Author’s response to reviews

Title: Depression among pregnant women and associated factors in Hawassa city, Southern Ethiopia: an institution-based cross-sectional study, 2017

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Author’s response to reviews:

Thank you for the comments and allowing us to respond to the reviewers comment. The reviewers have raised a number of points which they believe that would improve the manuscript. We have accepted the comments and made response to their comments. If they believe the raised comments not responded in our point by point response we are well come to see it again and respond accordingly.

POINT BY POINT RESPONSES FOR REVIEWER COMMENTS

Journal: Reproductive health
Submission ID: REPH-D-18-00486
Reviewer #1: Reviewer report

Comments:

Topic: it would be good if modified ...."Depression among pregnant women and associated factors in Hawassa city, Southern Ethiopia: a facility/Institution-based cross-sectional study"

Response by Author: thank you for your nice comment and suggestion. We have accepted your comment and made modification to the Topic.

Comments:

Abstract:
- Background: kindly avoid the year '2018', as far as the study period was not cover the whole year of 2018, or you can specifically report the study period or data collection period.

Response by Author: yes off course, we have removed the year 2018. The study period was mentioned in method part of the abstract.

Comments:

- Purpose: The objective of the study was to identify factors associated with depression among pregnant women attending antenatal clinic in public health institutions, Hawassa, Ethiopia, 2018. ….. the topic reflect both the level/prevalence and associated factors but readers might be confused that the author is wondered to identify only the associated factors

Response by Author: the objective of the study was to assess the prevalence of depression among pregnant mothers and identify the associated factors with depression.

Comments:

- Methods: the study period was May to July 2017: please be consistent on write up. It creates confusion on readers. Please kindly omit the term "Random" and use Systematic Sampling.

Response by Author: thank you for your comment. The comment were accepted and modified accordingly (see abstract part)

Comments:

- Results: line 43-45 what does it mean 'poor baby father support" which baby, please? Just partner may sound for.

Response by Author: Experiencing lack of baby’s father support is one variable that helped us to depict subjective feeling of pregnant mothers towards the support given by her partner. The variable was taken from different literatures. Those women who receive partner’s support during their pregnancy well empowered to deal with their pregnancy and their home responsibility

Comments:

Methods

Setting: page 5: line 12-17 needs language revision, and the incorrect citation (see City Administration Annual Report 2011), it should be according to the journal citation format, consult the authors' guideline.
Response by Author: Thank you for your view. It was put there unknowingly. We have changed it to vancouver style of referencing.

Comments:

Age 5: line 24-28: Eligibility criteria: what does it mean having regular follow up only? What about other pregnant women who came for ANC occasionally, in addition, how can you confidently report the prevalence of depression once excluded women who have mentally ill. What if her mental illness is due to depression?

Response by Author: this is critical point to raise. We did our work thoroughly not to introduce selection bias to our study. When we say mentally patients were excluded from the study means those patients who had severe form of mental illness like bipolar disorders and unable to communicate because of their illness and their capacity to decide. Apart from this, all cases were included in the study irrespective of their status.

Comments:

Data collection instrument: reports of sensitivity, specificity and Cronbach's alpha, is that from your finding or from other study? Seem from other study and cited, but how do you look at the similarity of the setting in terms of geographical, culture and other related factors. It would be good if you report the reliability estimate of your finding.

Response by Author: we didn’t conduct detailed validation on sensitivity and specificity. However, in our pretest, we measured of internal consistency (Cronbach's alpha), It is considered to be a measure of scale reliability. Edinburgh Postnatal Depression Scale was validated in Ethiopia by other study. List of threatening experiences (LTE) and the Oslo Social Support Scale item 3 have been used in a population level study in Ethiopia mostly. In addition to this, we had conducted reliability in our pretest for LTE (Cronbach's α = 0.90) & OSS3 (Cronbach's α = 0.88).

