Author’s response to reviews

Title: Correlates of depressive symptoms in late middle-aged Taiwanese women: Findings from the 2009 Taiwan National Health Interview Survey

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Author's response to reviews:

We are very pleased to have an opportunity to revise our manuscript entitled “Correlates of depressive symptoms in late middle-aged Taiwanese women: Findings from the 2009 Taiwan National Health Interview Survey” for consideration of publication in the BMC Women’s Health.

The following is our point-by-point response to all the comments from the reviewers.

We hope that the revision will meet with approval.

Reviewer #2’s comment #1:

Revised as suggested. The only discretionary thing is that according to international standards by the World Health Organization, the BMI-category between 25 and 29.9 is termed "preobese" (or, as noun: "preobesity"): see Table 2.1. in http://www.who.int/nutrition/publications/obesity/WHO_TRS_894/en/ or the information on
Response to Reviewer #2’s comment #1:

We thank Reviewer 2 for this comment and we have changed the terminology accordingly.

Reviewer #3’s comment #1:

For this new research question I consider that a different statistical approach should be used. As I understand, the new research question has a descriptive character. The aim of the authors is to report the prevalence of depressive symptomatology in a population-based sample and investigate associated socio-demographic and health characteristics. For that reason, I would prefer to see only descriptive statistic and no exploratory analysis.

Response to Reviewer #3’s comment #1:

We appreciate Reviewer 3’s suggestion. The aim of our study was to investigate the correlates of depressive symptoms in late middle-aged Taiwanese women. Therefore, the use of exploratory analysis is necessary to achieve our study aim. For readers who are interested in the descriptive part of our findings, they can ignore our statistical inference.

Reviewer #3’s comment #2:

Again Table 1 needs no p-values; there are no hypotheses behind that arbitrary testing. The reader can see whether depressed mood participants or non-depressed participants are similar or different on those characteristics independently of statistical significance.

Response to Reviewer #3’s comment #2:
The aim of our study was to investigate the correlates of depressive symptoms in late middle-aged Taiwanese women. Therefore, the comparison in Table 1 between the two groups was planned ahead. For readers who are interested in the descriptive part of our findings, they can ignore our statistical inference.

Reviewer #3’s comment #3:

Furthermore, the choice of an automated backward selection is not clear to me. The use of automated backward selection has been severely criticized and it is recommended not to use it to take decisions about inclusion of covariates in a model (McNamee R, Occup Environ Med 2005; 62:500-6). If a variable is a possible confounder, you need to control for it independently of the statistical significance. For example in the association between being married and depressive symptoms, a variable such as age could be a confounding factor. When analyzing the association between marital status and mental health, it is important to account for the mental health problems related to the age of people who get divorced (maybe younger or older as the others). As a final point, many of the variables included (and probably several from those excluded) in the multivariate model are collinear, which impacts the validity of the model.

Response to Reviewer #3’s comment #3:

We agree with Reviewer 3 that the automated backward selection method, without subject matter knowledge and judgment, may not result in a sensible regression model. During the multiple regression model development, we did not solely rely on the automated procedure. We also manually forced excluded variables such as age in the model to evaluate whether it would materially change the estimates of other included variables. Regarding the issue of collinearity, we had used the variance inflation factor (VIF) to quantify the severity of multicollinearity. The results showed that the VIF associated with all the included variables ranged from 1.03 to 1.13, which indicated that multicollinearity is not a concern in our model.

Reviewer #3’s minor point #1:
Psychological climacteric symptoms includes depressed mood. I would suggest removing that item, to avoid the item's correlation with the depressed symptomatology.

Response to Reviewer #3’s minor point #1:

The overall depressive symptoms were measured by a 10-item Chinese version of the Center for Epidemiologic Studies Short Depression Scale (CES-D). Psychological climacteric symptoms, while including depressed mood, it also included anxiousness, dysphoria, panic attacks, forgetfulness, and other psychological changes. These symptoms were specifically related to those with climacteric symptoms. Moreover, as seen Table 1, the variable psychological climacteric symptoms was not significantly different between women with and without depressive symptoms. Therefore, the item correlation between psychological climacteric symptoms and depressed symptomatology is not strong. In fact, the Spearman’s correlation coefficient between the two variables was only 0.039 (p = 0.384).

Reviewer #3’s minor point #2:

Do you have information on social support? It would be very valuable to include it on the analyses.

Response to Reviewer #3’s minor point #2:

We thank Reviewer 3 for this suggestion. Unfortunately, the questions included in the NHIS do not contain information on social support.

Reviewer #3’s minor point #3:

The association between physical activity and depressed mood could also be due to reverse causality.
Response to Reviewer #3’s minor point #3:

We agree with Reviewer 3 that the direction of causality between physical activity and depressed mood could be in both directions. Unfortunately, the cross-sectional design of our study limits the ability to assess the direction of the temporal relationship.

Reviewer #5’s comment #1:

Authors have introduced a new factors into the analysis "somatic climacteric symptoms" and "psychological climacteric symptoms". It is surprising that "psychological symptoms" including an item "feeling depressed" is NOT significantly associated with "depressive symptoms" assessed by CES-10. Authors should definitely elucidate this discrepancy in the discussion section.

Response to Reviewer #5’s comment #1:

We thank Reviewer 5’ comment. While the variable “psychological climacteric symptoms” includes “depressed mood”, other psychological climacteric symptoms – anxiousness, dysphoria, panic attacks, forgetfulness, and other psychological changes were also included. This is not too surprising since CES-10 was used to assess the overall “depressive symptoms” and the variable “psychological climacteric symptoms” assessed only climacteric-related psychological symptoms. In fact, the Spearman’s correlation coefficient between “depressive symptoms” and “psychological climacteric symptoms” was only 0.039 (p = 0.384). We have added a description of this observation in the Discussion section of the revised manuscript.

Reviewer #5’s comment #2:

As I have mentioned in the previous review, menopausal transition is the most critical period for the middle-aged women to get depressed. Therefore, it is inevitable to include menopausal status in the multivariate logistic regression analysis. Of course the reviewers know why the authors couldn’t do that, but they should explain why to the readers in the discussion/limitation section.
Response to Reviewer #5’s comment #2:

We appreciate the comment from Reviewer 5. We have revised the limitation section to indicate that the risk of suffering from depression or depressive symptoms is known to increase during menopausal transition and why menopausal status was not included in our analysis (based on the comments from Reviewer 5 in the previous round of review).