

# Depressive symptoms associated with disease severity in patients with knee osteoarthritis

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The results of a study presented today at the Annual European Congress of Rheumatology (EULAR 2018) demonstrate that among individuals with radiographic knee osteoarthritis (OA), decreased physical performance and greater structural disease severity are associated with a higher risk of experiencing depressive symptoms.

Knee OA is a chronic and disabling condition that is one of the leading causes of pain and functional limitations worldwide. Depressive symptoms are a frequent comorbidity affecting one in five patients, twice the amount of the general public.<sup>4</sup> Furthermore, there is growing evidence that psychological factors have a significant impact on pain and physical function in OA patients. Despite this, depressive symptoms are often under-recognised by treating rheumatologists, and therefore, may be under-treated in individuals with arthritis.

"We know that [disease](#) progression in patients with knee OA can lead to deteriorating psychosocial health," said Professor Thomas Dörner, Chairperson of the Abstract Selection Committee, EULAR. "The results of this study provide valuable insights into the components of OA disease severity which are related to depression onset."

The study examined three predictors of OA disease severity; structural severity (joint space width), physical performance (gait speed), and pain (subscale of the WOMAC Index). Each measure was operationalized as time-averaged severity and grouped in to quintiles, and results showed that depressive symptom onset was associated with increased severity for

two of the three predictors. In order of increasing magnitude, the odds ratios comparing highest to lowest severity quintiles were 1.60 for pain (95% CI: 0.81-3.16), 2.08 for gait speed (95% CI: 1.16-3.75), and 2.25 for joint space width (95% CI: 1.27-3.99).

"Given the results of our study, we believe that to effectively treat individuals with radiographic knee OA and comorbid depressive disorder, it is necessary to use a combined treatment strategy of two interventions delivered in parallel to simultaneously target each condition," said Alan M. Rathbun, Ph.D., M.P.H., Research Associate in the Departments of Epidemiology and Medicine at the University of Maryland School of Medicine and Special Fellow at the Geriatric Research Education and Clinical Center in the VA Maryland Health Care System.

Eligible participants (n=1,652) were selected from the Osteoarthritis Initiative who had radiographic disease<sup>†</sup> and were classified as without depressive symptoms<sup>‡</sup> at study baseline. OA disease severity was assessed at the beginning of the study using joint space width, 20-meter gait speed and pain<sup>§</sup> and then at three annual follow-up visits. These severity predictors were evaluated as a moving average at each time point then categorized into quintiles. Depressive [symptom](#) onset was assessed at four annual follow-up visits using the CES-D scale. Statistical modelling and analysis evaluated the association between each disease severity predictor and onset of [depressive symptoms](#).

**More information:** Abstract number: OP0003, [DOI: 10.1136/annrheumdis-2018-eular.7224](#)

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