



**UNIVERSITY OF WEST ATTICA**  
**SCHOOL OF HEALTH AND CARE SCIENCES**  
**DEPARTMENT OF PHYSIOTHERAPY**

## **Title of Postdoctoral Research**

How effective is a blended web-based rehabilitation for improving pain, physical activity, and knee function of patients with knee osteoarthritis?

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## **Background**

Knee osteoarthritis (KOA) is one of the leading causes of chronic pain, disability and absenteeism from work worldwide. Due to the chronic nature of this condition self-management is considered an essential part of therapy to improve physical function, activity, pain and quality of life. Web-based rehabilitation may be a potential innovative mode of patient' training to guide management compared to usual care, especially with the current restrictions pandemic imposed. Moreover, in order to alter KOA patients behavior towards physical activity, it may be more attractive and motivating to combine within their rehabilitation program, outdoor real-life local activity that could be sustained in the future.

## **Methods**

This is an open, randomised multi-center study with two prospective arms. Sixty eligible and consenting participants with knee OA will be recruited from the West Attica region municipalities (considered as structurally weak areas). After a comprehensive face-to face training session, participants will follow a 6-week web-based rehabilitation program, consisting of exercise, advice material and enhanced outdoor structured physical activity. The control group will be encouraged to follow the outdoor structured physical activity alone. Baseline, 6-week and 12-week follow up assessments will be performed. The primary outcome is self-reported physical function as measured by KOOS. Secondary measures include pain (VAS), function (Timed Up and Go Test, Sit to Stand test), physical activity levels (Lower Extremity Activity Scale, Baecke Scale and pedometer), psychological perspective (Tampa Scale of Kinesiophobia) and health-related quality of life (Short-Form 12). Baseline-adjusted Analysis of Variance will be used to test for group differences in the primary and secondary outcomes.

## **Discussion**

We expect that the intervention group to benefit from the combination of home web-based exercise, advice material and enhanced outdoor physical activity in many respects compared to the outdoor physical activity alone. If successful, this approach could be used to enhance access and promote self-management care programs for this clinical population that could be sustained during their chronic nature of their condition.

**Trial Registration:** ISRCTN12950684

**Keywords:** home-based, web-based, exercise, advice, physical activity, walking, knee osteoarthritis, chronic pain.

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