



Featured Article

Pain Catastrophizing: Controversies, Misconceptions and Future Directions

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Abstract: Recent reports have pointed to problems with the term “pain catastrophizing.” Critiques of the term pain catastrophizing have come from several sources including individuals with chronic pain, advocates for individuals with chronic pain, and pain scholars. Reports indicate that the term has been used to dismiss the medical basis of pain complaints, to question the authenticity of pain complaints, and to blame individuals with pain for their pain condition. In this paper, we advance the position that the problems prompting calls to rename the construct of pain catastrophizing have little to do with the term, and as such, changing the term will do little to solve these problems. We argue that continued calls for changing or deleting the term pain catastrophizing will only divert attention away from some fundamental flaws in how individuals with pain conditions are assessed and treated. Some of these fundamental flaws have their roots in the inadequate training of health and allied health professionals in evidence-based models of pain, in the use of psychological assessment and intervention tools for the clinical management of pain, and in gender equity and antiracism. Critiques that pain scholars have leveled against the defining, operational, and conceptual bases of pain catastrophizing are also addressed. Arguments for reconceptualizing pain catastrophizing as a worry-related construct are discussed. Recommendations are made for remediation of the problems that have contributed to calls to rename the term pain catastrophizing.

Perspective: *The issues prompting calls to rename the construct of pain catastrophizing have their roots in fundamental flaws in how individuals with pain are assessed and treated. Efforts to address these problems will require more than a simple change in terminology.*

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Key Words: Pain, catastrophizing, pain magnification, stigma, catastrophic worry

There have been calls to find a term that could replace the term “pain catastrophizing.”^{1–5} The rationale for renaming pain catastrophizing has proceeded from 2 main arguments: 1) individuals with chronic pain have reacted negatively to the term^{1,4,6} and 2) pain scholars have drawn attention to operational and conceptual problems with the term.³ Reports describing the

perspectives of individuals with chronic pain about the term pain catastrophizing are important in that they point to several problematic practices that have become almost systemic in the clinical management of chronic pain. Dismissal of the medical basis of pain complaints, patient blaming, misconceptions about the construct of pain catastrophizing, and the use of psychological tools by clinicians with minimal

MJL Sullivan receives royalties from Mapi Research Trust for licensing fees associated with the use of the Pain Catastrophizing Scale for commercial or funded research applications.

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1526-5900/\$36.00

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<https://doi.org/10.1016/j.jpain.2023.07.004>

training in mental health are topics that will be addressed in this paper. We advance the position that the problems prompting calls to rename the construct of pain catastrophizing have little to do with the term, and as such, changing the term will do little to solve these problems.

What is Pain Catastrophizing?

The origin of the term catastrophizing (in clinical practice) has been attributed to Albert Ellis, in a book published in 1962, where he addresses the cognitive basis of emotional disorders.⁷ Ellis characterized catastrophizing as an irrational pessimistic forecast of future negative events.⁷ Aaron Beck and his colleagues⁸ described catastrophizing as a tendency to “dwell on the worst possible outcomes of any situation.” Pain researchers later adopted the term as an explanatory construct to account for adverse pain outcomes.⁹⁻¹¹ Sullivan and colleagues¹¹ defined pain catastrophizing as “an exaggerated negative *mental set* brought to bear during actual or anticipated pain experience.”

Common across different definitions of catastrophizing is the view that catastrophizing involves the prediction or anticipation of future negative outcomes. There are, however, important differences in how catastrophizing has been conceptualized in the domains of mental health and pain. In the domain of mental health, catastrophizing has been conceptualized as the tendency to overestimate the probability of occurrence of a negative event.^{7,8} In the domain of pain, catastrophizing has been conceptualized as an exaggerated threat appraisal of one's symptoms.¹¹

Recently, Gellatly and Beck¹² have proposed that catastrophizing might be a transdiagnostic maladaptive process that contributes to a wide range of health and mental health conditions. Gellatly and Beck¹² suggest that, although the specific content of catastrophic thinking might vary across different health and mental health conditions, the cognitive processes triggered by catastrophizing, such as interpretive bias, attentional bias, and attentional fixation, might act as vulnerability factors common to several health and mental health conditions.

The Pain Catastrophizing Scale (PCS) is the most widely used measure of pain catastrophizing.¹³ The development of the PCS proceeded from a multidimensional conceptualization of catastrophizing comprising elements of magnification (ie, *I wonder whether something serious might happen*), rumination (ie, *I can't seem to keep it out of my mind*), and helplessness (ie, *There is nothing I can do to reduce the intensity of my pain*).

