Reviewer’s report

Title: More rumination and less effective emotion regulation in previously depressed individuals with preserved executive functions

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Reviewer: Thomas Beblo

Reviewer’s report:

In their study „More rumination and less effective emotion regulation in previously depressed individuals with preserved executive functions“, the authors investigated 109 previously depressed patients and 64 never depressed subjects. They assessed executive functions as well as emotion regulation and hypothesized interrelations between these areas. Their study appears to be relevant and was conducted thoroughly. In addition, the manuscript is well written and I only have a few minor concerns:

Title:
1. As the authors focus on women only, they should replace „individuals“ by „women“.

Abstract:
2. Again, „individuals“ should be replaced by „women“ (in the background section).
3. The authors express causal relations in their hypotheses but their design does not allow for causal inferences. Therefore, the hypotheses should be rephrased.

Introduction
4. Page 6, Paragraph 1: Again, they may consider rephrasing their hypotheses in accordance with their non-experimental design (see above, point 3).

Methods
5. Page 7, Paragraph 1: The authors state to not check for antisocial personality disorder. What about other personality disorders? What is the rationale to only skip this specific personality disorder?

Results
6. Page 12, Paragraph 2 and table 1: Table 1 would be even more significant if the authors include the t- and p-values.
7. Page 13, Paragraph 2 and page 14, Paragraph 2: Because the authors only have one hypothesis with respect to executive functioning but several dependent measures to confirm or decline this hypothesis they should consider to apply alpha correction (or multivariate statistics). On the other hand, as their hypotheses with respect to emotion regulation are more specific, they don’t need
to correct alpha here – making a comparison between executive functioning and emotion regulation basing on the statistical significance of the findings difficult.

In addition, this comparison (which seems to be crucial for the Ms and is already mentioned in the abstract: „...matched control participants on both neutral and emotional executive tasks. However, significantly more rumination and expressive suppression...“) basing on the statistical significance of the findings is not perfectly „fair“ anyway, because the different sample sizes used: n=173 for assessing emotion regulation but only n=147 for assessing executive functions. Thus, the statistical power is higher for assessing emotion regulation. The authors need to discuss this problem or, maybe even better, should consider excluding medicated patients throughout the entire Ms.

8. Page 14, Paragraph 1: I am grateful that the authors include this interesting and clinically relevant post hoc analysis.

Discussion

9. Page 16, Paragraph 1: The authors argue that a strength of their study is to control for comorbid personality disorders. However, personality disorders are not mentioned as exclusion criteria and it is not clear from the diagnostic assessment whether patients were checked for personality disorders. It appears unlikely to me that none of the previously depressed patients had a comorbid personality disorder (at least, these comorbidities are not mentioned in the results). Together with the above mentioned question (point 6) the handling with personality disorders remains a little unclear in the manuscript.

10. Page 17, Paragraph 1: The authors state that reflection was associated with working memory but miss to state how.

11. Page 18 and 19, Paragraph 1: The authors discuss possible reasons for the fact that executive functions were unrelated to emotion regulation. One simple, possible reason appears to be that the remitted patients show emotion dysregulation but no executive dysfunctions. It is not very plausible to assume that impairments of executive function may be a reason for emotion dysregulation when no executive impairments could be established.

Level of interest: An article of outstanding merit and interest 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.'