Comments:

- Sampling procedure should be clearly described in the method section. I was wondering that how do you recruit study participants, how many pregnant mothers were recorded, and how many of them were eligible for your study, how many pregnant women were approached, how many pregnant women were interviewed, how many of them refused, incomplete or excluded but hardly to get it in the manuscript, at least a piece of information about sampling procedure…. Kth or interval/pattern to recruit participants using SYSTEMATIC SAMPLING???. How did you estimate or calculate the sample size, nothing is reported here.

Response by Author: Thank you for your comment and questions. All the health facilities were included in the study. Among 643 (six months data) pregnant mothers who had follow up at
ANC clinics, 320 pregnant mothers were recruited for the study. A total of 317 pregnant mothers were interviewed. Pregnant mothers allocated to their study institutions proportionally. Study participants were included using systematic sampling technique (every 2 mothers). 3 pregnant mothers were excluded from the study.

Comments:

- What did you do to monitor your study or to maintain the good quality of your study, data and findings?

Response by Author: Training was given for data collectors and supervisors. Pre-test was done on 10% of the total sample at Tula health center, to check clarity of the instrument. The data was collected by properly trained nurses and regularly supervised supervisors. The principal investigators and supervisor were reviewed, checked the completeness of the data on daily basis and necessary feedback was offered to data collectors at the end of each collection.

Comments:

Results:

- Sociodemographic- variables: it is sad to see ethnicity as a factor or independent variable for a scientific curiosity. If so, how did you assess or manage its confounding effect of the ethnic based conflict has been arise between Sidama (See 145 (45.7%) Sidama by ethnicity) and Wolaita in Hawassa city almost during your study period, and also a violence and internal displacement around Hawassa. In that case, internally displaced people may came for ANC to your study site/facilities, so how did you handle it as covariate?

Response by Author:

Thank for your comment. We have included not to see the effect, it was included just as part of socio-demographic characteristics. Though it has no effect in the outcome variable, we included it to see the descriptive statistics. The conflict between the two nations happened in June/2018 not in 2017. Our data collection period was in May -July 2017. In general your comment, sounds well and I will not consider such variable in the future.

Comments:

- Table 1: What was the standard to categories participants age (very unusual), income in Birr (kindly make it in USD and look at the level of income as an international standard), because many readers may not understand Birr and its value? Education, please use grade level otherwise primary, secondary and preparatory may have different meaning in different countries. Discussion: avoid duplicating reports from results section.
Response by Author: thank you for your comment. Regarding age category, we have taken this category from other similar studies. In addition to this, the occurrence of depression differs in the mentioned categories. In age group of 20-30 it commonly occurs while in above 30 it rarely occurs. We have corrected the education background and currency. We have edited the discussion part accordingly.

Reviewer #2 Comments:

Comments:

A very good article. It would be enriched by correcting the grammatical mistakes and completing the sentences.

Response by Author: we have edited the manuscript for English language readability and grammar.

Comments:

In addition ensure that the information is consistent e.g. social support effect on antenatal depression- in one area it was said that it has no effect yet the data and other comments show a different picture.

Response by Author: we have corrected the raised issue accordingly. Thank you!

Comments:

It would be helpful for readers who are not from Ethiopia to know the equivalent Birr to USD for better comparison and understanding.

Response by Author: we have corrected the raised issue accordingly. You can get this information in the Table 1.

Comments:

It would also be useful to have more comprehensive recommendations on management of ANC depression.

Response by Author: we have corrected the raised issue accordingly.
Reviewer #3 Comment:

Comments:

Introduction:

1. More attention should be given toward proofreading, for instance, it should be 'low- and middle-income countries' not 'low and middle income countries'. The first sentence needs correction 'Depression is a common ……… ' not 'depression is common'.

Response by Author: we have corrected the raised comments at the introduction part

Comments:

2. It told about known negative consequences of depression not about the known determinants, please mention.

Response by Author: thank you for your comment. Our study objective is to determine the prevalence and factors associated with antenatal depression that is why we are interested in writing the consequences of depression in pregnant mothers. However, there are many more determinants to mention. There are biological, psychological and socio-economic determinants. Each subclass has its own determinants and consist of 4-7 each. We thought to include this determinants in our introduction part however we afraid of making our introduction part cumbersome.

