Appendix 1 to Mier D, Bailer J, Ofer J, et al. Neural correlates of an attentional bias to health-threatening stimuli in pathological health anxiety. *J Psychiatry Neurosci* 2017.

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Fink criteria

Diagnostic criteria for PHA included the symptom 'obsessive rumination about illness' (A) and one or more of the following symptoms (B): 'worry or preoccupation with fears of harbouring an illness or with bodily functions', 'suggestibility or autosuggestibility', 'an unrealistic fear of being infected or contaminated', 'an excessive fascination with medical information', and 'fear of taking prescribed medication'. These symptoms had to be present for most of the time for at least 2 weeks. The symptoms were not better or fully explained by a co-morbid medical condition or by a different mental disorder.

Experimental details

Stimuli of the different word categories were presented in blocks of 10 words, each word presented for 1.5 s, followed by an inter-stimulus interval with a fixation cross with a mean duration of 0.3 s. Blocks were separated with the presentation of a fixation cross for 9 seconds, followed by the instruction for the new block for 1 second. Total duration of each block was 18 s. The order of words and colors within the blocks were randomized and the blocks of the different categories were presented in the order of a Latin square. Each block was repeated four times, resulting in a total of 16 blocks. Words were presented in different colors (red, green, yellow, and blue) and subjects were asked to indicate the color of the word as fast as possible, while ignoring the word content, with an according button press on a Lumitouch optical response device (Photon Control Inc, Burnaby, Canada). Total experimental time was around 7 min. The experiment was implemented with Presentation software V.9.50 (Neurobehavioral Systems, Albany, CA). The stimuli were presented via VisuaStim video goggles (Resonance Technology Inc, Northridge, USA).

Analysis of the behavioral data

Number of correct responses as well as reaction times (RTs) of correct responses were analyzed with mixed 3 × 2 × 2 analyses of variance (ANOVAs) with group as between-subjects factor, and health-threat (health-threat vs. neutral words) as well as type (symptoms vs. illness words) as within-subjects factors. RTs were adjusted for outliers (< 300ms and > 1000ms) prior to data analysis (Witthoft et al., 2013; Yovel & Mineka, 2005). Analog mixed 3 × 2 × 2 ANOVAs were performed separately for the SAM ratings of emotional valence and arousal. In case of significant main or interaction effects, post hoc ANOVAs and paired two sample *t* tests (with two-tailed levels of significance) were performed. Analyses of the behavioral and rating data were accomplished with IBM SPSS Statistics V20 (http://www-01.ibm.com/software/de/analytics/spss/) using a threshold for significance of $p < .05$.

Behavioral results

The mixed ANOVA for the number of correct responses revealed no significant main or interaction effects (across groups and conditions, mean=98.25 % correct responses, *SD*=1.50).

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For RTs, a significant main effect for health-threat ($F(89;1) = 20.22$, $p < 0.001$), a trend for a main effect of health-threat type ($F(89;1) = 3.93$, $p = 0.050$), and a significant group by health-threat interaction were found ($F(89;2) = 3.33$, $p = 0.040$; Figure 2). Post-hoc tests revealed stronger emotional interference for health-threatening words in patients with PHA compared to healthy participants ($t(59) = 2.06$, $p = 0.044$) and patients with depression ($t(59) = 2.19$, $p = 0.032$).

Mixed ANOVAs for the SAM ratings of emotional valence revealed significant main effects of health-threat (health-threat vs. neutral words; $F(89;1) = 742.26$, $p < 0.001$), type ($F(89;1) = 51.95$, $p < 0.001$), and a trend for an interaction between health-threat and group ($F(89;2) = 2.92$, $p = 0.059$; Figure 3). Post-hoc comparisons, however, did not confirm significant stronger negative valence ratings for the threat related words in the PHA group (all ps > 0.34; s. Figure 3).

For the SAM ratings of arousal, the mixed ANOVA revealed significant main effects of health-threat ($F(89;1) = 468.94$, $p < 0.001$), type ($F(89;1) = 121.21$, $p < 0.001$), group ($F(89;2) = 10.72$, $p < 0.001$), and a significant health-threat by group interaction ($F(89;2) = 15.66$, $p < 0.001$; Figure 3). Patients with PHA had significantly stronger arousal ratings in comparison to healthy ($t(62) = 3.29$, $p = 0.002$) and depressed participants ($t(59) = 5.28$, $p < 0.001$) for the health-threatening words in comparison to the neutral control words.