Rheumatology and Therapy
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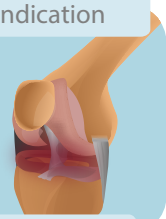
Self-Reported Weather Sensitivity is Associated with Clinical Symptoms and Structural Abnormalities in Patients with Knee Osteoarthritis: A Cross-Sectional Study

Xue, Y. , Chen,Y., Jiang, D. et al. Rheumatol Ther (2021). https://doi.org/10.1007/s40744-021-00340-w

Study location

China

Indication



Knee OA

Study population

80 participants

Study design

Cross-sectional survey

Questionnaire

Question 1: Does the weather affect the statue of your knees?
- a. It has a lot of influence
- b. It has some effects
- c. No, it's not related to weather

Question 2: What weather conditions have the greatest impact on your knees?
- a. When the weather gets warmer
- b. When the weather gets cold
- c. It's hard to say

Question 3: Did weather changes prevent you from carrying out your normal daily activities at any time?
- a. Yes, once
- b. Yes, more often
- c. No, never

Inclusion criteria

- ☐ Age > 38 years
- ☐ Knee OA per ACR criteria
- ☐ KL radiological grade 2
- ☐ VAS pain score ≥ 10 mm (0 mm = no pain, 100 mm = most severe pain)

Why carry out this study?

People with knee OA frequently report that their clinical symptoms— including pain, stiffness, and disability—are **sensitive to weather**.

OA is a **complex disease** for which subjective weather sensitivity has not been fully investigated.

This study was conducted to determine whether **self-reported weather sensitivity** was associated with **clinical symptoms** and **structural abnormalities** in patients with knee OA via a cross-sectional survey.

What was learned from the study?

57.5%
of participants reported weather sensitivity

After adjusting for age, sex, and BMI, weather sensitivity was associated with:

Clinical symptoms

Knee pain

Dysfunction

Overall clinical symptoms

Structural abnormalities

Cartilage defects

Marrow abnormality

A longitudinal study is warranted to determine whether causal relationships exist.

Abbreviations: OA = Osteoarthritis; ACR = American College of Rheumatology; KL = Kellgren-Lawrence; VAS = Visual analogue scale; BMI = body mass index

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