



# Addressing the Emotional Body in Patients With Chronic Pain

Matthias Karst, MD, PhD

In this carefully designed and thoroughly conducted head-to-head study,<sup>1</sup> 126 patients with chronic pain—mostly older veterans with chronic back pain, more than two-thirds of whom also had psychiatric diagnoses—were randomly assigned to either emotional awareness and expression therapy (EAET) or cognitive behavioral therapy (CBT).<sup>1</sup> After individual 1-on-1 treatment, both treatment approaches were carried out in eight 90-minute group sessions. At the end of therapy and at the 6-month follow-up, significantly greater pain relief was seen in the EAET group compared with the CBT group; 63% in the EAET group and 17% in the CBT group achieved pain relief of at least 30%. EAET was also superior to CBT in the secondary outcome parameters of anxiety, depression, life satisfaction, posttraumatic stress disorder (PTSD) symptoms, patient global impression of change, and global satisfaction with the treatment. Only in the EAET group were higher psychometric scores for anxiety, depression, and PTSD associated with a greater reduction in pain intensity after treatment.<sup>1</sup>

The study provides several new insights into EAET for chronic pain. It could be shown that (1) this method can also be used to successfully treat male military personnel with chronic pain, especially when the psychosocial burden is high; (2) the effects on the psychological dimensions can be achieved quickly; (3) the therapeutic effects of EAET are significantly superior to those of CBT in almost all dimensions, even after 6 months; and (4) the evocation and expression of emotions is superior to the mere cognitive discussion of these emotions in the therapy of patients with chronic pain.

Based on various approaches to short-term psychodynamic therapies, EAET was developed in the early 2010s to address medically unexplained or centralized symptoms.<sup>2</sup> Given a medium to large size correlation between emotional expression and positive outcome in any psychotherapy, the core concept of EAET is a psychodynamically oriented treatment that focuses on emotional experience and expression during the session while monitoring the intensity of perceived pain and other somatic symptoms.<sup>2</sup> The efficacy of this procedure has been demonstrated in several randomized clinical trials, including for typical chronic pain syndromes, such as fibromyalgia.<sup>2</sup> In addition to psychoeducational factors, EAET particularly addresses trauma-related emotions, whose changes may be the main driver of the therapy effects.<sup>1</sup>

Large epidemiological studies have shown that approximately 70% of patients with typical chronic pain have experienced psychological trauma, often as early as in childhood.<sup>3</sup> There is evidence that, on a neurobiological level, both chronic pain and psychological trauma can be traced back to central sensitization mechanisms and that the severity of trauma determines the severity of symptoms.<sup>3</sup> This interrupts a coherent, integrated experience so that the body appears as a mere physical object that hurts and is experienced as dysfunctional.<sup>4</sup>

The semantically charged lived body, on the other hand, which largely corresponds to the proportions of the sensory homunculus,<sup>5</sup> can thus be understood as an essential part of the pain memory in the pain disease and thus also becomes accessible to psychotherapeutic procedures. However, these procedures must necessarily also address the embodied psychological experience, ie, the patient must re-perceive the emotion associated with the bodily sensation as their very own emotion so that it can be understood, transformed, and regulated both in relation to the past and in the current context. Identifying and labeling an emotion can directly attenuate the activity of the amygdala and other limbic regions,<sup>6</sup> whose activity is considered an essential component of a dysfunctional pain connectome of cortico-mesolimbic areas.

## + Related article

Author affiliations and article information are listed at the end of this article.

**Open Access.** This is an open access article distributed under the terms of the CC-BY License.

EAET is based on psychodynamic concepts, but it assigns a special place to the integration of the body into the emotional experience. These emotion regulation skills are bidirectional in nature, aiming equally to transform mental activity and dissociative bodily experience into an integrated sense of self as a whole person, so that pain, pain interference, and psychological dimensions can be reduced.

