

Study suggests a single skills-based session on pain management packs a punch

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A single two-hour session of a pain management skills class could offer as much benefit as eight sessions of cognitive behavioral therapy (CBT) for patients experiencing chronic low-back pain (CLBP), suggests a study published in *JAMA Network Open*. Supported by the National Center for Complementary and Integrative Health (NCCIH) and the National Institute on Drug Abuse, both part of the National Institutes of Health, the study explored whether a compressed intervention could lead to the same benefits as a longer-course of CBT.

CLBP is the most common source of chronic pain in the United States and globally. Though the use of surgery and pharmaceutical interventions to manage CLBP is rising, the body of evidence has led to pain education and CBT being recommended as first-line treatments.

"CBT delivered in groups can offer important elements like contact with a therapist and [peer support](#)," said Helene Langevin, M.D., director of NCCIH. "But we realize that 16 hours of treatment time and the associated costs could be out of

reach for some patients, so this research could expand treatment options and make nonsurgical and nonpharmaceutical pain management accessible to more patients."

The research team, led by Beth D. Darnall, Ph.D., of Stanford University School of Medicine, California, recruited 263 adults who had experienced CLBP for at least six months, with an average pain intensity of 4/10 or greater, and randomized them to three different treatment arms. The 87 patients randomized to the empowered relief group participated in a single, two-hour pain relief skill-building class. The empowered relief intervention incorporated pain education, mindfulness principles, and self-regulatory skills like relaxation, cognitive reframing, and self-soothing. The 88 patients in the CBT group participated in eight two-hour classes in pain management education and active cognitive behavioral skill building. Within the health education group, 88 patients participated in a single two-hour class about back health, which was designed to match the empowered relief class in duration, structure, format, and class site.

In the study, the primary outcome was measured in differences in the Pain Catastrophizing Score at three months after treatment. Researchers designated several secondary outcomes including pain intensity and bothersomeness during the previous seven days, pain interference in daily living like sleep or physical function, and other outcomes.

Pain catastrophizing can lead to increased attention to pain and feelings of helplessness or being out of control. These responses can prompt neural circuits in the brain to amplify the pain signals. Decreases in pain catastrophizing can favorably impact brain function and structure, and research also suggests a reduction in disability. The Pain Catastrophizing Scale was introduced in 1995, and measures 13 various cognitive and emotional

responses to pain.

When comparing Pain Catastrophizing Scale scores at three months after intervention, the outcomes in the empowered relief group were on par with the CBT group (1.39, 97.5% Confidence Interval (CI)), while researchers found that both CBT and empowered relief were superior to the health education session (-7.29, 95% CI and -5.90, 95% CI, respectively).

"When it comes to pain, we know that the mind and body connection runs deep and coping skills can have a profound impact on how—and how much—people experience pain," said Dr. Langevin. "When people are burdened by chronic [pain](#), they face daily constraints and limitations. This study is exciting because it offers another treatment option for patients and clinicians to consider."

More information: Beth D. Darnall et al, Comparison of a Single-Session Pain Management Skills Intervention With a Single-Session Health Education Intervention and 8 Sessions of Cognitive Behavioral Therapy in Adults With Chronic Low Back Pain: A Randomized Clinical Trial, *JAMA Netw Open* (2021). [DOI: 10.1001/jamanetworkopen.2021.13401](#)

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