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: Amanda Deeks

Reviewer's report:

This is a study that considered diabetes and depressive symptoms in postmenopausal women. A number of previous studies have established higher rates of depressive symptoms in men and women with diabetes. The authors are correct that there is less known about the association with menopause. Unfortunately the authors focus more on diabetes and depressive symptoms and our understanding of the experience in postmenopause is not really confirmed or discussed fully in the current manuscript: there is just not enough of an argument as to why menopause has been included and sadly, this is a missed opportunity.

The authors fail to establish how menopausal status was confirmed. What questions were asked to confirm menopause, were women on HRT or women who had a surgical menopause included? These are all factors likely to impact on the experience of depression. The only reference to menopausal status was on page 6, Line 14 "In addition, women (n=31) who still had regular menstruation at the time of the survey interview were excluded." What about women who had irregular menstruation who were likely to be perimenopausal? Perimenopause is known to be a time of hormonal swings and this increases mood swings, depressive and anxious symptoms. Not including a definition or reference to the methodology to determine menopausal status is a major flaw and disappointing given that the study was "investigating the association between diabetes and depressive symptoms in postmenopausal Taiwanese women…" It would be better to delete references to postmenopause and instead focus on age.

One of the few references to the impact menopause may have on depression is on page 4 Line 33-39. The authors refer to a paper by Soares 2013 and state that "the changes in sex hormone profile and the dysregulation of the hypothalamic-pituitary-adrenal (HPA) axis associated with menopause may also contributed to an increased risk of depression in women." This is misleading. The issue of depression and menopause is very complex which is discussed by Soares and more likely in women who have a sudden withdrawal of hormones as in women who have had a surgical menopause. As this is one of the few references to menopause and depression the authors have missed an opportunity to explore the complexity of this issue.

There is also little reference made to diabetes and menopause and yet there have been a number of studies that have explored this previously such as the increased risk in postmenopause due to changes in adiposity and the metabolic profile.
Menopause status, depression and diabetes is a complex area of investigation and is worthy of further understanding. I am not sure the authors can conclude given this was a cross-sectional study based entirely on self-report that menopause and diabetes "...can increase the risk of depressive symptoms in women." Page 13, line 4-7. It is a much more complex story than currently discussed in this paper.

If the authors change the focus to be about age or include more fully the discussion of how menopause was established and the complexity of its role in depression then this paper would be improved.

**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?**
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No

**Are the conclusions drawn adequately supported by the data shown?**
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No

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