



Ruprecht-Karls-Universität Heidelberg
Medizinische Fakultät Mannheim
Dissertations-Kurzfassung

**Cognitive Biases and Effects of a Diary-Based Modification of
Symptom Attributions in Pathological Health Anxiety**

Autor: Tobias Kerstner
Institut / Klinik: Zentralinstitut für Seelische Gesundheit Mannheim (ZI)
Doktorvater: Prof. Dr. J. Bailer

According to cognitive-behavioral models of health anxiety and hypochondriasis, two processes play an important role in the maintenance of pathological health anxiety: a selective attention allocation toward physical sensations and a bias in interpreting perceived bodily sensations or symptoms in a catastrophic health-threatening way. In addition, alterations in cognitive processes regarding memory also represent a crucial aspect in these models. In this thesis, we investigated whether these processes can be detected with different experimental psychological paradigms and how specific they are for patients with hypochondriasis. Next, we examined whether a modification training, targeting the biased interpretations of bodily sensations lead to alterations in the aforementioned cognitive processes. A multi-level approach was chosen, using questionnaire and experimental psychological data. The first study, therefore, systematically and simultaneously assessed different cognitive biases in patients with hypochondriasis ($n=88$) compared to a depressive ($n=52$) and a healthy ($n=52$) control group. Attentional bias, emotional evaluation, and memory bias for illness information were investigated with an emotional Stroop task (EST), implicit association test (IAT), an emotional rating task for valence and arousal (SAM), and a recognition task (RET). We found that individuals with hypochondriasis showed a stronger attentional bias to health-threat-related information, more negative explicit but not implicit evaluations of health-threat stimuli, and biased response behavior in light of health threat. More negative and more arousing explicit evaluations of health-threat stimuli were related to the observed response biases. The results suggest that stronger bindings between feelings of arousal and health-threatening information in working memory might be crucial for the higher salience of health-threatening contents in hypochondriasis. The second study aimed to examine whether a two-week attribution modification training (AMT) changes symptom severity, emotional evaluation of health-threatening stimuli, and cognitive biases in pathological health anxiety. Therefore, we randomized 85 patients with hypochondriasis into an electronic diary-based AMT group (AMTG; $n = 42$) and a control group without AMT (CG; $n= 43$). Self-report symptom measures, emotional evaluation, attentional bias, and memory bias toward symptom and illness words were assessed with an EST, a RET, and SAM ratings for valence and arousal. After the two-week intervention period, the AMTG compared to the CG reported lower health anxiety, rated symptom and illness words as less arousing, and revealed a smaller memory response bias toward symptom words. However, no specific AMT effect was observed for the attentional bias. In sum, the results are in line with cognitive-behavioral models of health anxiety and hypochondriasis and support the efficacy of a comparatively short cognitive intervention in pathological health anxiety as a possible add-on intervention to existing treatment approaches. Future research is needed to clarify the exact mechanism of the observed AMT effects and to investigate long-term effects of the AMT.