when compared to the other conditions, was effective only for the timed up and go test (three studies, n=225; MD=-1.38, 95% CI [-2.35, -0.41]; p=0.005; $I^2$=56%). No significant differences were observed for the other analyses.
*Conclusion:* The findings of the present study demonstrate that physical therapy based on exercises, when started mainly in the early postoperative period of TKA is better than the comparison conditions in knee functionality.
*Implications:* The present review shows the clinical applicability of physiotherapeutic exercises started early after TKA, which can improve the functional conditions of patients.
*Keywords:* Arthroplasty, Knee, Replacement, Exercise Therapy, Postoperative Care

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## BODY BALANCE IN INDIVIDUALS WITH OSTEOARTHRITIS OF THE HIP AND KNEE, BEFORE AND AFTER GROUP PHYSIOTHERAPY INTERVENTION PROTOCOL

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*Background:* Osteoarthritis (OA) is a slow and progressive musculoskeletal disorder that primarily affects the hip and knee joints. As a result, it leads to loss of flexibility, pain, reduced range of motion, and affects gait and body balance, resulting in functional dependence and reduced quality of life for individuals. Physical therapy based on exercises is considered the best treatment option due to its favorable cost-benefit ratio, helping to reduce pain and improve physical function, gait, and body balance. Additionally, studies suggest that group physical therapy has proven beneficial as it utilizes fewer resources, thereby reducing costs, offering greater interaction among patients, and achieving similar results to individual treatment.
*Objectives:* This study aimed to evaluate the effects of a group exercise protocol on static and dynamic body balance in individuals with knee and hip osteoarthritis.
*Methods:* A clinical trial was conducted with patients diagnosed with knee and/or hip OA, who were able to walk independently and scored above 25 on the Lower Extremity Functional Scale (LEFS). The assessment instruments included the LEFS functionality questionnaire, Visual Analogue Scale (VAS) for pain assessment, Agility and Dynamic Balance Test (ÁGIL), and Stabilometry using an electronic baropodometer (FootWalk Pro®, AM CUBE, France), where participants maintained a bipedal position without support for 30 seconds. The intervention protocol consisted of 10 group kinesiotherapy sessions, conducted twice a week, with progressive exercises. The first week focused on mobility exercises involving active movements of the lower limbs, ballistic stretching, oscillations, and adopting different positions. The second week they emphasized mobility and resistance, incorporating shin pads and active lower limb exercises. In the third week, the focus was on resistance with higher intensity compared to the previous week. The fourth week they included resistance and functional exercises simulating musculoskeletal strain during daily activities. The fifth week involved functional exercises with increased intensity and additional balance training. Data were presented as means and standard deviations, and comparisons were made using dependent sample tests determined by the Kolmogorov-Smirnov test with the assistance of SPSS software (version 19.0) at a significance level of 5%.
*Results:* The sample comprised 27 participants, 20 women (74%) and seven men (26%), and a mean age of 64.19±8.33 years. After accounting for sample loss between the first and second evaluation moments (after intervention), there were 18 participants available for comparison tests. The results showed a significant 17% improvement in functional capacity and a 44% reduction in pain during movement.
*Conclusion:* The five-week group exercise protocol improved pain and functionality in this sample; however, it did not lead to significant changes in static and dynamic body balance parameters.
*Implications:* This study demonstrates the clinical applicability of group exercises, which can improve pain and function in patients with knee and/or hip osteoarthritis, thereby reducing costs and enhancing the efficiency of care in clinics.
*Keywords:* Osteoarthritis, Balance, Physiotherapy

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## THE INTRODUCTION OF NEW TECHNOLOGIES APPLIED TO THE CITIZEN SCIENCE METHOD IN SCIENTIFIC PROJECTS IN HEALTH: AN INTEGRATIVE REVIEW

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*Background:* Citizen Science (CC) refers to the collaboration of volunteers, amateur scientists, non-professional scientists (citizens), and those without academic training in a project or research of a scientific nature, actively contributing to science. In public health, research with the CC method is recent, in small numbers and samples, proving particularly useful, especially with the recent introduction of new technologies (NT). These NT help collect and analyze population health data, encourage the involvement of community members, and promote greater interaction, contribution, and discussions in solving the scientific problem that directly impacts a community's health and/or well-being.
*Objectives:* To describe the main studies in the literature and their findings on the incorporation of new technologies in health research applied to the citizen science method.
*Methods:* We carried out an integrative review of articles published up to 2021, extracting the location, the most used technology, and its results on the health of the individual or the environment in which he lives.
*Results:* Fourteen studies were found in 5 countries, mostly American (42.8%) and European (35.7%), with 92.8% using information and communication technology (applications) on mobile devices (smartphones) for data collection and recording of the studied population. All studies presented important findings regarding the training of individuals in the collection, analysis, monitoring, and health promotion of the studied population.