#### **Editorial comment**

Katja Boersma\*, Ida K. Flink and Steven J. Linton

## Considering the interpersonal context of pain catastrophizing

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In this issue of the Scandinavian Journal of Pain, Dr. Ryum and colleagues report on interpersonal problems as a predictor of pain catastrophizing in patients with chronic pain [1]. Using the baseline measurement of a returnto-work trial for chronic pain patients on long term sick leave, they hypothesize that pain catastrophizing - in line with the Communal Coping Model (CCM; [2]) - may be conceptualized as an interpersonal strategy, and not (only) as an intrapersonal cognitive-emotional style. They seek to relate interpersonal problems, as measured by the Interpersonal Problems circumplex model, to pain catastrophizing while controlling for a range of possible confounders. They find that variance in pain catastrophizing is uniquely explained by the pain itself but also by an interpersonal style characterized by hostility and distrust. As this paper is clearly theoretically driven, it adds to our conceptual understanding of the important phenomenon of pain catastrophizing. Not in the least it stimulates our thinking as to why patients with chronic pain may catastrophize.

### 1 Importance of pain catastrophizing

Pain catastrophizing is arguably one of the most powerful psychological constructs in the pain literature. The empirical evidence supporting the relevance of this

\*Corresponding author: Katja Boersma, Center for Health and Medical Psychology (CHAMP), School of Law, Psychology and Social Work, Örebro University, Örebro, Sweden,

E-mail: Katja.Boersma@oru.se

Ida K. Flink and Steven J. Linton: Center for Health and Medical Psychology (CHAMP), School of Law, Psychology and Social Work, Örebro University, Örebro, Sweden

construct can hardly be overstated. Whether trying to predict outcome after a visit to the dentist [3], an invasive operation [4], activity intolerance [5], recovery after child-birth [6], or chronic back pain disability [7] a simple score quantifying the cognitive-emotional style with which one usually responds to pain (i.e. catastrophizing) is a sure predictor of more adverse outcome.

### 2 Social context strongly influences pain catastrophizing

As Ryum et al.'s paper brings forward, pain catastrophizing is not only an isolated intrapersonal phenomenon. Instead, the social context is of utmost importance for how pain is experienced and expressed and pain catastrophizing appears to fulfil a key communicative function. For example, while pain catastrophizing is consistently correlated to pain expressions such as grimacing or verbal utterances, this connection has been found to be stronger when other people are present [8]. However, the function of communicating pain distress is complex and communication is a two way street (goes two ways). For example, it has been shown that punitive and invalidating responses from close relatives and caregivers are associated with increased emotional distress in pain sufferers [9]. Adding to this complexity, we found that we could influence the degree of pain catastrophizing in the laboratory by manipulating the degree of empathetic and validating responding to expressed pain experience [10]. Specifically, subjects performing a painful task who were met by invalidation (i.e. the experimenter communicated that their experience was exaggerated and illogical) showed a steady increase in situational pain catastrophizing as compared to those who were met by validation (i.e. the experimenter communicated that their experience was true and understandable). This indicates that pain catastrophizing is dynamic and dependent on social responses to expressed distress.

#### 3 Why are pain patients not taken seriously by health care providers

Indeed, a recurring observation in the context of a chronic pain problem is how challenging it is for patients to satisfactorily convey their pain experience and distress to their surroundings. This is not strange, as pain is a subjective experience and predominantly reliant on self-report and the ability to communicate it to others. It is however not uncommon for patients to feel that they are not taken seriously. Consequently, pain catastrophizing has been related to reports of invalidating health care experiences, perceived injustice and anger [11–14]. There are several contexts in which interpersonal interactions can be relevant to the development of pain problems. While health care providers, managers, coworkers, insurance officers and close relatives can be important sources of empathy and validation they can also be experienced as punitive due to their questioning of legitimacy, or their inability to live up to expectations for help and assistance.