Pain catastrophizing has emerged as one of the most robust predictors of adverse pain outcomes.^{11,14-17} The most consistent finding is that elevated scores on measures of pain catastrophizing are associated with more severe pain.^{11,15,17,18} A relation between pain catastrophizing and pain severity has been reported in experimental and clinical studies, in children and adults, in response to a wide range of medical/surgical procedures, and in every pain population in which it has been studied.¹⁹⁻⁴⁶ Cross-cultural studies suggest that the relation between pain catastrophizing and pain severity is universal.⁴⁷

The causal or antecedent status of pain catastrophizing for adverse pain outcomes has been supported by numerous investigations.⁴⁸⁻⁵¹ Cross-lagged panel studies have shown that changes in pain catastrophizing precede changes in pain.^{52,53} In addition, several clinical trials have revealed that treatment-related reductions in pain catastrophizing are prospectively associated with reductions in pain severity, depression, post-traumatic stress symptoms, and disability.⁵⁴⁻⁶⁰ Laboratory studies also show that experimental manipulations of pain catastrophizing have corresponding effects on the experience of pain.^{61,62} The emerging pattern of findings supports the view that the relation between pain catastrophizing and pain is likely bidirectional, where the experience of pain can give rise to catastrophic thinking, and catastrophic thinking can contribute to adverse pain outcomes.^{11,21,29,53,61,63,64}

Cross-sectional and prospective studies have shown significant relations between pain catastrophizing and emotional distress states such as anxiety, fear, anger, depression, and post-traumatic stress symptoms.^{13,51,65-68} One study showed that 80% of participants with whiplash injuries who scored above 21 on the PCS also scored in the clinical range on measures of depression or post-traumatic stress disorder.⁶⁹ Pain catastrophizing has been associated with a range of adverse clinical outcomes, such as suicidal ideation, opioid overuse, and prolonged disability.^{17,69-75} High scores on measures of pain catastrophizing predict poor response to analgesic medication,⁷⁶ facet joint injection,⁷⁷ radiofrequency neurotomy,⁷⁸ physical therapy,⁷⁹ multidisciplinary rehabilitation,^{58,80} and surgical interventions.^{37,81}

Pain catastrophizing has been associated with several indices of aberrant pain processing such as temporal summation of pain,^{57,82-84} sensitivity to movement-evoked pain,^{85,86} the spreading of pain,⁸⁷ conditioned pain modulation,^{88,89} inflammation,⁹⁰ and elevated salivary cortisol.⁹¹ As well, research supports the heritability of pain catastrophizing.⁹² There are also indications that pain catastrophizing might play a role in the transition from acute to chronic pain.^{29,93} Taken together, these findings suggest that pain catastrophizing might be inextricably linked to the pathophysiology of chronic pain.

Few pain-related psychological variables have been studied as extensively as pain catastrophizing. Research on pain catastrophizing has influenced the content and objectives of many treatment approaches used in the management of acute and persistent pain conditions.⁹⁴⁻⁹⁷ Research on the relation between catastrophizing and pain has benefited the practice community and pain sufferers by increasing the depth of understanding about pain and increasing the repertoire of treatment options available to pain sufferers.

Negative Reactions to the Term Pain Catastrophizing

Reports indicate that individuals with chronic pain have reacted negatively to the term pain catastrophizing.^{4,5,98}

Discussions have focused primarily on 2 related issues: how the term pain catastrophizing can lead to a dismissal of the medical basis of the individual's pain complaints and patient blaming.^{6,98}

Catastrophizing and Psychological Causation of Pain

Webster and colleagues⁶ conducted an online survey examining the perspectives of individuals with chronic pain about the term pain catastrophizing. Their findings suggest that approximately 45% of individuals with chronic pain have heard of the term pain catastrophizing, and 32% consider the term problematic. The interview responses of participants in several studies highlight both the alarm and disrespect that is experienced when clinical practice or communication suggests a psychological basis for presenting pain complaints.^{1,6,98-100} Survey participants' accounts reflect a concern that the implied "psychological cause" of their pain will contribute to a dismissal of the medical basis of their pain and, in turn, result in inadequate medical care.⁶

