Reviewer's report

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

Version: 2 Date: 24 Nov 2016

Reviewer: Maria Elena Lacruz de Diego

Reviewer's report:

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.

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.

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.

Minor points:
Psychological climacteric symptoms includes depressed mood. I would suggest removing that item, to avoid the item's correlation with the depressed symptomatology.

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

The association between physical activity and depressed mood could also be due to reverse causality.
Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

No

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

No

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

No

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I am able to assess the statistics

Quality of written English
Please indicate the quality of language in the manuscript:

Acceptable

Declaration of competing interests
Please complete a declaration of competing interests, considering the following questions:

1. Have you in the past five years received reimbursements, fees, funding, or salary from an organisation that may in any way gain or lose financially from the publication of this manuscript, either now or in the future?

2. Do you hold any stocks or shares in an organisation that may in any way gain or lose financially from the publication of this manuscript, either now or in the future?

3. Do you hold or are you currently applying for any patents relating to the content of the manuscript?
4. Have you received reimbursements, fees, funding, or salary from an organization that holds or has applied for patents relating to the content of the manuscript?

5. Do you have any other financial competing interests?

6. Do you have any non-financial competing interests in relation to this paper?

If you can answer no to all of the above, write 'I declare that I have no competing interests' below. If your reply is yes to any, please give details below.

No competing interests

I agree to the open peer review policy of the journal. I understand that my name will be included on my report to the authors and, if the manuscript is accepted for publication, my named report including any attachments I upload will be posted on the website along with the authors' responses. I agree for my report to be made available under an Open Access Creative Commons CC-BY license (http://creativecommons.org/licenses/by/4.0/). I understand that any comments which I do not wish to be included in my named report can be included as confidential comments to the editors, which will not be published.

I agree to the open peer review policy of the journal