# 4 Importance of positive empathetic validation of pain and pain patients

The function of pain communication is complex but its role as an "emotion regulator" has been highlighted in recent years [15]. Not in the least it has been emphasized that empathetic validation of the pain experience may function to down-regulate negative emotion, promote relational trust and open the way to concrete support and problem solving. Ryum et al. show in their study that patients who report more negative and demanding interpersonal behaviors also reported higher levels of pain catastrophizing. Their study is one example of an effort to explicate the function of pain catastrophizing and highlights its interpersonal context. Possibly then, the association between pain catastrophizing and a hostile and distrusting interpersonal style could partly be a reflection of a pain patient's trajectory of unsatisfactory social interactions and problem solving around an inherently distressing phenomenon.

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#### References

- [1] Ryum T, Jacobsen HB, Borchgrevink PC, Landrø NI, Stiles TC. Interpersonal problems as a predictor of pain catastrophizing in patients with chronic pain. Scand J Pain 2020;20:51–9.
- [2] Thorn BE, Ward LC, Sullivan MJL, Boothby JL. Communal coping model of catastrophizing: conceptual model building. Pain 2003;106:1–2.
- [3] Sullivan MJ, Neish NR. Catastrophizing, anxiety and pain during dental hygiene treatment. Community Dent Oral Epidemiol 1998;26:344-9.
- [4] Theunissen M, Peters ML, Bruce J, Gramke HF, Marcus MA. Preoperative anxiety and catastrophizing: a systematic review and meta-analysis of the association with chronic postsurgical pain. Clin J Pain 2012;28:819–41.
- [5] Sullivan MJ, Rodgers WM, Wilson PM, Bell GJ, Murray TC, Fraser SN. An experimental investigation of the relation between catastrophizing and activity intolerance. Pain 2002;100:47-53.
- [6] Flink IK, Mroczek MZ, Sullivan MJ, Linton SJ. Pain in childbirth and postpartum recovery—The role of catastrophizing. Eur J Pain 2009;13:312–6.
- [7] Peters ML, Vlaeyen JW, Weber WE. The joint contribution of physical pathology, pain-related fear and catastrophizing to chronic back pain disability. Pain 2005;113:45–50.
- [8] Sullivan MJ, Adams H, Sullivan ME. Communicative dimensions of pain catastrophizing: social cueing effects on pain behaviour and coping. Pain 2004;107:220-6.
- [9] Cano A, Leong LE, Williams AM, May DK, Lutz JR. Correlates and consequences of the disclosure of pain-related distress to one's spouse. Pain 2012;153:2441–7.
- [10] Carstens Söderstrand JK. Lending an ear to pain: the impact of emotionally oriented communication on pain catastrophizing. In: Communication in the context of acute pain: Persuasion or validation? PhD dissertation, Örebro Studies in Psychology, Örebro University, Örebro, 2018:39. Retrieved from http://urn. kb.se/resolve?urn=urn:nbn:se:oru:diva-65435.
- [11] Edlund SM, Wurm M, Holländare F, Linton SJ, Fruzzetti AE, Tillfors M. Pain patients' experiences of validation and invalidation from physicians before and after multimodal pain rehabilitation: associations with pain, negative affectivity, and treatment outcome. Scand J Pain 2017;17:77–86.
- [12] Sullivan MJ, Adams H, Horan S, Maher D, Boland D, Gross R. The role of perceived injustice in the experience of chronic pain and disability: scale development and validation. J Occup Rehabil 2008:18:249–61.
- [13] Cano A, Leong L, Heller JB, Lutz JR. Perceived entitlement to pain-related support and pain catastrophizing: associations with perceived and observed support. Pain 2009;147:249–54.
- [14] Trost Z, Vangronsveld K, Linton SJ, Quartana PJ, Sullivan MJ. Cognitive dimensions of anger in chronic pain. Pain 2012;153:515-7.
- [15] Linton SJ. Intricacies of good communication in the context of pain: does validation reinforce disclosure? Pain 2015;156:199–200.