

Worse mental health associated with worse pain in osteoarthritis: study

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How much pain osteoarthritis sufferers feel is directly related to their mental health, a new study by researchers at UC Davis School of Medicine has found. In the study, people with better mental health felt less pain, and people with worse mental health felt more.

The study suggests that mental-health treatment could be an effective way to lessen arthritis [pain](#).

"We found that increased levels of pain were associated with worse mental health at baseline," said Barton L. Wise, an assistant professor of general internal medicine and the study's lead author. "And further, pain flares were associated with poorer mental health during the week prior to the pain flare."

The study, "Psychological Factors and Their Relation to [Osteoarthritis Pain](#)," is published in July in the journal *Osteoarthritis and Cartilage*. Wise, who is a researcher with the UC Davis Center for Healthy Aging, said he and his colleagues conducted the research because of the episodic nature of osteoarthritic pain. How much pain a person feels in their arthritic knee or hip may change, and those changes may not be related to structural changes in their joints.

"Pain varies over time, both over extended periods and over shorter periods," Wise said. "The same person can feel little or no pain in their knee or hip, and later they can feel moderate-to-severe pain even when the extent of damage to the knee or hip joint as seen on x-ray imaging

remains the same."

Osteoarthritis is a degenerative disease involving the loss of cartilage and bone at the joints. Typical symptoms include joint pain, tenderness and stiffness, usually in the knees, hips and spine. It is the most common form of arthritis, and also is known as degenerative joint disease.

Osteoarthritis has an estimated 27 million sufferers in the United States and is a leading cause of knee- and hip-replacement surgery, according to the [Centers for Disease Control and Prevention](#).

The researchers studied 266 subjects in the Longitudinal Examination of Arthritis Pain Study, which investigated the relationship between pain, fluctuations in pain and health outcomes. During telephone interviews, the participants, all of whom had hip or knee pain, responded to questions about their pain and psychological states. The interviews took place at one-week intervals over a 12-week period. Mental health was scored using the Mental Health Index-5, with high scores indicating better mental health on a scale of five to 30. Pain was scored using the Western Ontario and McMaster University Osteoarthritis Index of 0 to 10, with a score of 10 indicating severe pain.

Better baseline mental health, a mental-health index score of 28 to 30, was associated with less pain and a relatively low score of 2.93 on the osteoarthritis pain index scale. Participants with worse mental health had mental-health index scores of 13 to 22 and a relatively high osteoarthritis pain index score of 4.57. In addition, patients with worse mental health — mental-health index scores in the 13-to-22 range — had double the risk of increased pain flares as compared with participants in the 28-to-30 range.

Wise said that part of the study's strength is that it gauged individuals' perceptions of their pain intensity at different times, as well as comparing different participants' pain experiences.

"Pain is difficult to study in part because experiences and reporting of pain differ from one person to another. There can be differences in people's central or peripheral nervous systems, past experiences of pain or cultural differences in perceptions of pain, and these make it very complicated to look at differences in pain across individuals. Our study design helped eliminate some of those obstacles," he said. "But it's likely that people's pain is the result of a large group of different factors rather than something as simple as one specific physiological factor."

While the study did not measure whether participants suffered from clinical conditions like depression, it suggests that mental-health treatment could improve patients' osteoarthritis pain — especially because there are no medications that have been proven effective for changing the overall course of osteoarthritis. Current treatments for osteoarthritis include weight loss, improved diet, vitamin consumption and over-the-counter analgesics like acetaminophen or ibuprofen.

"With the paucity of effective interventions for osteoarthritis pain and the toxicities of some in common use, [mental health](#) may represent a new therapeutic target for osteoarthritic pain, with potential significant opportunities for both patients and physicians," the study says.

Provided by University of California - Davis

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