

Psychological Processes Underlying Pain and Physical Distress:

Role of Catastrophizing and Acceptance-based Coping

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Abstract

Background

Catastrophizing in the pain literature refers to the tendency to magnify and ruminate about noxious stimuli, to focus excessively on negative aspects of pain and to feel helpless about controlling pain. The role of catastrophic thinking on pain outcomes has been firmly established in the pain literature. Recent studies have shown that acceptance and value-related processes are both related to patient functioning among pain patients. Limited empirical research, however, has been conducted on psychological factors affecting symptom distress among cancer patients.

Objectives

The current study aims (1) to test out the generalizability and applicability of the construct of catastrophizing among cancer patients; (2) to explore the relationships among catastrophizing, acceptance and value-related variables on a group of lung cancer patients receiving cancer treatment (Study 1) and a group of non-metastatic breast cancer patients receiving curative treatment (Study 2); and (3) to investigate the differential effectiveness of an acceptance-based intervention among catastrophizers and non-catastrophizers in coping with experimental pain among college students (Study 3).

Method

Questionnaires were used to collect data from 219 lung cancer patients (Study 1) and 127 breast cancer patients (Study 2) attending an outpatient clinic at a local hospital. The potential moderating effect of acceptance/ value-related processes on catastrophizing was examined cross-sectionally (Study 1) and prospectively (Study 2) in the two studies using hierarchical multiple regression analyses.

In Study 3, an experimental approach was employed to manipulate and test out the effectiveness of an acceptance-based intervention in alleviating the impact of catastrophizing among 140 healthy undergraduates ($n = 73$ in the experimental group; $n = 67$ in the control group) coping with cold pressor pain.

Results

Results showed that while acceptance and value-related variables could both moderate the impact of catastrophizing on lung cancer patients' symptom distress in coping with a highly life-threatening disease (Study 1), only pre-treatment value-related variables (but not acceptance) could moderate the impact of catastrophizing on breast cancer patients' subsequent symptom distress in coping with a curable disease (Study 2). The pattern of interactions emerged among the two group of cancer patients also differed. In the experimental pain study (Study 3), both catastrophizers and non-catastrophizers were found to benefit similarly well

from the acceptance-based intervention.

Discussion

The present findings provide preliminary evidence that effects of pain catastrophizing do not seem to be restricted to pain-related outcomes and is generalizable to the study of symptom distress among cancer patients. Acceptance and value-related processes could potentially buffer the negative impact of catastrophizing on patients' symptom distress. The findings were interpreted in light of the emotion regulation framework (Gross, 1998; Gross & Thompson, 2007; Werner & Gross, 2010); and implications for patients coping with cancer would be discussed.

摘要

背景

在痛症研究中，對痛楚的災難化反應是指放大並反覆思索不適反應、過分專注於痛楚的負面之處，及對控制疼痛感到無助的傾向。災難化反應對痛楚的影響早已被確立於痛症研究的文獻中。此外，近年的研究發現，接納及價值有關的心理進程也與痛症病人的功能息息相關。可是，針對心理因素如何影響癌症患者的症狀的研究，到目前為止還是不多。

研究目的

本研究旨在 (1) 測試災難化反應於癌症病患者中的適用性; (2) 探討災難化反應、接納及價值有關的心理進程如何影響正進行癌症治療的肺癌患者 (研究一) 及治療中的非轉移性乳癌患者 (研究二); (3) 探索並試驗在大學生群組中，以接納為基礎方向的訓練分別對災難化者和非災難化者在應對實驗性疼痛的效果 (研究 3)。

研究方法

研究以問卷調查方式收集來自本地一所醫院的門診中的 219 位肺癌患者 (研究一) 和 127 位乳癌患者 (研究二) 的資料。所得的數據以多重回歸分析法，為接納／價值有關的心理進程對災難化反應的調節效應作橫向性 (研究一) 及前瞻性的測試 (研究二)。

除此，研究三以實驗方法測試以接納為基礎方向的訓練對減輕災難化反應

的有效性。此研究於 140 名健康的大學生中（73 名為實驗組；67 名為對照組）以應付冷痛實驗方式進行。

研究結果

結果顯示，接納和價值相關的心理進程均能對患有危疾的肺癌患者的災難化反應起調節效應（研究一），以減輕他們的身體不適。在病程較樂觀的乳癌患者中，卻只有開始治療前的價值相關心理進程能調節災難化反應，而治療前的接納相關心理進程則未能顯著地調節及後在治療期間的身體不適（研究二）。分析顯示調節效應的模式和方向在這兩個不同的癌症患者組別中各有不同。在疼痛實驗中（研究三），災難化和非災難化者皆能同樣地受益於以接納為基礎方向的訓練。

討論

本研究的結果初步顯示災難化反應的應用並不局限於痛症病人，災難化反應也適合應用於癌症病者的身體不適中。而接納和價值相關的心理進程則能有機會對病人的災難化反應起緩衝作用。這些研究結果實能以情緒調節理論框架 (Gross, 1998; Gross & Thompson, 2007; Werner & Gross, 2010) 作剖析，文末也會就研究結果對癌症病人的臨床應用作討論。

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