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Pain catastrophizing: A patient-centered approach to assessment

BY OSHEECA J. THOMPSON, BS; KEESHA POWELL-ROACH, PhD, RN; JANIECE L. TAYLOR, PhD, RN, FAAN; ELLEN L. TERRY, PhD; AND STAJA Q. BOOKER, PhD, RN

Abstract: Pain is a subjective experience and its perception and expression vary widely. Pain catastrophizing, which refers to patients' thoughts or feelings about their pain, may impact their communication of pain and nurses' subsequent response. This article discusses how nurses can more readily recognize, assess, and manage pain catastrophizing.

Keywords: pain assessment, pain catastrophizing, patient care

Pain is among the most frequent and emergent clinical events encountered by nurses.[1,2] Patients' perceptions of pain affect their experience and treatment, particularly if they are exhibiting anxiety, signs of catastrophization, and depression. Pain catastrophizing is a cognitive and affective appraisal that involves the tendency to attend to or magnify the threat value of pain and feelings of helplessness to cope with pain.[3] Therefore, nurses must recognize pain catastrophizing in clinical settings and help patients refocus their experience since they typically report higher pain intensity and more psychological distress (such as anxiety and depression), and have poorer treatment outcomes (such as reduced functioning and quality of life).[4-6]

Assessing the intensity or severity of pain is important to understand the experience of pain. To develop a

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more comprehensive, tailored, and interdisciplinary pain management plan, other patient-related factors such as pain catastrophizing should be incorporated into a patient's pain assessment. However, pain assessments rarely include an evaluation of the psychosocial aspects of pain, such as the patient's appraisal of pain, nor do treatment plans adequately incorporate interventions geared toward mitigating pain catastrophizing effects on pain perception. Pain catastrophizing carries a negative connotation and does not lend itself to compassionate, patient-centered care.[7] This article discusses how nurses can more readily recognize, assess, and manage pain catastrophizing.

Construct of pain catastrophizing

Pain catastrophizing is an exaggerated negative cognitive response to actual or perceived pain.[8] It is a multidimensional construct that includes ruminating thoughts, magnified pain experiences, and feelings of helplessness.[9] Pain catastrophizing is commonly described in two ways: (1) temporary state of distress about the pain such as when anticipating pain from a scheduled procedure, when receiving a new diagnosis, when experiencing new pain-related symptoms or severity of symptoms, or during a medical procedure or injury; and (2) a pattern of thinking, feeling, and reacting to pain over a longer period

Patients may catastrophize due to fear of further injury or feeling disempowered to positively impact their pain trajectory and outcomes. Consistent evidence suggests that pain catastrophizing enhances the intensity of pain and the pain experience, which may result in further pain-related fear and the avoidance of activities and behaviors that are presumably painful.[10]

Pain catastrophizing affects patients of all ages and with various acute and chronic pain conditions, such as sickle cell disease, rheumatoid arthritis, osteoarthritis, fibromyalgia, dental issues, and postsurgical pain.[11] Miller and colleagues reported that children who catastrophize are at greater risk of disability and exhibit interpersonal issues with peer relations and academic achievement, and intrapersonal struggles with anxiety and depression.[6] Older adults who report greater catastrophic thinking in the morning also reported being inactive for most of the day.[12] Patients, notably females, who exhibit higher levels of catastrophizing had a greater expectation of receiving opioids compared with those with lower levels of pain catastrophizing.[13,14] When coupled with other factors such as pain intensity, pain catastrophizing can impede the effectiveness of pain management and interventions.[14] Educating patients on strategies to manage and cope with pain can help improve the treatment of pain.

Cultural considerations

Pain catastrophizing may reflect certain culturally learned behaviors that should not be automatically considered "negative," "maladaptive," or in need of modification. Protective, survival, or resilient mechanisms that lead to state or trait catastrophizing may not be negative. Flaskerud[11] highlights the importance of understanding culture and the conceptualization and measurement of pain catastrophizing. In fact, Booker et al.[15] asserted that pain catastrophizing may be a normal pain expression that is negatively misinterpreted by healthcare providers. While pain catastrophizing is not a choice, it is, in some cases, a necessary response and a reality among those who do not receive adequate medical care.[7] In these individuals, pain catastrophizing may serve as a coping tool to elicit tangible emotional and medical support.[8] However, it is unclear if inequitable treatment of pain is related to providers' negative interpretation of patients' pain catastrophizing behaviors.