A recent systematic review and meta-analysis of emotion regulation interventions for chronic pain<sup>7</sup> points to the positive outcomes of these techniques compared with usual care and CBT. Other therapy modalities, such as CBT and mindfulness-based stress reduction, also address emotional regulation to varying degrees, but they appear to be inferior to EAET in terms of reducing pain and affective distress. Future studies should include emotional regulation as an outcome parameter to identify the proportion of this characteristic within each treatment modality.<sup>7</sup> With the current form of EAET including only a few treatment sessions, it needs to be clarified how sustainable the therapeutic effects are and whether even stronger effects can be achieved if the emotional body is addressed at the same time through targeted stimulation.<sup>8</sup>

#### ARTICLE INFORMATION

**Published:** June 13, 2024. doi:[10.1001/jamanetworkopen.2024.17340](https://doi.org/10.1001/jamanetworkopen.2024.17340)

**Open Access:** This is an open access article distributed under the terms of the [CC-BY License](https://creativecommons.org/licenses/by/4.0/). © 2024 Karst M. *JAMA Network Open*.

**Corresponding Author:** Matthias Karst, MD, PhD, Pain Clinic, Hannover Medical School, Carl-Neuberg-Str 1, 30625 Hannover, Germany ([karst.matthias@mh-hannover.de](mailto:karst.matthias@mh-hannover.de)).

**Author Affiliation:** Pain Clinic, Hannover Medical School, Hannover, Germany.

**Conflict of Interest Disclosures:** None reported.

#### REFERENCES

1. Yarns BC, Jackson NJ, Alas A, Melrose RJ, Lumley MA, Sultzer DL. Emotional awareness and expression therapy vs cognitive behavioral therapy for chronic pain in older veterans: a randomized clinical trial. *JAMA Netw Open*. 2024;7(6):e2415842. doi:[10.1001/jamanetworkopen.2024.15842](https://doi.org/10.1001/jamanetworkopen.2024.15842)
2. Ahlquist LR, Yarns BC. Eliciting emotional expressions in psychodynamic psychotherapies using telehealth: a clinical review and single case study using emotional awareness and expression therapy. *Psychoanal Psychother*. 2022;36(2):124-140. doi:[10.1080/02668734.2022.2037691](https://doi.org/10.1080/02668734.2022.2037691)
3. Manuel J, Rudolph L, Beissner F, Neubert TA, Dusch M, Karst M. Traumatic events, posttraumatic stress disorder, and central sensitization in chronic pain patients of a German university outpatient pain clinic. *Psychosom Med*. 2023;85(4):351-357. doi:[10.1097/PSY.0000000000001181](https://doi.org/10.1097/PSY.0000000000001181)
4. Storck T. Leiblinien psychosomatischen Denkens in der Psychoanalyse. *Psyche-Z Psychoanal*. 2022;67(6):527-539.
5. Günther F, Rinaldi L. Language statistics as a window into mental representations. *Sci Rep*. 2022;12(1):8043. doi:[10.1038/s41598-022-12027-5](https://doi.org/10.1038/s41598-022-12027-5)
6. Lieberman MD, Eisenberger NI, Crockett MJ, Tom SM, Pfeifer JH, Way BM. Putting feelings into words: affect labeling disrupts amygdala activity in response to affective stimuli. *Psychol Sci*. 2007;18(5):421-428. doi:[10.1111/j.1467-9280.2007.01916.x](https://doi.org/10.1111/j.1467-9280.2007.01916.x)
7. Norman-Nott N, Hesam-Shariati N, Wewege MA, et al. Emotion regulation skills-focused interventions for chronic pain: a systematic review and meta-analysis. *Eur J Pain*. 2024;00:1-8. doi:[10.1002/ejp.2268](https://doi.org/10.1002/ejp.2268)
8. Meissner K, Schweizer-Arau A, Limmer A, et al. Psychotherapy with somatosensory stimulation for endometriosis-associated pain: a randomized controlled trial. *Obstet Gynecol*. 2016;128(5):1134-1142. doi:[10.1097/AOG.0000000000001691](https://doi.org/10.1097/AOG.0000000000001691)