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# Health anxiety moderates the effects of distraction versus attention to pain

Heather D. Hadjistavropoulos\*, Thomas Hadjistavropoulos, Allisson Quine

*Clinical Research and Development Program, Regina Health District, Department of Psychology, University of Regina,  
2180 23rd Avenue, Regina, Sask., Canada S4S 0A5*

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## Abstract

Little is known about the relationship between health anxiety and chronic pain. The present study explored whether individual differences in health anxiety would influence the response of chronic pain patients to physical therapy. Furthermore, the interaction of health anxiety with coping strategy usage (distraction versus attention) was studied. Participants were 81 chronic pain patients who were interviewed and completed measures of pain, anxiety and cognition following an active physiotherapy session in which they either: (1) attended to physical sensations; (2) distracted from physical sensations or (3) completed the session as usual. Health anxious, compared to non-health anxious, individuals worried more about their health and injury during the session and attended to and catastrophically misinterpreted sensations more frequently. A complex interaction between health anxiety and coping strategy emerged. Among health anxious patients, attention to sensations resulted in lower anxiety and pain than did distraction. It appears as though attention had a short-term anxiety reducing effect for health anxious patients. Among non-health anxious patients, attention resulted in greater worry about health than distraction. Clinical and theoretical implications are discussed. © 2000 Elsevier Science Ltd. All rights reserved.

*Keywords:* Health anxiety; Chronic pain; Coping; Attention; Distraction

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## 1. Introduction

Health anxiety has been conceptualized as a dimensional construct that is characterized by extreme health anxiety or even hypochondriasis (excessive preoccupation with disease in the absence of supporting medical evidence or despite medical reassurance) at one extreme and

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\* Corresponding author. Tel.: +1-306-766-5209; fax: +1-306-766-5530.

E-mail address: hhadjstavropoulos@reginahealth.sk.ca (Heather D. Hadjistavropoulos).

complete lack of concern about one's health on the other (Warwick & Salkovskis, 1990; Hitchcock & Mathews, 1992). A Cognitive-Behavioural Theory (CBT) of health anxiety has been proposed (Warwick & Salkovskis, 1990). According to this theory, health anxious individuals form dysfunctional assumptions and beliefs about symptoms and disease based on past experiences and become health anxious when these dysfunctional schemata are triggered by critical incidents (e.g. hearing about illness, experiencing bodily sensations). Cognition is not only predicted to be prominent in the development of health anxiety, but is also expected to play an important role in the maintenance of the condition as well. Once health anxiety ensues, the theory further predicts that the health anxious person will manifest an attentional bias to notice illness information. Moreover, they will have a tendency to misinterpret somatic information as catastrophic and personally threatening (i.e. cognitive reaction). Considerable support for the cognitive response style among health anxious patients has been found through clinical observation (Salkovskis & Warwick, 1986), questionnaire studies (Kellner, Abbott, Winslow & Pathak, 1987; Jones, Mabe & Riley, 1989), studies examining cognitive biases (Hitchcock & Mathews, 1992), and quasi-experimental studies examining cognitive responses to experimentally induced pain (Hadjistavropoulos, Craig & Hadjistavropoulos, 1998).

Recently, it has been suggested that health anxious individuals may not only have a bias to negatively attend to and interpret somatic sensations, but they may also be deficient in strategies that protect them from health anxiety. Hadjistavropoulos et al. (1998), for instance, found that in a non-clinical sample health anxious individuals were deficient in their capacity to objectively monitor somatic sensations while experiencing experimentally induced pain. Non-health anxious individuals, on the other hand, utilized an objective monitoring style (i.e. a focus on the objective, concrete and nonemotional aspects of the symptoms as manifested in cognitions such as "it is a tingling sensation") when exposed to pain. Previous research shows that those who use such an objective monitoring strategy during a noxious event experience benefits including increased pain tolerance and threshold as well as improved recovery from pain (Blitz & Dinnerstein, 1971; Ahles, Blandard & Leventhal, 1983; Cioffi & Holloway, 1993). Hadjistavropoulos et al. (1998) proposed an extension to the CBT and suggested that health anxious persons may be deficient in their ability to engage in objective somatic monitoring. Here, the question remains whether this finding would hold in a clinical sample.

A further cognitive strategy that could be predicted to play a role in the experience of health anxiety is cognitive avoidance or suppression. The cognitive-behavioural theory of health anxiety (Salkovskis & Warwick, 1986) suggests that health anxious individuals will physically avoid information or situations that evoke health anxiety. Whether this would extend to the usage of cognitive avoidance, such as distraction or the suppression of anxiety provoking thoughts, in order to avoid health anxiety is unclear. If cognitive avoidance is present among health anxious individuals it could actually serve to increase health anxiety in the long run. Counter to what might be expected based on common sense (Leventhal, 1992), cognitive avoidance/distraction as a coping strategy seems to lose its advantages after a brief period and tends to be associated with greater disability and pain in those who favor this approach (Mullen & Suls, 1982). Suppression of thoughts, that relate to physical sensations, tends to result in a longer recovery period from pain and increases the probability that innocuous physical sensations (e.g. vibration) will be perceived as unpleasant (Cioffi & Holloway, 1993). Moreover, efforts to suppress such thoughts increases the likelihood of unwanted cognitions

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