Biopsychosocial models of pain have become the dominant conceptual frameworks guiding pain research.^{101,102} Biopsychosocial models proceed from the view that a complete understanding of pain-related phenomena requires consideration of the interplay among biological, psychological, and social factors.^{103,104} A large body of literature supports the view that psychological factors play an important role in the experience of pain.^{99,105-109} The place of psychological interventions in the overall management of pain conditions has been to complement medical and physical approaches to the treatment of pain; psychological research on pain and psychological interventions for pain were never intended to imply that the medical basis of presenting pain conditions could be dismissed.⁹⁴

Several ideological and system-based barriers have impeded the adoption of biopsychosocial models in the clinical management of pain conditions.¹¹⁰⁻¹¹⁴ It has been suggested that Cartesian dualism remains a dominant lens through which pain conditions are managed in clinical practice.^{115,116} In the absence of objective physical findings, many clinicians make the "leap to the head," and the medical basis of the presenting pain problem is dismissed.^{111,117,118} The clinical lexicon is replete with terms that have been used to imply the psychological causation of pain. Terms that can be found in medical reports of individuals whose pain is considered to be of psychological origin might include "functional syndrome," "somatic focus," "somatization," "sick role," "abnormal illness behavior," or "medically unexplained pain."^{119,120} Pain catastrophizing appears to have become one of the psychological terms used for making the "leap to head."

It is important to note that psychological interpretations of chronic pain predate the introduction of the term pain catastrophizing by decades.^{99,121-125} In 1958, George Engel¹²³ proposed that many individuals seeking medical treatment for pain conditions were

actually suffering from "psychogenic pain." According to Engel,¹²³ pain without objective evidence of physical pathology could be understood as arising from psychological factors such as guilt, loss, failure, or repressed anger.¹²³ Engel's arguments drew heavily on the Freudian concept of conversion hysteria, where emotional conflicts could be converted into physical symptoms such as pain. Perhaps one of the more damaging elements of Engel's paper was the assertion that "psychogenic pain" could be easily identified through a brief clinical interview by a physician and that additional medical tests were not necessary.¹²³

Blumer and Heilbronn¹²⁶ introduced the term "pain-prone disorder" to describe a psychological predisposition for the development of chronic pain. Also relying heavily on psychoanalytic concepts, the authors suggested that chronic pain could arise as a result of psychological conflicts related to underlying rage, aggressivity, and dependency. Blumer and Heilbronn^{122,126} proposed that pain-prone disorder could be construed as a variant of depressive disease and could be treated effectively with antidepressants. Although neither Engel¹²³ nor Blumer and Heilbronn¹²² specifically addressed sex differences in psychogenic pain or pain-prone disorder, it is clear from their case descriptions that they considered women to be more susceptible than men to these conditions.

Concepts such as psychogenic pain or pain-prone disorder have endured over the past half-century in the relative absence of supporting evidence.^{127,128} There is no rigorous research to support the view that psychological factors can be "converted" into pain symptoms.¹⁰⁵ While numerous studies have shown that pain catastrophizing can contribute to more severe pain symptoms in individuals who have been diagnosed with a medically legitimate pain condition,^{11,15,18} there is no research to show that pain catastrophizing can "create" a pain condition. When physicians consider a high score on a measure of pain catastrophizing to be grounds for dismissal of the medical basis of a pain problem, this would not be considered evidence-based practice.

If individuals with chronic pain must navigate a health care system where suspicion of psychological influence, including catastrophic thinking, is sufficient for a physician to dismiss the medical basis of pain complaints, then it is not surprising that they would be weary of suggestions that psychological factors might be contributing to their pain condition. However, the propensity of some physicians to view pain conditions as proxies for psychiatric problems, not requiring medical treatment, is a clinical error that is unlikely to be solved by efforts to remove the term pain catastrophizing from the clinical lexicon.

