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Do anthropometric measures and pain influence functional test performance in knee osteoarthritis?

Rebecca B Ramalho[1], Leonardo Furlan[1] , Luiz F A Selistre[1]

[1]Department of Physical Therapy of the Federal University of São Carlos, São Carlos - SP - Brazil.

Background and aims

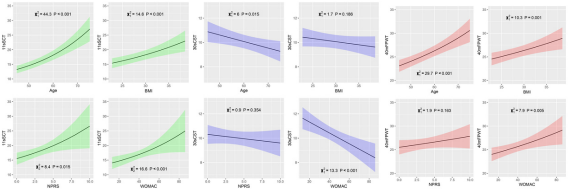
This study aimed to evaluate how age, weight, height, and pain intensity influence the performance of functional tests in individuals with knee osteoarthritis (KOA), as their impact in this specific population remains relatively unexplored.

Methods

This observational, cross-sectional study recruited participants with KOA. Anthropometric data were collected, and the Western Ontario and McMaster Universities Osteoarthritis Index (WOMAC) questionnaire was administered. Participants reported their pain levels (Numerical Pain Rating Scale - NPRS) and performed the 30-second chair stand test (30-s CST), the 40 meter fast-paced walk test (40m FPWT), and the stair climb test (SCT). Three ordinal regression models were used. The analysis was conducted in R, with a significance level of 5%. The study received approval from the Human Research Ethics Committee of the Federal University of São Carlos (UFSCar) (CAAE: 43321821.90000.5504), and all participants provided written informed consent.

Results

142 participants, with an average age of 59 years. The mean BMI was 29.1, mean pain intensity (NPRS) was 3.5, and mean WOMAC total score was 47. The average scores for the functional tests were 9 for the 30-s CST, 28.82 for the 40m FPWT, and 22.82 seconds for the SCT. Age, BMI, and WOMAC score negatively affected FPWT performance, while age and WOMAC negatively affected 30s CST performance. Age, WOMAC, BMI, and NPRS were negatively associated with SCT. Women performed worse than men on all functional tests.



Conclusions

Advanced age, being female, high BMI, high pretest pain intensity, and low self-reported function were all found to negatively impact functional test performance.

Relevance for patients care

Understanding the influence of such factors helps in the interpretation of the performance of patients with knee osteoarthritis on performance-based tests.

References

Lee, S. J., et al (2020). Preoperative physical factors that predict stair-climbing ability at one month after total knee arthroplasty;

Wollesen, B., et al (2017). Influence of age, gender and test conditions on the reproducibility of Dual-Task walking performance.

Altman, R., et al (1986)., Development of criteria for the classification and reporting of osteoarthritis. Classification of osteoarthritis of the knee.

R Core Team (2023). R: A Language and Environment for Statistical Computing. R Foundation for Statistical Computing, Vienna, Austria. https://www.R-project.org/.