Comments:

Methods

1. Please mention how other variables like age, marital status, religion, education, occupational status or monthly income were obtained. How did you obtain those information? Self-administered questionnaire or interviewer-administered questionnaire? Paper or automated questionnaire?

Response by Author: we have obtained those mentioned variables from different literatures and our professional experiences. We have used interviewer administered questionnaires. Our data collection tool has socio-demographic and obstetrics variables which was collected by semi-structured questions, social support variable was assessed by standard tool called Oslo social support (item3) scale and depression was by Edinburg postnatal depression scale.

Comments:
2. Clarify the operational definitions of categorical variables like education level. For instance, how many numbers of years are required to complete primary education?

Response by Author: Thank you for your comment. We have modified the education status of the respondents just by mentioning with their grade level.

Comments:

3. How the sample size was determined? There should be a posthoc power calculation if it was not determined.

Response by Author: Among 643 (six months data) pregnant mothers who had follow up at ANC clinics, 320 pregnant mothers were recruited for the study. We put together all variables of interest and calculated the sample size for each factors/variables. Finally taken the large sample size of the group which is 320. A total of 317 pregnant mothers were interviewed. Pregnant mothers allocated to their study institutions proportionally. Study participants were included using systematic sampling technique (every 2 mothers). 3 pregnant mothers were excluded from the study.

Comments:

4. In abstract, the authors mentioned that they used systematic sampling but in the main text it was not mentioned.

Response by Author: Thank you for your comment. You may get this information under the methods section in sub-title of study setting and population of the last line.

Comments:

5. How the quality of the data was ensured? Data processing and analyses

Response by Author: Training was given for data collectors and supervisors. Pre-test was done on 10% of the total sample at Tula health center, to check clarity of the instrument. The data was collected by properly trained nurses and regularly supervised by supervisors. The principal investigators and supervisor were reviewed, checked the completeness of the data on daily basis and necessary feedback was offered to data collectors at the end of each collection. The coded data was checked, cleaned by entering into Epi Info version 7 and exported into Statistical Package for the Social Sciences (SPSS window version 22) for analysis. Descriptive statistics was employed to estimate the prevalence of antenatal depression. Binary Logistic regression analysis was conducted to assess the relationship between each independent variable and dependent variable. The strength of association was measured by odds ratios with 95% confidence intervals. A statistical significance was declared at P <0.05.
Comments:

1. How did you select the variables to conduct into the multivariable model?

Response by Author:

Variables with p-value less than 0.2 during bivariate analysis and Potential confounders (important) variables were entered into binary logistic regression model to identify the effect of each independent variable with the outcome variables.

Comments:

2. I don’t see anything about multiple regression but you did it.

Response by Author: We tried to show the multiple regression through the table 4. We have entered variables with p-value of less than 0.2 and potentially important variables to multivariable model and put the output in the table 3.

Comments:

3. I am wondering why there was no missing data.

Response by Author: we had thorough and organized monitoring of data cleaning, coding and entry. There was daily entry of data and supervision this might helped us more.

Comments:

Results

1. Mention the unit of monthly income in Table 1.

Response by Author: thank you for your comment. We have edited this part and modified the currency to US dollars.

Comments:

2. Table 1, the total of the numbers of age groups is higher than 317 (108+171+49). Please recheck. Check other numbers and percentages. There are many discrepancies.

Response by Author: thank you for your careful observation. We have corrected it now and checked others for the same issue.
Comments:

3. Mention the full forms of the abbreviations in the footnotes of Table 3.

Response by Author: Thank you for your comment. We have modified it accordingly.

Comments:

4. Again, check the section of 'Factors associated with..' , you need to do proofreading. Also mention some numbers in that section (like you did in the abstract).

Response by Author: Thank you for your comment. We have modified it accordingly.

Comments:

Discussion

1. Without just mentioning the findings that were in agreement with past research explain the results. For instance, why the 'experience of stressful event related to …' were significant? Need that for all the factors.

Response by Author: Thank you for your comment. We have modified the discussion part of the manuscript based on the comments given.

