse, and infected episiotomy’.

1 Others means infection of cesarean section, Cycle Disorder, heart pounding.
4- Why authors considered vaginal discharge as a complaint in both tables???? This is inaccurate! We know that vaginal discharge can be a normal finding in women’s life cycle unless accompanied by abnormal color or smell or othersymptoms. We also know that the characteristics of normal vaginal discharge vary according to the time of her menstrual cycle.
Can authors clarify what kind of vaginal discharges reported or assessed during the consultation?
As you say, women believed that vaginal discharge is normal in postpartum even if it is accompanied with symptoms; only 117 women expressed a complaint while doctors diagnosed 266 vaginal infections (odorant or colored discharge and also ulceration at clinical exam) and for all these women, they prescribed a treatment.

5- Why Episiotomy in table 2 is listed as a complaint. While in table 3, infected episiotomy is considered? Can authors justify this variation?
We corrected it in the Table 2. In our description “episiotomy problems” meant infection of episiotomy in postpartum.

6- Bleeding was reported by women in table 2. How come physicians did not diagnose this? How authors explain this variation?
Again, these variations are connected to my previous concern regarding data collection of women complaints. How it was done? By whom?
This example is similar to genital infection; we found that women were afraid by bleeding but doctors judged that it was a normal postpartum bleeding and did not treat them. As already mentioned, data were collected by specifically trained medical doctors.

7- Table 2: Any reports from women regarding signs and symptoms of anemia?
The homologue
Women reported symptoms of weariness (associated sometimes with heartbeat) as showed in Table 2. This is the only symptom related to anemia. This symptom was reported by 35 women and all these women were diagnosed anemic by blood analysis. Doctors diagnosed in total 224 women with anemia (following the laboratory blood exam).

8- Table 2: How breast problems were asked for women? i.e. was the question a general question asking about breast problems or were specific items such as: inverted nipple, cracked nipple, sore nipple, engorgement.....etc.
The question asked to women in the complaints section is an open question. When a woman expressed a breast problem, the doctor deepened the interview and asked specific questions about the type of problems before making a diagnosis.

9- Table 2: What comes under “others” complaints by women? Can authors mention these at the end of the table as a footnote?? This will be interesting for the readers to see!
‘Others’ meant for example ‘infection of cesarean section wound’, ‘cycle disorder’, ‘heart pounding’. We added the meaning of ‘others’ in the manuscript as a footnote.

10- Table 3: How physicians diagnosed urine incontinence during the consultation? Was the cough reflex test described in your definitions in the annex implemented by
giving each woman 500 ml of water ....etc.? I am a clinician myself and I find this hard or not practical in our clinics due to lack of human and physical resources and crowdedness especially a woman need to wait for 45 minutes to be examined! I am really interested to know how physicians managed to perform the test if they did?! However, if physicians used another method to diagnose incontinence, this must be mentioned in the method of consultation and this also could affect validity of the data and should be acknowledged.

We agree with you, it is difficult to realize the test but our gynecologist did it following the standard shown in the Appendix.

11- Table 5: is very confusing to read. Try to present the table in a different easier format read. i.e. you can put categories of age under age,.....etc.

Ok, we simplified it in Table 5.

12- Table 5: what do you mean by professional activity? Did you mean occupation? If so, use same terminology as it can be confusing.

Thanks, we have corrected it in the table and ‘professional activity’ was replaced by ‘occupation’.

13- Table 5: Are these proportions of women who reported complaints? if yes, add reported to the table title

Yes these proportions relate to women’s complaints in the postpartum period and we modified the title accordingly.

14- Table 5: complications during delivery at the end are not clear what does the last two lines represent!?

We have deleted the two lines and Table 5 is now clearer.

15- Again, you mentioned using logistic regression in the methods, and reported results just before the discussion in one sentence. I see this as not enough! either you delete all about regression or you include details of your analysis in the methods and in the findings. My suggestion is to delete it since your main focus was not to find determinants. However, you need to acknowledge and report the confounders in the limitations.

We agree, we have deleted it.

**Discussion:**

1- Paragraph 2: The discussion of genital infections should be connected to my previous concern: vaginal discharge is normal in the women cycle unless accompanied with symptoms. The discussion also should argue the need for raising awareness of women towards vaginal discharge and when they should seek help. This may be also apply to physicians if they lack this knowledge.

We agree with you. We inserted this issue in the discussion section, second paragraph (and we added a reference).

2- Paragraph 4: on which basis the authors are discussing that the difference between women reports and physicians diagnosis is anemia? were women asked about signs and symptoms of anemia? As this was not reported in table 2 or anywhere in the findings?!
We had only a few women who expressed symptoms related to anemia (weariness), as explained above. As the interview was an open question on complaints (and thus no specific question about signs and symptoms of anemia), it is not surprising that only a few women spontaneously expressed anemia related symptoms.

3- Paragraph 4: Authors’ discussion about discrepancy between women and physicians by acknowledging that physicians reported that they did not really listened to this type of complaint....etc.
I find this strange since you mentioned that physicians were trained on how to do this consultation and you included signs and symptoms of depression in your definitions in the annex.
How do you explain this? Can you mention something about this training in the methods section? who conducted it? how (method of training)? Duration?

Before starting the study, seven doctors and 9 midwives were trained as investigators by a Professor of Obstetrics and Gynecology from the Marrakech University Hospital. The 2-day interactive training consisted of teaching the standard operating procedures for interviewing and examining women and of discussing the case definitions (see Appendix 1 adapted from [25]).

Apparently, even if the doctors have been trained about standards they did not pay sufficient attention to psychological complaints. When we fed back the results to the doctors and investigators at the end of the study, they were surprised and recognized this problem. They explained this attitude due to the high workload and more interest in physical problems than in psychological problems (they did not used to listen actively).

We have integrated this opinions in paragraph 5 in discussion and in the limitations of the study.

4- In Morocco, the proportion of women who attend postpartum care is 22%. What are the reasons for such low coverage? Has anyone ever investigated this? Is it related to the place where these services are provided? Is it related to the providers? Are there alternatives in the community? i.e. outreach clinics, private physicians, home visits by midwives or community health workers...etc. Has anyone asked women why they do not attend these services? This will be interesting to include in order believing in your recommendation from this study.

The first study that has dealt with this issue is a MPh thesis of a student coached by the Principal Investigator. It is a descriptive mixed study carried out in 2013, using two pretested questionnaires. The first was administered to 205 women who recently delivered in 3 deliveryhouses (one rural), the second questionnaire to all health professionals involved in the postnatal consultation. The qualitative component consisted of 18 interviews with officials involved in maternal health, two focus groups with women and direct observation of the postnatal care.

Results: The majority of women respondents (81%) has no understanding of postnatal consultation and never attended the IEC sessions (89%); the reason for their visit to health services was for the vaccination of their newborns (91%). 50% of women were not satisfied with the consultation schedule or the lack of friendliness by health professionals.

Health professionals said that they had insufficient training (89%), were lacking supervision (66%) and experienced poor working conditions (70%).

Minor Essential Revisions:
Thanks, we have added them in the manuscript.