Reviewer’s report

Title: A psychometric appraisal of the DREEM

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Reviewer: Arnoldo Riquelme

Reviewer’s report:

This article is well written, the statistical analysis is simple but good enough to support their results. Methodology is appropriate to analyse the psychometric properties of this instrument (DREEM) and their conclusions are coherent with their findings. It is important to highlight that it’s not new their findings related to low reliability (Alpha coefficient <0.6) in the social domain, because it is consistent with other analysis carried out by several authors in different languages.

The best way to assess reliability is Generalizability theory (D studies and G coefficient) which is currently preferred by several authors instead of Cronbach alpha and I encourage the authors to consider it to expand the analysis.

Construct validity was well conducted but even when they found a predominant factor, it’s difficult to conclude that DREEM is uni-dimensional, because this main factor must explain more than 50% of the variance. The original authors of the DREEM questionnaire, based the strength of this instrument in grounded theory followed by Delphi technique with universal validity and it was widely administered in several countries, cultures and languages in the last 10 years. It is difficult at this level to propose to reframe or delete some items of this instrument.

I recommend the authors to carry out other analysis to assess construct validity: as a complement of the traditional exploratory factor analysis like the Kaiser–Guttman criterion, in which all factors with an Eigen value >1.00 can be included (Field, 2000; 2005); and the Cattell criterion, where the inflexion point of the scree plot curve is the cut off, and all factors above are accepted (Cattell, 1966).

In conclusion, their findings are consistent with other authors and it will be useful to include additional analysis to support their conclusions and to expand the information related to psychometric properties of the DREEM questionnaire.

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Acceptable

Statistical review: Yes, and I have assessed the statistics in my report.
Declaration of competing interests:

'I declare that I have no competing interests'