Patient Blaming: The Problem of Stigma and Bias

It has been suggested that the term pain catastrophizing has been used by physicians to blame individuals

for their pain condition.^{5,6} Individuals with chronic pain report that they have been made to feel responsible "for making themselves worse" or "overexaggerating" their condition.⁵

Patient blaming is not a new problem in the management of chronic pain. The clinical literature provides numerous examples of how individuals with chronic pain have been blamed for contributing to their pain condition or for failing to improve following treatment.¹²⁹ Indeed, recent studies have drawn attention to the use of stigmatizing language in physician reports of individuals with chronic health conditions.^{130,131} Stigmatizing language in medical reports includes using disrespectful terms to refer to clients/patients or language that confers blame on clients/patients for their health condition.¹³⁰ The use of stigmatizing language has been observed primarily in relation to conditions that are difficult to treat, such as diabetes, substance abuse, and chronic pain.¹³¹

The repertoire of terms used to blame clients/patients with pain is extensive. Terms identified in one study of stigmatizing language in hospital admission notes included: difficult patient, drug seeking, fake, in denial, lifestyle disease, malingerer, noncompliant, secondary gain, and unmotivated.¹³⁰ Since hospital admission notes are read by all staff who will be providing care, the use of stigmatizing language can have a far-reaching negative impact by influencing the impressions and attitudes of other treating professionals.

It has been suggested that stigmatizing language might reflect conscious or unconscious negative biases physicians hold about specific types of patients or certain types of health conditions.^{130,132} It has also been suggested that patient blaming might serve self-protective functions that preserve professional self-esteem in the face of treatment failures.¹²⁹ As well, discussions have addressed how patient blaming might emerge as an unfortunate consequence of the power hierarchy that characterizes patient-physician relations in Western medicine, where the client/patient is placed in a position of lower status or value.¹¹⁷

Individuals with chronic pain have reported that the term pain catastrophizing can contribute to a credibility gap since it implies that they are exaggerating or magnifying their pain experience.^{133,134} Some clinicians have unfortunately interpreted high scores on the magnification subscale of the PCS as reflecting an exaggeration or amplification of pain experience. However, the magnification subscale of the PCS does not assess exaggerated pain reports; it assesses the tendency to exaggerate the "threat value" of one's pain symptoms. The misconstrual of pain catastrophizing as a form of pain exaggeration suggests that the PCS is being used by clinicians who have not been adequately trained in the clinical applications of the PCS for the assessment and treatment of pain conditions.

The misconstrual of pain catastrophizing as a form of pain exaggeration is a clinical error that is likely to be particularly disadvantageous to women or Black individuals seeking treatment for pain. Women and Black individuals score higher on measures of pain

catastrophizing than male Caucasians.^{13,135,136} One study found that twice as many women than men with chronic pain reported that their pain condition had not been taken seriously.¹³⁷ It has also been shown that women are prescribed less potent analgesics than men, even though women report more severe pain than men.^{138,139} Medical reports for women or Black individuals are more likely than those for Caucasian men to contain stigmatizing language.^{130,140}

In the Webster et al⁶ study, many participants who had heard of the term pain catastrophizing had heard it from a clinician. So why are some clinicians using a term in conversation with their clients/patients that will likely invite a defensive reaction? Part of the answer to this question is that psychological tools, such as the PCS, are being used increasingly by clinicians with minimal training in mental health. The PCS was published in a psychological journal intended for use by psychologists. But today, the PCS is being used most often by clinicians with little or no background in mental health.

Over the past 2 decades, the siloes of disciplinary practice have become more porous, and clinicians have adopted tools that were developed in disciplines other than the ones in which they were trained. The adoption of psychological tools by clinicians who were not trained as mental health service providers comes with the responsibility to seek training in the appropriate and responsible use of these tools. It would be of interest to determine whether clinicians who use the term pain catastrophizing in conversations with their clients/patients were ever trained to be competent in the clinical management of pain-related psychological risk factors.

Many terms in the mental health lexicon will invite defensive reactions from clients/patients because the terms embody notions of deficit or dysfunction. The taxonomy of psychological difficulties was never intended to be used in conversations with the recipients of care; it was designed to be part of interprofessional communication and for research. Psychologists often refrain from using terms like borderline, histrionic, antisocial, dependent, or neurotic in their conversations with clients with personality problems to avoid defensive reactions that might impede treatment engagement. Simply because a term is part of the clinical lexicon does not mean that it is a term that should be used in conversation with individuals receiving treatment for chronic pain.

Access to information has increased dramatically over the past 3 decades, and as a result, individuals with chronic pain who are searching for information about pain will likely come across the term pain catastrophizing. However, even if information about pain catastrophizing is widely available, the relevance of the term pain catastrophizing to the care of the individual with chronic pain will most likely emerge as a result of a clinical assessment that included a measure of pain catastrophizing. As such, the onus still remains with the clinician to ensure that all information relevant to a client's condition is communicated in a manner that is respectful and conducive to the client's full engagement in treatment.

