

We are grateful to the reviewers' valuable and helpful comments on our manuscript [NO.: 72061] with the title **"Peripartum depression and its predictors: A hospital-based study"** submitted as an original article to WJP. We have addressed all comments (point-by-point), as indicated in the attached pages and considered their corrections within the main text. We hope that the explanations and revisions of our work are satisfactory. We have highlighted the changes in the revised manuscript (yellow color).

Response to reviewer's # 1 comments

Reviewer:

Although the topic has already been addressed in other studies, this article contributes to improve knowledge in this area, taking into account the prevalence of the disease, which is not always recognized and valued. Although the results corroborate the data found in the literature on the prevalence and severity of depressive symptoms, as regards the predictors, anxiety was the only variable found. The article is well written and the results are correctly summarized. The tools seem appropriate and the sample size is quite interesting. The importance of this study lies in the need to raise awareness among patients and their families about psychiatric disorders, particularly depression, and to alert doctors to the prevalence and severity of depressive symptoms, enabling them to address depression with a view to avoiding/minimizing the consequences on the health of both mother and child.

Author:

Pages 18 and 19 (under conclusion section):

We revised the conclusions according to the reviewer's direction as follow: "There is wide variation in prevalence rates of peripartum depression from different countries. Our results showed that 20.66% had clinically significant symptoms of depression and 7.44% had the diagnosis of major depression. Although the topic has already been addressed in other studies and the results of the study corroborate the data found in the literature as regards the prevalence, predictors and severity of depressive symptoms, however, the results of this study may contribute to improve knowledge, taking into account the prevalence of the disease is not always recognized and valued. Antepartum anxiety was the only variable found as predictor for antepartum depression and also for postpartum depression together with antepartum depression and parenting stress. Therefore, screening for peripartum depression and its risks is important."

Response to reviewer's # 2 comments

Reviewer:

A reflection on the bipolar nature of these depression would have enriched the discussion.

Author:

We provided a discussion about the peripartum bipolar disorder as follow:

Page 16 (second paragraph):

"In this study, although major depressive disorder was diagnosed in 7.44% of pregnant women, neither antepartum nor postpartum bipolar disorder or history of bipolar disorder in the non-pregnancy periods was observed in the screened 968 women. This could be attributed to the fact that this is not a population-based study. It is also possible that the prevalence rate for peripartum bipolar disorder is lower than unipolar or bipolar depression^[61-63]. There are many published studies on both unipolar and bipolar postpartum depression, whereas, they are few on bipolar postpartum depression. A survey on general population of the United States estimated that a 12 month prevalence rate for postpartum bipolar disorder was 2.9%^[61]. Authors also found that many women with postpartum bipolar disorder had acute mood episodes and the risk of bipolar episodes were greater during the postpartum period than other periods of life^[62]. Wisner et al.^[63] found that among the 14% of women with postpartum depression, 22.6% actually had bipolar disorder."

Response to reviewer's # 3 comments

Reviewer:

Suggest to Indicate the study's design with a commonly used term in the title or the abstract e.g. Peripartum depression and its predictors in a hospital: Cross- sectional study

Author:

This is not a cross-sectional study, it is a longitudinal observational study. Women were recruited from the anti-natal care of the hospital. Women were interviewed in the antepartum and postpartum periods.

We revised the title as follow:

"Peripartum depression and its predictors: A longitudinal observational hospital-based study"

Reviewer:

under result: Suggest to rewrite Out of 968, 20.66% (n=200) of them had clinically significant symptoms of depression

Author:

It has been revised as follow:

"Out of 968 (mean age= 27.35±6.42yrs), 20.66% (n=200) of them had clinically significant symptoms of depression and 7.44% had major depression"

Reviewer:

Abstract's Result part: very difficult to read and suggest to rewrite.

Author:

We re-wrote as follow:

"Out of 968 (mean age= 27.35±6.42yrs), 20.66% (n=200) of them had clinically significant symptoms of depression and 7.44% had major depression. Previous premenstrual dysphoria, post-abortive depression, depression unrelated to pregnancy and were reported in 43%, 8% and 4.5%, respectively. Psychosocial stressors were reported in 15.5%. Antepartum anxiety and parenting stress were reported in 90.5% and 65%, respectively. Postpartum T3, T4 and TSH levels did not significantly differ from reference values. Regression analysis showed that anxiety trait was a predictor for antepartum ($B^{**}=0.514$, $t=8.507$, $P=0.001$) and postpartum ($B^{**}=0.573$, $t=0.040$, $P=0.041$) depression. Antepartum depression ($B^{**}= -0.086$, $t= -2.750$, $P=0.007$) and parenting stress ($B^{**}=0.080$, $t=14.34$, $P=0.0001$) were also predictors for postpartum depression."

