Reviewer's report

Title: Spider phobia is associated with decreased left amygdala volume

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Reviewer: Michael Gerhard Odenwald

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This study is very interesting and novel as it measures amygdalae volumes and compares female participants with and without spider phobia. The study is worth publishing. I have only some comments that the authors should reply to.

1. The procedures are not fully clear. Based on the information provided by the authors, participants were recruited through advertisements and diagnoses were made using the DIA-X. Spider phobia was additionally measured by the SPQ. In order to identify axis II disorders patients were screened with the SKID-II screening questionnaire and controls with the SCL-90-R. This procedure needs to be justified by citing appropriate references (e.g. Starcevic et al., 2000) comparing the sensitivity of both methods to identify personality disorders. Furthermore, the STAI was used to measure state and trait anxiety; but trait anxiety is only measured among patients. Furthermore, it is unclear why also FEE results are only analyzed for phobic participants. The different assessment of control and phobic group need to be mentioned at least in the limitations section.

2. The ANCOVA that was reported for the main results, is not fully clear: seems that you report an interaction effect between the within-subject and a between-subject factor, i.e. hemisphere * group. It needs to be specified whether the assumption of sphericity has been tested.

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 interests