Recently, Amtmann et al¹⁴¹ suggested that the term “concerns about pain” might be a suitable replacement for the term pain catastrophizing. The relabeling of pain catastrophizing as “concerns about pain” appears to have been prompted primarily by the aim of introducing a term that will be more acceptable to individuals with chronic pain.^{1,141} While using a term that is more acceptable to individuals with chronic pain might have some advantages, there are also disadvantages. Minimizing the maladaptive nature of catastrophic thinking is problematic. The risk-factor status of pain catastrophizing for adverse pain outcomes has been well established. The term “concerns about pain” would be considered by clients/patients and clinicians alike to be a normal response to pain. There will likely be challenges to mobilizing efforts to develop interventions designed to reduce “concerns about pain” as well as challenges engaging individuals with chronic pain in the treatment of what they perceive to be a normal reaction to their pain problem. Efforts to find a normalized term as a substitute for pain catastrophizing might actually impact negatively on the recovery outcomes of individuals with chronic pain.

Conceptual Problems With Pain Catastrophizing

Pain scholars have addressed several problems with the construct of pain catastrophizing.^{3,6,142,143} Critiques have focused on 3 main topics: 1) the defining characteristics of pain catastrophizing, 2) the measurement of pain catastrophizing, and 3) the conceptual basis of pain catastrophizing.

The Definition of Pain Catastrophizing

Several authors have noted that the term pain catastrophizing has been defined and measured in ways that differ from how catastrophizing was originally defined by Ellis⁷ and Beck.⁸ There are grounds for questioning the utility of critiques of pain catastrophizing based on how conceptual or operational definitions of pain catastrophizing differ from definitions offered by Ellis⁷ or Beck.⁸ The defining features of catastrophizing proposed by Ellis and Beck can be best viewed as “clinically inspired,” likely drawn from their experiences with clients treated in their respective practices. At the time when Ellis and Beck offered descriptions of catastrophizing, no research had been conducted on the causes, correlates, or consequences of catastrophic thinking.

A literature search on the term catastrophizing reveals that surprisingly little research has been conducted on catastrophizing in the area of mental health (outside the domain of pain). Over 95% of research publications that contain the word “catastrophizing” in the abstract have been conducted using measures of pain catastrophizing. As a result, more is known about pain catastrophizing than is known about catastrophizing as originally defined by Ellis or Beck.

Proceeding with a definition of pain catastrophizing as “an exaggerated negative *mental set* brought to

bear during actual or anticipated pain experience” has several advantages. First, this is the definition that has guided much of the research on pain catastrophizing over the past 20 years. The definition is sufficiently broad to account for several aspects of the “catastrophic mindset,” such as negative appraisals of the threat value of pain symptoms or pain-related stimuli, as well as attentional focus on pain and repetitive or ruminative thinking.^{9,10,144,145} The definition is open to refinement as research elucidates more of the fundamental or functional dimensions of pain catastrophizing. An evidence-grounded definition will serve the advancement of knowledge and clinical practice better than impressionistic definitions originally advanced in the absence of rigorous study.

The Measurement of Pain Catastrophizing

The magnification subscale of the PCS was intended to measure the tendency to “exaggerate the threat value of pain.” The 3 items that comprise the magnification subscale of the PCS include: *I become afraid that the pain will get worse, I wonder whether something serious may happen, and I keep thinking of other painful events.* One issue that has been raised with respect to the measurement of pain catastrophizing is whether a scale can assess “exaggeration of the threat value of pain,” since there is no objective external referent for the “actual threat of pain.”³

To require objective external referents of “actual threat” as a requisite for considering a particular threat appraisal to be exaggerated might be unrealistic. Threat value is a probabilistic concept, and the actual degree of threat or likelihood of negative outcomes associated with different life situations is not known. The notion of “exaggeration of threat” is the basis of formulations of several mental health conditions, such as generalized anxiety, obsessive-compulsive disorder (OCD), and phobias.^{146,147} For example, individuals with OCD might exaggerate the degree of threat associated with exposure to germs;^{146,148} individuals with phobias might exaggerate the degree of threat associated with feared situations such as flying, heights, or proximity to animals.¹⁴⁹ While it is generally recognized that the probability of the negative outcomes anticipated by individuals with OCD or phobias is relatively low, it is not possible to quantify the degree of exaggeration in relation to an objectively derived criterion.

