

The Key Role of Pain Catastrophizing in the Disability of Patients with Acute Back Pain

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Abstract

Purpose This study investigated the role of anxiety sensitivity, resilience, pain catastrophizing, depression, pain fear-avoidance beliefs, and pain intensity in patients with acute back pain-related disability.

Method Two hundred and thirty-two patients with acute back pain completed questionnaires on anxiety sensitivity, resilience, pain catastrophizing, fear-avoidance beliefs, depression, pain intensity, and disability.

Results A structural equation modelling analysis revealed that anxiety sensitivity was associated with pain catastrophizing, and resilience was associated with lower levels of depression. Pain catastrophizing was positively associated with fear-avoidance beliefs and pain intensity. Depression was associated with fear-avoidance beliefs, but was not associated with pain intensity. Finally, catastrophizing, fear-avoidance beliefs, and pain intensity were positively and significantly associated with acute back pain-related disability.

Conclusion Although fear-avoidance beliefs and pain intensity were associated with disability, the results showed that pain catastrophizing was a central variable in the pain experience and had significant direct associations with disability when pain was acute. Anxiety sensitivity appeared to be an important antecedent of catastrophizing, whereas the influence of resilience on the acute back pain experience was limited to its relationship with depression.

Keywords Acute pain · Anxiety sensitivity · Fear-avoidance beliefs · Catastrophizing · Resilience · Disability

Introduction

The fear-avoidance model offers a theoretical explanation of the process by which acute pain may develop into chronic pain disability [1–6]. The fear-avoidance model [3] originally incorporated anxiety sensitivity as a variable that increased the probability of developing fear of pain. Anxiety sensitivity is the fear of bodily sensations due to beliefs that these sensations will have negative somatic, cognitive, or social consequences [7]. Understood as a general propensity to develop fears, anxiety sensitivity has been proposed as a stable individual variable that would explain individual differences in fear of pain [1].

In a later formulation of the fear-avoidance model, the relationship between anxiety sensitivity and fear of pain was thought to be mediated by catastrophic cognitions [8]. Furthermore, fear-avoidance models suggest that individuals who engage in catastrophic thinking become fearful of pain and avoid any movement and activity that may provoke pain. This leads to their disengaging from meaningful activities and to disability [1–3]. Therefore, as Gheldof et al. [9] suggested, the fear-avoidance model could explain why only a minority of individuals with acute low back pain develop chronic pain problems. Several prospective [10, 11], experimental [12], and cross-sectional [13] studies have shown that elevated fear-avoidance beliefs may play a central role in maintaining pain in patients with acute back pain, which is a significant predictor of future disability in these patients. Fritz [10] and Klenerman et al. [11] analysed the role of fear-avoidance beliefs in patients with acute low back pain. Fritz [10] assessed the relationship between fear-avoidance beliefs and future

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