Comments:

2. Please elaborate the implications of the findings.

Response by Author: We have accepted the comment.

Comments:

3. I don't see any strengths and limitations. Please mention that.

Response by Author: We have mentioned the limitation of the study immediately below conclusion in the main document.

Reviewer #4 comments:

Comments:
1) Page 3, line 24 and page 6, line 51 and page 7, line 18 - Please explain what "good family feeling on current pregnancy" meant? Is this a validated measure?

Response by Author: thank you for your comment. We have included this issue by considering the previous literatures. It is single variable which depicts the subject feeling of the family towards the current pregnancy. We have it closed ended questions with the subjective response of poor or good. This might be taken as the limitation of the study.

Comments:

2) Page 4, lines 6-12 - awkward long sentence, please rework. Remove "sinful" feeling

Response by Author: we have accepted the given comment and modified the sentence accordingly.

Comments:

3) Page 4, line 30 - Child health outcomes is mentioned. Please elaborate on what types of outcomes.

Response by Author: depression has been associated with many poor outcomes, including maternal, child and family unit challenges. Infants and young children of depressed mothers are more likely to have a difficult temperament, as well as cognitive and emotional delays. Effects of maternal depression on the health of the infant range from the physical and physiological to the psychological and behavioral. Growth of the fetus has been found to be at risk when mothers suffer with depressive symptoms. Thus, low birth weights and weights small for gestational age have been reported for these mothers. Pre-term deliveries and shorter gestations have also been associated with depressive symptoms.

Comments:

4) Page 4, line 34-36 - What is the influence on postnatal depression? Increases? By how much?

Response by Author: antenatal depression has 5-10% risk on the future postnatal depression. Antenatal depression is associated with an increased risk of PPD in women. For example, a study conducted in Canada found a two-fold increase in PPD in women who had a previous history of depression.

Comments:

5) Page 4, line 48 - Explain the statement that "the research in this area is minimal". Please back up this statement with evidence and clarify in LMICs. Did authors do a literature search on the
topic in LMICs? If so, please describe findings. If not, this statement is not supported. Fisher et al (2012) could be used as a reference to support but ideally, need more of a literature review to make the statement.

Response by Author: yes you are right. We have corrected the statement with ‘Although depression has serious impact in pregnant mothers, per our literature review the research in this area is low’

Comments:

6) Page 5, line 7-9 - Justify why this time period for data collection. Elaborate on how this time period was chosen and how three months was decided to be enough time. Justify why this time period is believed to be similar to other times of the year and if seasonality could be an issue.

Response by author: the data time was selected based on our work load. Two of the study investigators are researchers in Hawassa University, we were busy with other university tasks and we made data collection time on May-July, to get more appropriate time, the courses delivered by us mostly given from January –march in the block plate form. So, we decided the data collection time on May-July. In addition, based on the report from health department of the city, many more pregnant mothers come to the ANC from May – September interval. In this season much large amount of pregnant mothers come for ANC service. To get the required sample size we need three months of data collection period.

Comments:

7) Page 5, line 18 - What is the poverty line in SNNPRS, in Ethiopia?

Response by author: the poverty line for SNNPRS was 38.2 % in 2005.

Comments:

8) Page 5, line 21 - Describe how systematic random sampling was completed

Response by author: Among 643 (six months data) pregnant mothers who had follow up at ANC clinics, 320 pregnant mothers were recruited for the study. A total of 317 pregnant mothers were interviewed. Pregnant mothers allocated to their study institutions proportionally. Study participants were included using systematic sampling technique (every 2 mothers). 3 pregnant mothers were excluded from the study.

Comments:

9) Page 5, line 38 - Add reference to statement about how EPDS has been validated
Response by author: We have put the reference. EPDS is a 10 item questionnaire, scored from 0 up to 3 (higher score indicating more depressive symptoms), that has been validated for detecting depression in ante partum and postpartum samples in many countries. The instrument was validated in Addis Ababa for postpartum use and showed sensitivity of 84.6 % and specificity of 77.0 % at the cutoff score 7/8 (12). The cutoff point of EPDS among pregnant women is usually higher than postpartum women (13).

