Reviewer’s report

Title: Memory Complaints and Depressive Symptoms Over Time: A Construct-Level Replication Analysis

Version: 0 Date: 03 Oct 2019

Reviewer: Rick Kwan

Reviewer's report:

Some unclear messages in the manuscript:

In the background:

1. Why bidirectional relationship is more important/significant to understand compared to the concurrent relationship between depressive symptoms and memory complaints? These relationships have been examined for many years repeatedly. Why is the current understanding on the relationship between depressive symptoms and memory compliant insufficient for clinical/policy decision making?

2. Again, how does your integrative analysis overcome the methodological problems in the previous studies? You have described how you did the analysis without clearly saying how this method is better than the previous methods. This is very important because these relationships have been well-studied. You are advised to justify very clearly how your method produces robust conclusion compared with the previous ones.

3. What are the objectives or hypothesis in this manuscript?

Methods:

1. In the HRS data set, you mentioned that you removed 92 Hispanic individuals due to extremely unbalanced sample size. What do you mean by unbalanced sample size, unbalanced race groups? unbalanced sample size between HRS and NHATS? Given your sample size is large, does this 92 subjects make a difference?

2. Covariates: how do you justify the selection of the covariates?

3. Statistical analysis: It is clear in terms of what methods you have used. However, it is unclear how your methods are used to answer the research questions that you intended to ask.

Results:
1. In table 3, there are four models (NHATS HRS NHATS HRS), how are they different from one another? Please specify them in the table.

2. What is the information about the number of follow-up times, and years between the follow-up times?

3. Your results showed that depressive symptoms are not predictive of future memory complaint. How do you explain/guess that this finding is different from that reported in the previous study that people with depressive symptoms are associated with higher risk of cognitive decline? e.g., Paterniti, S., Verdier-Taillefer, M., Dufouil, C., & Alpérovitch, A. (2002). Depressive symptoms and cognitive decline in elderly people: Longitudinal study. British Journal of Psychiatry, 181(5), 406-410. doi:10.1192/bjp.181.5.406

Discussion:

1. What is the "new" that you have found? You repeatedly reported that your findings are consistent with the previous studies. It is no wonder because this is a very well-studied topic.

2. Again, you mentioned the strength of the integrative analysis (e.g., consistency across results were not due to differences in covarites/predictors). Then, how is your result different from the previous results after adopting this robust analysis method? If it comes up with a similar result with a more robust method to enhance our confidence, say it so.

3. Again, there is a lack of implications to clinical practice, research, and policy making from your findings. What changes do you expect to see by knowing what you have found?

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.

Yes

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

Yes

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

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