Author's response to reviews

Title: Early Identification of Women at Risk of Postpartum Depression using the Edinburgh Postnatal Depression Scale (EPDS) in a sample of Lebanese Women

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Author's response to reviews:

Reviewer: Barbara Yawn

1. It is not really clear if the women in the low risk group EPDS 8 or below who were followed were selected randomly or by convenience sample. This could greaterly affect the outcomes since depressed mothers may be less likely to agree to the interview. Thsi just be clearly specified.

Response: At the second assessment, the 76 women who scored #9 on the EPDS at D2 were called back, and 71 of them accepted the assessment. Concerning the 152 women who scored <9 at D2, we chose randomly among them 78 women and we called them for a second assessment at D30-40. The latter group has been considered to be a control group and has been compared with the group who scored #9 at D2. In fact, it was difficult for us to call back all the 152 women, that's why 78 women were randomly chosen among these 152 women. The whole sample selected was a convenience sample of women who attended Hotel Dieu de France hospital for delivery during the study period but the control group was selected from the subgroup of women scoring less than 9 on EPDS in a randomized manner.

In the article, the following correction was done to the methods section:
“Given the difficulty to contact on D30-40 all women included in our sample, and the need to compare women with an EPDS score #9 to those with a score < 9 on D2, a control group was randomly selected from the group of women presenting an EPDS < 9. For every woman who scored 9 or more on the EPDS, a woman who scored less than 9 on D2 was randomly selected to undergo an evaluation
on D30-40.”

The section “sample characteristics” has been modified in the following way:

At the first assessment at D2, 228 women were included in our sample from 245 who were eligible. Refusal to participate and early discharge before D2 were among the reasons behind the lack of participation in the remaining patients. From the first assessment at D2 there were two groups created by their EPDS score, the group of those having an EPDS more or equal to 9 (N=76) and the group having an EPDS less than 9 (N=152). At the second assessment, the 76 women who scored #9 on the EPDS at D2 were called back, and 71 of them accepted to participate in the assessment. As discussed previously, among the 152 women who scored < 9 on EPDS at D2, we chose 78 women randomly and we called them for a second assessment at D30-40.

2. The 25% greater risk and the correlation are weak. Yet no discussion of the potential negative impact of this is discussed. Are the authors suggesting that screening be done at D2 an not repeated?

3. Are there any negative impacts of telling a woman she may have PPD at D2 when 'Baby Blues” and effects of the delivery may affect her symptom burden?

Response to both questions:

It is true that 25% greater risk is weak but it was found to be significant in our study. We do not suggest that the usually recommended screening should be modified. Women have to be assessed by their gynecologist during the 6-8 weeks period post-partum. However, we recommend that the EPDS should be used as a screening tool on as early as D2 and that women scoring 9 or more on EPDS and those presenting a positive personal history of depression should benefit from a closer follow-up.

In the article, the following correction was made:

“Women from our sample with a score #9 on D2 postpartum had a 25% higher risk of developing PPD on D30-40 (1.25 times higher risk). A higher risk of PPD was found by Dennis et al. when the first assessment with EPDS done at one week postpartum presented a score # 9 (19). The risk of PPD at the second assessment done at the fourth week and the third assessment done at the eighth week was clearly higher (30.3 and 19.1 times higher respectively) (19). However, in the latter study, the diagnosis of a depressive episode between 4 and 8 weeks postpartum relied solely on a score of 12 or above on the EPDS with no conducted interviews to confirm the diagnosis (19). Therefore, despite the fact that an EPDS score #9 on D2 weakly predicts a PPD on D30-40, it allows us to select the patients who need a closer follow-up during the post-partum period. Yet, the limitation in this screening method will remain the high number of monitored women who will not develop PPD. Nevertheless, most of these women were pleased by the important support from the hospital's team and did not object to being interviewed again on D30-40 even though they did not develop PPD.”
In addition the following conclusion has been added:

“In conclusion, we suggest screening all women for depressive symptoms early during the postpartum period. The EPDS may be considered as a reliable screening tool on as early as D2 after delivery. Women with EPDS score # 9 and/or a positive personal history of major depressive disorder should benefit from a closer follow-up during the rest of the post-partum period”.

4. Of the 33% of those identified on D2, how many would be treated if this was done in the "real world".

Response: The main objective of our study was to determine if an elevated EPDS score at D2 is predictive of a PPD at D30-40. Treating all women with early depressive symptoms at D2 would have prevented us from reaching this objective especially that treatment of all women with early depressive symptoms is not recommended since these early symptoms could correspond to baby blues.

In the article, the following correction was made:

“Participants with a score superior or equal to 9 were evaluated before discharge from the hospital but were not treated. As a matter of fact, treatment of women with early depressive symptoms is not recommended due to the fact that these symptoms may correspond to baby blues that are prone to remit within 2 weeks after delivery especially when these symptoms are not associated with psychotic symptoms, suicidal plans or attempts (20). In order to give women with EPDS score # 9 the possibility of getting an adequate management, they were given instructions to contact the maternity department at the hospital or their gynecologist in case their symptoms persisted beyond the two weeks period or aggravated within this period.”