Considerable evidence indicates differences in clinical pain and catastrophizing across gender, ethnicity, and race such that a higher prevalence of chronic pain is observed in women compared with men.[16-18] Terry and colleagues[19] reported that pain catastrophizing mediates the relationship between discrimination and pain in women. Evidence suggests that Black and Hispanic Americans generally report higher levels of pain catastrophizing and greater severity of pain.[20] Although data are minimal, studies show that Chinese participants report lower pain intensity and greater pain catastrophizing than European-Canadians.[11] In one study, pain catastrophizing scores were higher in Black Americans and Asians compared with non-Hispanic Whites and also mediated the relationship between ethnicity and experimentally induced pain.[21] Studies show that catastrophizing is differentially expressed across cultures, and labeling a patient with the term "pain catastrophizer" disregards their perception and expression of pain and may contribute to patients feeling unsupported and not believed. As a result, these patients are stigmatized by healthcare providers who think that the patients' pain is exaggerated and question their credibility.[22] This exaggeration of pain may be viewed by providers as "puttin' on" or "faking."[23] The concept of pain catastrophizing has been misunderstood in the context of cultural diversity and normative cultural expressions and thus misapplied.

US healthcare systems must recognize the diversity of patients and create culturally sensitive environments that foster respect and acceptance of patients' diverse responses to pain and painful events. For example, Stanford University is renaming pain catastrophizing so that it is more patient-centered and less offensive to patients.[24]

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Assessment and management Q&A

Assessing for signs of pain catastrophizing is not just another task for nurses to perform nor does it require much time. Pain assessment is a social transaction that involves open communication and a trusting relationship.[25] Through this transaction, nurses may reframe unhealthy behaviors using therapeutic approaches.

• *How does a nurse assess and measure pain catastrophizing?*

Pain catastrophizing can be identified by observing clinical behaviors and measured using a brief standardized tool that can be integrated into the electronic health record, (see *Pain catastrophizing scales*). The Pain Catastrophizing Scale (PCS) and the Coping Strategies Questionnaire (CSQ) are two of the most commonly used tools.

The 13-item PCS is a self-report measure that categorizes catastrophizing into three subscales: the inability to think about anything other than pain (rumination); the exaggeration of pain severity (magnification); and thoughts of the inability to cope with pain (helplessness).[26,27] Patients rate how accurately each item describes their pain experience using a 5-point scale, from 0 (not at all) to 4 (all the time). Higher scores indicate the presence of catastrophizing.[28] PCS has been accepted, adapted, and translated into 16 different languages. PCS's total score is comparative and validated among countries and pain conditions.[28,29]

Individuals at risk for pain catastrophizing may be identified in the acute setting with the use of the CSQ.[27] This 42-item scale asks participants to rate how frequently they engage in a listed activity as a coping strategy using a 7-point scale, from 0 (Never do that) to 6 (Always do that). Each activity represents one of the six domains: distraction, catastrophizing, ignoring pain sensations, distancing from pain, coping self-statements, and praying. Each domain is scored separately (0-36 points). Higher scores are indicative of greater use to cope with pain.[30] CSQ has been validated and is comparative among countries.[31]

• *What are some examples of pain catastrophizing in patients?*

Pain catastrophizing may be associated with or represented by pain behaviors such as,

- frequent rumination and talk of pain without actively pursuing a solution[4]
- watching the clock for the next analgesic medication dose
- nervousness or anxiety[4]
- constantly reporting pain to nurse despite receiving multimodal treatment
- appearing hopeless or disengaged with pain and care[8]
- limiting activities for fear of exacerbating pain[12]
- screaming or using profane language

• *How does (or could) labeling a patient as a catastrophizer influence nurses' assessments?*

This label could generate and perpetuate stereotypes that further marginalize these patients.[7] Nurses might negatively label these patients as difficult and subsequently dismiss reports of pain or need for treatment. These negative labels include "drama queen," "difficult patient," "complainer/whiner," "drug seekers," "attention seekers,", "clock watchers," and "pill poppers."[32] Even referring to patients as "chronic pain patients," "sicklers" (for patients with sickle cell disease), "frequent fliers," or "opioid users" may provoke implicit bias and differential treatment. Such biases may influence how and how often pain is assessed and treated.