The Conceptual Basis of Pain Catastrophizing

There have been several attempts to reconceptualize pain catastrophizing within frameworks that have been used in research in mental health.^{3,143,150-152} Pain scholars have suggested that constructs related to worry might be suitable alternatives to the construct of pain catastrophizing.^{3,141,143,151} Worry about pain has been defined as a cognitive process that focuses attention on the pain problem and its potential negative

consequences and is thought to promote attempts at problem-solving.¹⁵⁰ It has been suggested that pain catastrophizing might represent a form of misdirected problem-solving (ie, searching for a pain cure) or a form of ineffective emotional self-regulation.^{143,151,153}

Flink et al¹⁵¹ proposed the term “catastrophic worry” as a possible replacement for the term pain catastrophizing. According to Flink et al, catastrophic worry is a type of repetitive negative thinking that is intended to reduce the aversive physiological and psychological aspects of a threatening pain-related situation. Catastrophic worrying has been described as comprising elements of perseverative thinking, feelings of personal inadequacy, and attributing a high truth value to predictions of negative outcomes.¹⁵⁴

If the constructs of worry and pain catastrophizing are synonymous, either conceptually or operationally, then a case could be made for renaming pain catastrophizing as a form of pain-related or catastrophic worry. One of the advantages would be conceptual consistency across different domains of research on the cognitive processes that underly adverse emotional or physical outcomes. Clearly, there are similarities. Conceptualizations of worry include negative thought content (ie, negative appraisals), repetitive or perseverative thinking (ie, rumination), and ineffective coping efforts.^{147,151,153-155} Pain catastrophizing has also been associated with negative outcome expectancies,¹⁵⁶ perseverative thinking,¹⁵⁷ and ineffective pain coping strategies.^{136,158-160}

Confidence in the interchangeability of the concepts of worry and pain catastrophizing would be increased if the pattern of research findings on the relations between worry and pain-related outcomes were similar to that observed on the relations between pain catastrophizing and pain-related outcomes. A challenge in drawing such comparisons is that relatively few studies have been conducted on the relation between worry and pain-related outcomes.^{143,151} Most studies on worry and pain have been descriptive, with few prospective studies examining the causal or antecedent status of worry as a determinant of adverse pain outcomes.^{142,161} Only a handful of studies have examined the relation between catastrophic worry and anxiety-related mental health problems.^{154,162,163} We could not find any empirical study examining the relation between catastrophic worry and pain-related outcomes.

There is reason to invite caution in equating pain catastrophizing with worry. From an empirical perspective, it is important to consider that the PCS has been shown to predict pain outcomes independent of measures that assess worry.¹⁶⁴ The PCS has also been shown to predict pain outcomes independent of emotional conditions where worry is a prominent feature, such as state and trait anxiety,^{13,43} anxiety sensitivity,¹⁶⁵ fear,⁸¹ neuroticism,¹⁶⁶ and depression.⁴³

Reflections and Recommendations

Clinical and conceptual problems related to the term pain catastrophizing have been reviewed. An effort was

made to identify the factors underlying the problems that have led to calls for renaming or reconceptualizing pain catastrophizing. These are summarized below, and directions for remediation and advance are made.

Renaming Pain Catastrophizing

It is clear that the term pain catastrophizing has been used, by some clinicians, in a manner that has been detrimental to the treatment of individuals with chronic pain. The term has been used to dismiss the medical basis of pain complaints, to question the authenticity of pain complaints, and to blame individuals for their pain condition. These are serious problems that deserve the attention of the practice and scientific communities.

In this paper, we have argued that factors driving current discussions on the negative impact of the term pain catastrophizing have their roots in some fundamental flaws in how individuals with pain are assessed and treated. Some of these fundamental flaws have their roots in the inadequate training of health and allied health professionals in evidence-based models of pain, the inadequate training of health and allied health professionals in the use of psychological assessment and intervention tools for the clinical management of pain, and a distressing tolerance for using medical reports as vehicles for the communication of bias and prejudice toward individuals with chronic pain, particularly women and racial minorities.

Could a simple change in terminology adequately address these problems? Unlikely. Clinicians have at their disposal an extensive repertoire of terms that can and have been used to dismiss, accuse, and blame individuals with chronic pain. The use of such terms in communication with, or in relation to, individuals with pain conditions, is a symptom of a host of larger problems. Tackling these problems will require much more than a change in terminology. Continued calls for changing or deleting the term pain catastrophizing will only serve to divert attention away from some major ideological and practice-related problems in the assessment and treatment of individuals with chronic pain.