5. Of those with MDD diagnosed at 30 to 40 days, how many were treated?

Response: In the article, the following correction was made:

“If a woman was diagnosed with PPD on D30-40, she has been instructed to report it to her gynecologist on her next visit between 6 and 8 weeks postpartum. In addition, a letter was sent to the gynecologist informing him with the diagnosis and prompting him for psychiatric referral of his patient. All the gynecologists in our study work at the same hospital but had the choice to refer their patients to psychiatrists at our hospital or at other institutions.

So we were sure that all women were referred but we don't know what type of treatment each woman were given and what were the outcomes of such a treatment.

Minor essential:

6. This is a very unusual group of women I believe. What is the percent of women in Lebanon who have graduated from University and who have a
graduate degree? The almost 100% feeling of support---of course this is before they have actually needed the postpartum support---is very different than in most countries and could greatly affect the generalizability of the results.

Response: In the article, the following corrections were made in the discussion section:

1) “While resuming a social and productive life may seem protective against the development of PPD, it may as well be percieved by the woman as an additional burden. Moreover, the lack of family support was almost significantly correlated to the onset of depressive symptoms in our study (p=0.06). Concordantly, Chaaya et al. as well as many other authors observed an increase in the likelihood of scoring high on the EPDS score and of PPD with the lack of family and social support (7, 22, 25, 34, 35). The fact that the lack of family support, as a risk factor of PPD, tended to be significant while being found overtly significant in other studies could be partly due to the fact that women in our study were inquired regarding this factor, on D2, before they truly needed the support”.

2) “In addition, our study included women who gave birth at Hôtel-Dieu de France, a reference hospital that usually treats women from all over the country. However, during the recruitment period, the hospitalized women were mainly residents in two urban regions, Beirut and Mount-Lebanon, which could partly explain the high percentage of university graduates among them. However, with the lack of national studies assessing the prevalence of women with a higher education, we cannot clearly determine if the education level of women in our sample is significantly different from the rest of the population. On the other hand, the high rate of caesarean sections in our sample can be justified by the fact that Hôtel-Dieu de France hospital in Lebanon is considered a tertiary reference center for maternal and fetal medical problems.”

7. In many sites the threshold is 10 --->9 and not 9. What happens when the threshold is changed?

The threshold chosen in our study on D2 is EPDS score equal or superior to 9.

8. This should be accopanied by clinical recommendations. Just screening in a group that is not generalizable to the rest of Lebanon with no further recommendations could be counter-productive.

Response: In the article, the following correction was made: “Furthermore, in our study, the diagnosis of PPD was based on a semi-standardized interview along with EPDS. The use of a standardized diagnostic tool would have been more pertinent but given the fact that interviews on D30-40 were conducted over the phone instead of live interviews, completing additional scales would have been a much more difficult task.

In conclusion, we suggest screening all women for depressive symptoms early during the postpartum period. The EPDS may be considered as a reliable
screening tool on as early as D2 after delivery. Women with EPDS score # 9 and/or a positive personal history of major depressive disorder should benefit from a closer follow-up during the rest of the postpartum period.”

9. Might want to comment that the recommendations of NICE and SIGN are not evidence based in general and the recommendations for the timing of screening are opinion based by these groups. No current evidence for “rescreening” at 3 months is available.

Response: In the article, the following points were clarified:

1) “However, most of the scientific communities’ recommendations regarding the timing for screening and rescreening are not evidence based but based on experts opinion in these groups.”

2) “In Lebanon, as recommended by the WHO, women are usually asked to consult their gynecologist between 6 and 8 weeks after delivery. We decided to contact them on D30-40 so we can evaluate them before 8 weeks (20).”

Reviewer : Sarah Doucette

Major Compulsory Revisions
1) The sample and group composition is not clear from the methods section. The authors state that 228 women participated in the study from a pool of 245 women who delivered during the specified time period, meaning that 17 women refused participation. Was there further attrition at the 2nd assessment (d30-40 pp)? The n’s in table 2 go down from 152 to 78 and 76 to 71. Are these numbers different because of loss to follow-up? This is almost 50% attrition in 1 group which is very high. Because this is only in 1 group, this poses a major selection bias threat which should be addressed in the limitations. Was there any information available on the women who dropped out?

Response: Thank you for addressing this problem. As a matter of fact, we built a convenience sample of women who attended Hotel Dieu de France hospital for delivery during the study period. At the first assessment 228 women were included from 245 who were eligible. From the first assessment at D2 there were two groups created by their EPDS score, the group of those having an EPDS more or equal to 9 (76) and the group having an EPDS less than 9 (152). At the second assessment, the 76 women who scored #9 on the EPDS at D2 were called back, and 71 of them accepted the assessment. Concerning the 152 women who scored <9 at D2, we chose randomly among them 78 women and we called them for a second assessment at D30-40. Likewise, we selected a control group for the second assessment in order to compare it to the group who scored #9 at D2. In fact, it was difficult for us to call back all the 152 women, that’s why 78 women were randomly chosen among these 152 women.

