

# Link between mood, pain in rheumatoid arthritis patients

July 28 2015, by Marjorie S. Miller

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Depressive symptoms and mood in the moment may predict momentary pain among rheumatoid arthritis patients, according to Penn State researchers.

"The results of this study link momentary positive and negative mood with momentary [pain](#) in daily life," said Jennifer E. Graham-Engeland, associate professor of biobehavioral health. "That is, we found evidence consistent with a common, but largely untested, contention that mood in the moment is associated with fluctuation in pain and pain-related restrictions." The link was examined among individuals with [rheumatoid arthritis](#), but may extend to other populations.

Greater positive mood as assessed in the moment—in daily life—was associated with less pain and fewer arthritis-related restrictions in the moment, whereas negative mood was associated with more restrictions. Individuals who reported greater depressive symptoms in general also reported more common pain and restrictions in daily life. This effect of [depressive symptoms](#) was not due to differences in day-to-day mood.

The researchers report their results in the *Annals of Behavioral Medicine*, currently available online.

Study participants were provided mobile devices that prompted them to rate their own mood and pain five times a day across seven days. Ratings of pain, swelling, stiffness, and arthritis-related restrictions to routines and activities were similarly obtained five times a day across the same

period.

"Although it is relatively common to hear people in everyday life acknowledging that their mood can exacerbate their physical pain, most evidence for this view is derived from cross-sectional comparisons, longitudinal associations over fairly lengthy periods of time, such as months or years, or laboratory studies where mood and/or pain are manipulated, as opposed to naturally occurring in everyday life," Graham-Engeland said.

According to the researchers, several recent studies have used end-of-day assessments of mood and pain. In their study, this approach was extended to use multiple assessments per day to examine associations between mood and pain within individuals.

Study results also suggest that positive mood may be particularly important.

"Several of our analyses suggest that momentary [positive mood](#) is more robustly associated with momentary pain than [negative mood](#)," Graham-Engeland said.

The researchers speculate that multi-component interventions aimed at both mood and depression and which incorporate non-traditional interventions as additions to pharmaceutical therapies may be needed to optimally improve pain and pain-related quality of life in many people with rheumatoid arthritis.

Although the researchers note that important questions remain about causality as well as directionality of effects, the present research suggests that interventions to target depression as well as interventions to target momentary [mood](#) warrant investigation for individuals with rheumatoid arthritis and, perhaps, chronic pain in general.

**More information:** "The effects of daily mood and couple interactions on the sleep quality of older adults with chronic pain." *Journal of Behavioral Medicine* [DOI: 10.1007/s10865-015-9651-4](https://doi.org/10.1007/s10865-015-9651-4)

Provided by Pennsylvania State University

Citation: Link between mood, pain in rheumatoid arthritis patients (2015, July 28) retrieved 3 May 2024 from <https://medicalxpress.com/news/2015-07-link-mood-pain-rheumatoid-arthritis.html>

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