Reviewer's report

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

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Reviewer: Masakazu Terauchi

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It is disappointing that the authors seem to be satisfied stating that "... the presence of psychological symptoms ... did not appear to increase the risk of depressive symptoms. This finding is not too surprising since the CES-D 10 was used to assess overall depressive symptoms whereas the variable "psychological climacteric symptoms" focused only on climacteric-related psychological symptoms (P12 L216-)." The items on the authors' "psychological climacteric symptoms", namely "anxiousness, dysphoria, panic attacks, feeling depressed, and forgetfulness" have been repeatedly shown to be associated with, or almost identical to, the depressive symptoms, such as listed on CES-D 10. It would not be likely that a woman answers differently to these two questionnaires just because one is general depression checklist and the other is one focusing on menopause. The authors should definitely elaborate on why these two closely associated variables have so low correlation coefficient, as this kind of contradiction undermine the study's credibility.

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.

Yes

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

Unable to assess

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

Yes

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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

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