Comments

10) Page 5, line 40 - EPDS was validated for detecting post-partum depression in Addis Ababa. Justify its use for antepartum. See Kozinsky et al 2015 (Kozinszky Z, Dudas RB. Validation studies of the Edinburgh Postnatal Depression Scale for the antenatal period. Journal of affective disorders. 2015 May 1;176:95-105.) who found inconclusive validity of EPDS for antenatal period

Response by author: Yes we can use EPDS for antepartum depression assessment. In our reference no 13 you can get a systematic review of studies validating the Edinburgh Postnatal Depression Scale in antepartum and postpartum women, this study conveys the use EPDS in antenatal depression. In addition to this one Nigerian study on ‘Validation of the Edinburgh Postnatal Depression Scale as a screening tool for depression in late pregnancy among Nigerian women’ also supported the validity of the scale.

Comments:

11) Page 6, line 6 - Add citation for common use of the Oslo 3-item social support scale. Also, are there any previous studies completed in Ethiopia? It was tested in Norway and other countries in Europe. Has it been validated for LMICs use?

Response by author: Yes off course it was not tested in Ethiopia. It was validated in Nigeria (http://mjpsychiatry.org/index.php/mjp/article/viewFile/264/195). In addition to this, it has been used in a population level study in Ethiopia mostly.

Comments:

12) Page 6 - results - Was there any impact of gestational age?

Response by author: Per our literature review, antenatal antidepressant use was associated with lower gestational age at birth and an increased risk of preterm birth. However, Presence of depression not associated with gestational age. These results suggest that medication status, rather than depression, is a predictor of gestational age at birth. Further studies were recommended.
Comments:

13) Page 3, line 24 and page 6, line 51 and page 7, line 18 - First, change lose to lost and secondly clarify "history of lose new born child". Does this mean perinatal deaths or neonatal deaths up to 28 days?

Response by author: we used history of lost new born child as history of perinatal death.

Comments:

14) Page 7, line 48 - the 20-30 age bracket is also the largest age group. How was that taken into account for the analyses?

Response author: thank you for your comment. Regarding age category, we have taken this category from other similar studies. In addition to this, the occurrence of depression differs in the mentioned categories. In age group of 20-30 it commonly occurs while in above 30 it rarely occurs. However, we admit this as one of the study limitation.

Comments:

15) Page 7, line 52 - explain possible reasons why this study was in line with other studies.

Response by author: we added the possible reasons to the explanations. We have revised the whole discussion part based on this comments.

Comments:

16) Page 7, line 48, line 54 and page 8, line 6 and page 8, line 12 and page 8, line 24 and page 8, line 28 - Include (AOR and CI 95%)

Response by Author: Thank you for your comment we have corrected the discussion part accordingly (see discussion part). However, one of the reviewers (reviewer 1) informed us not to repeat the results in discussion section.

Comments:

17) Page 7, line 56 - which low resource settings

Response by Author: it was to mean low income countries. We have corrected this by appropriate terms. (See discussion part)
Comments:

18) Page 7, line 8 - "This finding was in agreement with other study findings" - Where? What other studies?

Response by Author: we have discussed this issue in the discussion part of the manuscript. (See discussion part)

Comments:

19) Page 8, line 32 and 34 - Social support was described in the results section (Page 7, line 20) as not significantly associated, which contradicts the statement in the discussion that "antenatal depression was significantly higher among pregnant mothers who had poor social support than women who had good social support".

Response by Author: thank you for your thorough looking! We have put mistakenly as if social support not statistically significant. We have now corrected the mentioned mistakes.

Comments:

20) Page 9 - Better brainstorm of limitations is needed. For example, one limitation is that the study excludes women who are not attending ANC who may also have higher or lower rates

Response by author: we have mentioned our study limitation in our previous submission. We have accepted the comment and modified the limitation of the study accordingly (see study limitation)

Other comments

All other grammar and editorial comments were accepted and document was modified based on the comment.

Thank you so much!