In the article, the following correction was made: “Given the difficulty to contact
on D30-40 all women included in our sample, and the need to compare women with an EPDS score #9 to those with a score < 9 on D2, a control group was randomly selected from the group of women presenting an EPDS < 9. For every woman who scored 9 or more on the EPDS, a woman who scored less than 9 on D2 was randomly selected to undergo an evaluation on D30-40."

The section “sample characteristics” has been modified in the following way:

“At the first assessment at D2, 228 women were included in our sample from 245 who were eligible. Refusal to participate and early discharge before D2 were among the reasons behind the lack of participation in the remaining patients. From the first assessment at D2 there were two groups created by their EPDS score, the group of those having an EPDS more or equal to 9 (N=76) and the group having an EPDS less than 9 (N=152). At the second assessment, the 76 women who scored #9 on the EPDS at D2 were called back, and 71 of them accepted to participate in the assessment. As discussed previously, among the 152 women who scored < 9 on EPDS at D2, we chose 78 women randomly and we called them for a second assessment at D30-40."

2) The authors should revisit their objectives when writing the discussion. Rather than comment on every single risk factor examined, stick to discussing the findings from your main objectives and perhaps comment on the significant findings, or ones contrary to the literature. The discussion was difficult to follow. The authors should also be careful in over interpreting their findings. The risk factors of depressive symptoms and PPD were analyzed by unadjusted correlations and were not adjusted for multiple comparisons. Conclusions such as “maternal age has no influence on depressive symptoms/depressive episode onset are too strong for this type of analysis. Moreover, the authors need to address the implications of their limitations more in their discussion. For example, 1 of the objectives was to determine a predictive threshold for the Lebanese Population, yet the study sample was not representative of this population.

Response: All these points were taken into consideration in the discussion (kindly refer to the discussion were major modifications were made)

3) Why did the authors not compute an adjusted model? This would strengthen your analysis. Several risk factors were analyzed, but not adjusted for multiple comparisons. A suggestion would be to run a step-wise adjusted model to determine the most significant risk factors for PPD, although power would be a limitation.

Response: A stepwise regression was made.

In the article, the following correction was made:

“III.6- Multivariate Stepwise regression to identify significant factors associated with PPD.

A stepwise regression shows that an EPDS score #9 on D2 (p<0.001) and a personal history of depression (p=0.008) are significantly associated with the diagnosis of PPD on D30-40 (Table 4).”
Minor Essential Revisions

1) There are grammatical/spelling errors and inappropriate uses of verbs etc throughout the text and there are even some words in French? The authors should have the manuscript edited for English.

Response: We took this point into consideration and all the manuscript was edited for English.

2) Why was day 2 postpartum chosen? There is no explanation or rationale for this in the introduction or methods.

In the article, the following correction was made: “Most of the women admitted to Hôtel-Dieu de France are usually discharged on the second or the third day after delivery. In order for us to achieve the highest participation rate, women were asked to complete the EPDS and the questionnaire that assesses their sociodemographic parameters on D2 postpartum.”

3) How was the control group randomly created and where did the participants come from?

Response: The control group was randomly selected by a program that enabled our statistician to provide us with 78 file ID from our database for participants included at D2 scoring less than 9 on EPDS. The participants in the control group lived in Beirut and Mount Lebanon region as shown by table 1 (no significant difference for region of residency between participants with EPDS less than 9 or equal or superior to 9.

4) The authors make a statement in the introduction on line 83, “in general, demographic factors do not influence significantly the risk of PPD.” Could the authors please elaborate on this statement and provide references. Demographic factors have been found to be associated with PPD.

Response: In the article, the following correction was made: “In general, demographic factors do not significantly influence the risk of PPD although some of these variables can be considered as weak risk factors such as unwanted or unplanned pregnancy, low socio-economic status and being single (8). On the other hand, psychosocial variables such as dissatisfaction within the couple and/or lack of social support are strong predictors of PPD (8, 9). Furthermore, women with the highest risk of PPD are those with a previous history of puerperal psychosis, those with a history of PPD and those who suffered from depressive symptoms during pregnancy (8, 10-12).”

5) Was the psychiatrist conducting the phone interview blind to the different groups of women (less than/greater than a score of 9)?

Response: In the article, the following correction was made: “The telephone interviews were conducted throughout the study by a single psychiatrist (first
author of this manuscript) who knew the results of the first evaluation.”

6) In the discussion instead of “D2” there are instances of “J2” which I assume is a typo.

Response: These errors were corrected and J2 has been replaced by D2.

7) This study is longitudinal, not cross sectional as participants were followed up at a 2nd assessment time.

In the article, the following correction was made: “This is a longitudinal study where participants were assessed twice during a telephone interview: on the second day (D2) postpartum and after 30 to 40 days postpartum (D30-40).”