Reviewer:

all the key words needs to be double checked with MESH under Pubmed as they were not MESH term.

Author:

Key words are all mentioned in MeSH (Medical Subject Headings), the NLM controlled vocabulary thesaurus used for indexing articles for PubMed.

Reviewer:

Background: Suggest to give different prevalence for antepartum and post-partum separately

Author:

The prevalence for antepartum and post-partum have been provided separately and related references were added. as follow:

Page 5 (lines 6-20):

"There is a wide range of prevalence rates of antepartum and postpartum depression (i.e. peripartum depression) reported from different countries worldwide, with estimates ranged from 5% to 58% or even higher^[3-19]. This is non-surprisingly attributed to different population characteristics, socioeconomic states and time and methods for evaluation. However, meta-analyses of large studies done in different areas of the world have shown that the approximate estimated prevalence is 10% to 15%^[3] for antepartum depression and 10% to 16.4% for postpartum depression^[20]. It has been indicated that the prevalence rates of postpartum depression seems closer or even similar to that of antepartum depression^[21,22]. Studies have also have shown the greater risk for being admitted to a psychiatric hospital is at the 1st month after delivery than at any time of life^[3-19]. The American Psychiatric

Association uses the term "Peripartum depression" to define major depression in its Diagnostic and Statistical Manual of Mental Disorders version 5 (DSM-5) to characterize depression which occurs in the antepartum (during pregnancy) and postpartum (within the first 4 weeks after delivery) periods^[23]. However, it has been recommended expand the diagnostic criteria from 1 month to 6 months after delivery as it has been observed that this entire period carries a high-risk for developing depression^[24]."

Reviewer:

Core tip needs to be rewrite as difficult to grasp it.

Author:

We re-wrote the core tip as follow:

"The prevalence rates of depression and anxiety are higher in pregnant women compared to non-pregnant because motherhood and family responsibilities represent additional burdens on pregnant woman. The prevalence rate of peripartum depression has been estimated to range from 5 to 58% or even higher in different nations, however, meta-analyses studies from different countries and populations reported similar approximated prevalence rate for postpartum as well as antepartum depression, which is 10 to 16.4%. A unified consensus has been made to use specific screening tools for determination of peripartum depression. Edinburgh postpartum depression scale (EPDS) is a commonly and widely used 10-item screening questionnaire with an estimated sensitivity of 75-100% and a specificity of 76-97%. Here, we estimated the prevalence of antepartum and postpartum depression for Egyptian women and determined their independent risk predictors."

Reviewer:

Methods: The design of study was wrong, the inclusion criteria were not appropriate Where is operational definition

Author:

The study design and inclusion criteria are correct and operational definitions are appropriate:

- This is a longitudinal observational study as we structured repeated observations (follow up) of the same individuals for the same variables over a period of time (the antepartum and postpartum periods) (i.e. a correlational research, repeated measures that involves looking at variables taken from the same sample at different intervals).
- This is not a cross-sectional study in which there is interviewing a fresh sample of people each time they are carried out, whereas a longitudinal study follows or measures the characteristics of the same individuals on at least two occasions over time to address directly the study of individual change and variation.

- We explained the measurements used during data collection in a clear, concise and detailed definitions to standardize the data (detailed operational definitions).
- Even before submission in the web-page of the journal, the operational definitions of the studies are mentioned in a clear manner and I have chosen Longitudinal observational to start submission.

The definition for peripartum period is clarified. We used the same definition in the inclusion criteria as follow:

Page 5 (lines 13-20), in the introduction section:

"The American Psychiatric Association uses the term "Peripartum depression" to define major depression in its Diagnostic and Statistical Manual of Mental Disorders version 5 (DSM-5) to characterize depression which occurs in the antepartum (during pregnancy) and postpartum (within the first 4 weeks after delivery) periods^[23]. However, it has been recommended expand the diagnostic criteria from 1 month to 6 months after delivery as it has been observed that this entire period carries a high-risk for developing depression^[24]."

