Reviewer's report

Title: Searching for the optimal number of response alternatives for the distress scale of the Four Dimensional Symptom Questionnaire

Version: 3 Date: 07 Nov 2018

Reviewer: Adrian Alacreu-Crespo

Reviewer's report:

In my opinion, the authors performed a good job answering the recommendations, the article is more clear and people who are not familiarized with psychometric and the IRT can read this article and understand it.

After the review of this paper I think that is in general suitable for publication, but I only have a final of recomendation after publication:

- Is about the discriminant validity, in the response, authors said that to asses discriminant validity the choice measure to evaluate this validity (in this case neuroticism) should be a construct related with the objective construct (distress) but to a lesser degree than the measures uses to asses convergent validity. Indeed in the Measures, measurements, and types of scales scores section you explain that neuroticism should have lower correlations with distress to asses better discriminant validity. However, in the results section both, GHQ (that is used as convergent validity measure) and Neuroticism show both high correlations coefficients and high significance in this correlations (p < 0.1), and authors interpret the high GHQ correlations as a measure of convergent validity, but also, the high neuroticism as a measure of divergent validity. Then, my problem is in the interpretation of this as divergent validity, I think that your results here show neuroticism convergent with the distress scale. Then, you have two options, step back and explain neuroticism as a convergent validity measure (I probide a reference in the last review that can explain that theoretically; Ploubidis & Frangou, 2011), or preferably, explain that you fail in obtain the discriminant validity with neuroticism and that relationship show this scale as convergent with distress, in discussion and results. Finally, revise the Table 3, you put Neuroticisme instead of Neuroticism.

Finally, I congrat authors for the paper, and I encourage them to perform the invariance analysis with adolescent, but also, to analyze more in deep the prospective relationships between distress and the health/stress measures because I think that they have great information and a big sample to investigate really interesting predictive models.
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.

Not relevant to this manuscript

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