Reviewer’s report

Title: Attentional bias modification in reducing test anxiety vulnerability: A randomized controlled trial

Version: 2 Date: 27 Jun 2017

Reviewer: Brage Kraft

Reviewer's report:

Whole document:

The paper assesses whether attention bias for threat can be changed using ABM. The study applies a RCT double-blind (?) design which seems well suited to answer this question. A sham ABM and no-training condition provide control for placebo effects and the general effect of doing a dot-probe task. Another strength is the use of a different measure of attention bias than the one used in the intervention, which can illuminate whether the ABM effect is detectable using a methodologically different paradigm.

However, the presentation of the rationale for this study is too vague. Notably, the title emphasizes the use of ABM to reduce vulnerability for test anxiety, and an assessment of test anxiety is described (TAS), but not included in the results. Whether the sample is a population with test anxiety or not is also unclear. Also, why is salivary amylase measured? The relevance of this to test anxiety and ABM is not clearly presented. Further, the language needs major revision, both regarding rationale, structure, clarity of arguments, and grammar.

Introduction:

- need introduction to the phenomenon of test anxiety
- there is no clear rationale why salivary amylase is measured
- presentation of previous studies using ABM in test anxiety is needed

Methods:

- please present the power calculations more clearly
- it's stated that this is a double-blind study, but at the same time that "participants were asked not to reveal the treatment allocation" - if so, the participants weren't blinded
- please describe the VAS
- should use "Threat block" as opposed to "Negative block", as in Taake et al. (2009)
- as in Taake et al (2009), where words matched according to frequency of use and length?
- Did you exclude high or low reaction times?
- eStroop bias scores: you should calculate individual test scores which represent changes in attention bias from pre to post (pre minus post), and check if there is a significant difference between the groups.
- There is very little description of the salivary amylase measures
- ethical considerations are not described

Results:
- whether there is a significant difference between the groups on the eStroop at pre ABM should also be assessed
- a full ANOVA table for the main effect should be presented
- Tables are lacking clear descriptions (what is Vulnerability?)
- Measure of test anxiety is lacking

Discussion:
- Authors claim the participants are "test anxiety individuals", but I don't see how this is the case, as no measure of test anxiety is provided
- Authors also conclude that ABM is effective in reducing anxiety vulnerability (?) in people preparing for an exam, but how is it ensured that the participants were actually preparing for an exam?
- The rest of the discussion is not reviewed because of the above limitations, which must be addressed first

Tables:
- 1: no citation for DASS, and not described in Methods
- 2: not clear
- 3 & 4: what is Vulnerability 1 and 2?

Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

No

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

No

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

No

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.

I recommend additional statistical review

Quality of written English
Please indicate the quality of language in the manuscript:

Not suitable for publication unless extensively edited

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