Essential steps that will need to be taken to target practice-related shortcomings will include 1) ensuring that the curricula of health and allied health professionals reflect current evidence-based conceptualizations of chronic pain, 2) addressing issues of pain-related invalidation and stigma in the education of health and allied health providers, 3) ensuring that health and allied health professionals receive the training necessary to use psychological tools in their clinical practice competently, and 4) broader training in gender equity and antiracism for health and allied health providers.

Reconceptualizing Pain Catastrophizing

There are grounds for advocating for continued efforts to bring pain catastrophizing under a broader conceptual umbrella. Psychological processes triggered by, or impacting on, pain experience must have parallels with psychological processes involved in adaptation to other forms of stress. However, it does not follow that

constructs relevant to the psychology of pain must be subsumed into existing models in the area of mental health. Conceptual models addressing the role of cognition in mental health problems might require modification to accommodate the pattern of findings that has been associated with pain catastrophizing.

Conceptual model building in relation to pain catastrophizing has the advantage of being able to appeal to a vast body of scientific findings. The availability of a vast empirical base will augment the probability that a powerful explanatory model can be developed. However, the task of synthesizing the available literature into a coherent conceptual framework applicable to the domains of mental health and pain will be challenging. A viable reconceptualization of pain catastrophizing would need to account for a diverse body of findings that includes: the heritability of pain catastrophizing,^{92,167} the emergence of pain catastrophizing early in life,^{168,169} evidence of elevated levels of pain catastrophizing in healthy pain-free individuals,^{13,170,171} the stability of pain catastrophizing (as measured by the PCS),¹³ the relation between pain catastrophizing and other personality traits,^{66,172} the association between pain catastrophizing and the expression of pain behavior,^{158,173} the relation between pain catastrophizing and mental health comorbidities,^{17,69,72,73} gender and racial differences in pain catastrophizing,^{136,174,175} the association between pain catastrophizing and indices of aberrant pain processing,^{176,177} the relation between catastrophizing and problematic recovery outcomes,^{11,15,69,73,178} and the treatment resistance of pain catastrophizing.¹⁷⁹

A conceptual model that could account for the diverse findings on the causes, correlates, and consequences of pain catastrophizing might also find useful application as an explanatory model in the area of mental health. *Catastrophic worry* stands out as the variable that appears most similar, as least descriptively, to pain catastrophizing.^{151,154} A common conceptual framework of catastrophic thinking/worry applicable to health and mental health domains would be of heuristic and clinical value. However, construct equivalence will require more than discussions about semantic similarity. More research needs to be conducted on the causes, correlates, and consequences of catastrophic worry to make a convincing case that pain catastrophizing can be reconceptualized as a form of catastrophic worry.

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Conclusions

Terms enter the clinical lexicon when they confer added value from an explanatory or treatment perspective. Terms included in the clinical lexicon are often loosely based on some conceptual framework relevant to a specific problem, function, or outcome. Conceptual models of psychological processes evolve over time, and terms, once deemed useful, might require revision. As well, over time, the use and meaning of terms might drift from their original intent and inadvertently impact negatively on clients seeking treatment for a pain condition. Some believe that this is the case with the term pain catastrophizing.

Calls for changes to the clinical lexicon must be based on a sound rationale, and the anticipated benefits must outweigh potential costs. If the term pain catastrophizing was a root cause of (some) clinicians' propensity to dismiss, discount, or blame individuals with chronic pain, then renaming pain catastrophizing would be warranted. However, as has been argued in this paper, the problems that are being attributed to the term pain catastrophizing have their roots in suboptimal education of clinicians in evidence-based pain medicine, suboptimal education of clinicians in the use of psychological tools/concepts associated with pain, and a general lack of awareness/sensitivity to issues of gender and racial bias in the assessment and treatment of individuals with chronic pain. The avenues for remediation of these problems may be daunting, but without addressing these root causes, the problems will persist. To believe that renaming a term is all that will be needed to change some significant flaws in training and treatment delivery systems that are impacting negatively on individuals with chronic pain would constitute a disservice to individuals who are struggling to have their pain conditions addressed with dignity, respect, and competence.

Disclosures

This program of research was supported by funds from the Institut de recherche Robert-Sauvé en santé et en sécurité du travail (IRSST) and the Canada Research Chairs (CRC) Program.

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