Reviewer's report

Title: Brain responses to body image stimuli but not food are altered in women with bulimia nervosa

Version: 1 Date: 21 June 2013

Reviewer: Silja Vocks

Reviewer's report:

In the paper to be reviewed entitled “Brain responses to body image stimuli but not food are altered in women with bulimia nervosa”, the authors report an fMRI study in which activation differences between females with and without bulimia nervosa are compared regarding their responses to viewing visual high-caloric food stimuli and slim body stimuli. Strengths of the study are the relatively large clinical sample (n=21) and the sound design of the study. Furthermore, this study is of high clinical and scientific interest, as the neuronal mechanisms of eating disorders are not well understood to date. Therefore, I would recommend accepting the paper. However, there are a few aspects that should be considered in a revision of the paper.

1. At the end of the introduction section, I would recommend to specify in detail in which aspect (i.e., design, sample) the current study differs from the previous studies conducted in this research domain.

2. More information should be provided on the possible effects of antidepressant medication on brain activation patterns in the literature and in the current sample.

3. Please specify the rationale of inclusion and exclusion of comorbid disorders in more detail (p. 7).

4. Please give details on the matching procedure of the stimuli for color and complexity (p. 8).

5. Please describe the body photographs used as stimulus material in more detail (p. 8).

6. Please do not use abbreviations in the headings, even if they were already explained in the text (p. 13).

7. It would make sense to discuss the findings of decreased activations in the left fusiform gyrus and the middle temporal gyrus (BA 37) in light of a reduced activation of body-processing brain areas (e.g. the Extrastriate Body Area).

8. Please delete the sentence “This deserves further investigation” and specify which aspects need to be clarified in future research (p. 15).

9. Please give a reference for the phrase that block design paradigms are unlikely to detect increased amygdala activations (p. 19).

10. I would prefer not to use subheadings in the Discussion section and instead to interconnect the content of the various paragraphs.
11. Please name the EDE-Q scale “Eating concern” instead of “Eating” (Table 1).
12. Please explain each abbreviation in the tables.
13. In the tables, some of the z-values are “hidden” behind the vertical line.
14. The authors might think about deleting the last sentence of the paper “Lastly, this study highlights the potential confounding role of methodological factors such as the instructions on how to engage with stimuli and the use of a LLB contrast.”, as in the present study, no experimental manipulation of various instructions was performed.
15. Please correct the interpunction errors.

**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.