Reviewer’s report

Title: Association of environmental and sociodemographic factors with life satisfaction in 27 European countries

Version: 0 Date: 10 Jul 2018

Reviewer: Angela Chow

Reviewer’s report:

This study examined the effects of sociodemographic, macroeconomic, and environmental factors on life satisfaction. Following are my comments. I hope my comments can help to further improve the manuscript.

P.3. Line 17. The texts about the reciprocal association of life satisfaction and mental health should be put right after "Several studies have demonstrated that low life satisfaction is a predictor of depression".

P.3 Line 19. Life satisfaction is not commonly operationalized with single-item measures. There have been some discussion whether or not single-item measures could be function as reliable and valid tool for capturing life-satisfaction. Nevertheless, there are some initial findings showing single- and multiple-item scales work similarly.

Measures of Life Satisfaction and analysis. This is my biggest concern. Why the researchers had to combine "very satisfied" and "fairly satisfied" into one category and "not very satisfied" and "not at all satisfied" into another category? The mult-level regression could be run by using one response (e.g., "very satisfied" or "not at all satisfied") as the reference, without any manipulation (combination) of the original data. Although additional analysis using an alternative grouping of responses were reported, this approach is not preferable especially no valid reasons for the combination of responses were given. Please consider to redo the analysis using the original data.

P.6. "Sociodemographic factors" section. Is it possible to add educational level into the model? Education has impact on life satisfaction above and beyond financial difficulties (or income).

P.6. "Environmental factors". How about natural crisis/disasters such as storm, snow storm, and earthquake?

P.7. Please compare individuals with complete and missing data (i.e., check attrition bias).

P.16. "Consistent with existing literature, our findings indicate that males, middle-aged individuals and unemployed individuals are more likely to report lower levels of satisfaction with life." Indeed, research on lifespan development has shown life satisfaction does not necessarily drop at midlife.
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.

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 recommend additional statistical review

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.

I declare that I have 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.