The language used with patients and in medical records should minimize blame and reinforce collaboration and decision-making. Nurses should be cognizant of using language that reflects bias and frustration that might limit patient-centeredness.[33] Furthermore, biases or judgmental language may put patients at risk for lower-quality care, disrespect, or disbelief by other clinicians and subsequently worse outcomes. Nurses are asked to:

- learn more about chronic pain and its biopsychosocial mechanisms;
- recognize their biases, beliefs, and values by completing the "I Asked Myself" pain assessment, which is designed to help nurses be aware of any preconceived notions or misconceptions they might have about pain among Black patients Each item includes a question and a research-based suggestion to

Pain catastrophizing scales

Instrument	Purpose
Avoidance Endurance Questionnaire (AEQ)	To assess emotional, behavioral, and cognitive coping responses to pain
Coping Strategies Questionnaire (CSQ)	To identify coping strategies used during the pain experience
Cognitive Coping Strategies Inventory (CCSI)	To assess the use of coping strategies in acute pain settings
Pain Catastrophizing Scale (PCS)	To assess how often patients engage in catastrophizing behavior when experience pain
Pain Cognition List (PCL)	To identify patients whose pain experience is controlled by cognitive factors
Pain-Related Self-Statements (PRSS)	To identify thoughts that crossed a patient's mind during the pain experience

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change any disparate behavior in the care for Black patients.
  - develop intentional awareness of unsupportive communication with patients;
  - remove personal judgment and bias from the assessment process and use purely clinical judgment, and
  - help patients clearly communicate their pain experience during nursing encounters.[34]

• *Could catastrophizing be a sign of a more complex mental or behavioral health issue?*

Existing literature debates whether pain catastrophizing is a coping strategy, cognitive set, or personality trait developed from childhood pain experiences.[4] Pain catastrophizing may overlap and correlate with negative affect, limiting construct validity.[11] Some researchers report that people who catastrophize do so to elicit social support, while others suggest it is a result of cognitive and physical impairment.[5,35] Even so, it is well documented that pain catastrophizing may negatively impact mental health, increase negative emotions, and increase the risk of disability and chronicity.[4,8,12]

• *How can nurses assist patients to reduce pain catastrophizing?*

Nurses and patients should work together to develop goals for comfort, function, and mood during assessment and treatment planning.[36] This includes establishing a realistic plan for pain diagnostics and management by working with an interdisciplinary healthcare team including a physician, nurse, psychologist, and life coach. Consistent evidence demonstrates the therapeutic benefits of reducing pain catastrophizing. Terry et al.[39] note that the catastrophizing intervention can be "easily applied to existing protocols within different therapeutic settings such as clinics and hospitals."[37, 38]

Brief single-session interventions (up to 30 minutes) that educate patients on how thoughts and feelings impact pain and how to develop positive coping strategies have also been shown to be successful in reducing pain catastrophizing.[39-43] Brief psychoeducation, instruction about relaxation and breathing exercises, and reassurance may be useful to address psychosocial factors related to reporting pain and may lead to improved treatment outcomes.[27] While nurses are generally accustomed to addressing the biopsychosocial aspects of chronic pain, a growing body of research shows that attention to spirituality in patients with chronic pain is an important part of management.[31] This is especially important in populations such as Black and Hispanic Americans who exhibit high pain catastrophizing and strong religious values.[15,20] Other strategies used to ameliorate pain and maintain function include music therapy, guided relaxation, massage, thermal (heat/cold) therapy, and behavioral therapies like cognitive-behavioral therapy.[44,45]

Conclusion

While not routinely assessed, pain catastrophizing is a common behavioral response that is crucial to understanding a patient's appraisal and experience of pain. Nurses should understand the mechanisms of pain catastrophizing and have the tools to measure and manage catastrophizing. With proper implementation, these recommendations can increase patients' involvement in their care, help develop a tailored pain management plan, and decrease detrimental pain outcomes while empowering a subset of patients who might be at higher risk for poor healthcare and pain outcomes. ■

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Osheeca Thompson is a clinical research coordinator at the University of Florida (UF) College of Medicine. Keesha Powell-Roach is an assistant professor at the University of Tennessee Health Science Center College of Nursing. Janiece Taylor is an assistant professor on the research/education track at the Johns Hopkins School of Nursing. Ellen Terry and Staja Booker are assistant professors at UF's College of Nursing and the Pain Research and Intervention Center of Excellence in the College of Dentistry.

The authors and planners have disclosed no potential conflicts of interest, financial or otherwise.

DOI-10.1097/01.NURSE.0000823252.50782.45

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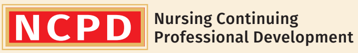

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