Page 7 (lines 4-7), in the Patients and methods section (same as in old version):

"Inclusion criteria: (a) gestational age of more than or equal 6 weeks (i.e. antepartum period), (b) compliance to the study's follow-up schedule during pregnancy (i.e. antepartum period) and at least 10 to 12 weeks after delivery (i.e. postpartum period)^[21], (c) matched social, economic and educational levels, and (d) Edinburgh postpartum depression scale (EPDS) screening questionnaire scoring of at least 13, indicating presence of clinically significant symptoms of depression^[35,36]

Reviewer:

Results;

I am not sure the result was correct or not as the score for depression was continuous and no further explanation how categorization was done. Furthermore why correlation test was done between BDI-II scoring in the antepartum period and socioeconomic states ($r = -0.224$, $P = 0.001$) as socioeconomic status is a categorical data as shown in Table 1. Furthermore I am not sure Table 3 is univariate analysis for antepartum depression or postpartum depression. Thus I didn't proceed with discussion as the univariate analysis was not conducted appropriately.

Author:

Our statistical analysis is correct (as it is in the old version):

"Data were processed using SPSS for windows, version 20.0 (SPSS Inc., Chicago, IL, USA). Comparative statistics were carried out with *t*- and Chi. Square tests or ANOVA (if variables are more than two). Correlation analyses between antepartum score of BDI-II and the results of demographic, socio-economic and psychometric testing's scores were carried out with Spearman's rho correlation coefficient. Multiple logistic regression analysis was carried out to check for demographic, clinical and psychosocial factors which independently predict or associate with antepartum and postpartum depression. Significance was considered with probability value less than 0.05."

- For correlation analysis, we used Spearman's rho correlation coefficient as this test is used for continuous (quantitative data; numerical, or continuous) or categorical (qualitative data; nominal, dichotomous, or ordinal) variables. Nominal variables (non-parametric variables) describe categories that do not have a specific order to them. Ordinal (non-parametric classified and ordered variables) variables have two or more categories that can be ordered or ranked. In this study, examples of nominal variables were residence, obstetric and psychiatric characteristics. Examples of ordinal variables are the socioeconomic status (if entered as low, middle and high in the statistical analysis and not as scoring value) and educational level (none, can read, primary, secondary and high).
- We did multiple logistic and not multivariate (or multivariable binary logistic regression model) for antepartum and postpartum depression separately (table 6). We have chosen the correct statistical analysis method "Multiple logistic regression". Because multiple logistic analysis refers to more than one independent (or predictor) variables but multivariate analysis refers to more than one dependent variables.

We used multiple logistic regression analysis in our study as the dependent variable was either antepartum or postpartum depression (results were presented separately in table 6 and noted as ¶ for postpartum depression) and the independent variables were several (demographic, clinical and psychosocial factors).

This is completely different from a multivariate analysis or a multivariate regression model in which there are several dependent variables (≥ 2). In a multivariate analysis, variables with statistically significant association on univariate analysis are included in a multivariable binary logistic regression model.

Many statisticians believe that a multiple regression analysis is a univariate model.

- In this study, data were processed using SPSS for windows, version 20.0. Continuous variables were entered just as they are, but we recode categorical variables into a series of variables that can then be entered into the regression model. SPSS program has a variety of coding systems that can be used when recoding categorical variables and even the overall effect of the categorical variable will remain the same regardless to the chosen coding system.
- Correlation test was done between BDI-II scoring in the antepartum period and socioeconomic states scoring (a continuous variable) as we explained above.
- Table 3 is not univariate analysis as we explained above. This is a multiple logistic regression and not a multivariate analysis. Table 3 is just a "Comparative statistical results of symptoms of depression during pregnancy according to social, demographic and obstetric variables". In the same table, it is also obvious that these are the data during the antepartum period (1st, 2nd and 3rd trimesters).

Response to Editorial comments

- Language has been revised by a colleague with naïve language is English.
- Abbreviations; Abbreviations must be defined upon first appearance in the Abstract, Key Words, Core Tip, Main Text, Article Highlights
- Decomposable Figures (were provided and organized into a single PowerPoint file.
- Tables were formatted in a separate file as required

With this manuscript, there are 6 tables and two figures which we wish to be published.

I certify that the materials of this work "**Peripartum depression and its predictors: A hospital-based study**" have not been submitted simultaneously elsewhere and that there is no part of the text or any of the tables has been copyrighted, published, or reproduced elsewhere. I certify that all individuals included as authors of papers have contributed substantially to the scientific process leading up to the writing of the paper and its revised version.

Thank you for accepting reviewing our revised manuscript.