

Reviewer's report

Title: Environmental exposures and their genetic or environmental contribution to depression and fatigue: a twin study in Sri Lanka

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Reviewer: Marieke Wichers

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Manuscript 'Environmental exposures and their genetic or environmental contribution to depression and fatigue: a twin study in Sri Lanka'

This is a very interesting and unique twin study. The number of participants is impressive. In addition, it is one of the few studies examining mental illness in a low-income country. It is well-written and a lot of attention is given to potential confounding influences and interpretation of findings (e.g. with respect to GE correlation and reverse causation). The methods are statistically sound. In my opinion, this study, especially by combining ACE modeling with examining the sources of environmental influences, is an important contribution to the scientific literature. I have only a few minor comments (discretionary revisions):

1. Although the sample size is large, for some analyses, as mentioned in the discussion, there was still too little power. Why did the authors not additionally include a continuous measure of depressive symptomatology? In case, the authors have no such dimensional scale of depressive symptoms available, they could use number of DSM-IV clinical symptoms of depression.

2. It would also have been very interesting in this data set to examine GE interaction using ACE modelling. The continuous moderator method of Shaun Purcell could be used to model interactions with A, C, E on the one hand and a continuous exposure variables on the other. Also, GE interaction with dichotomous exposure variables could be interesting.

Level of interest: An article of importance in its field

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:

I declare that I have no competing interest