

TITLE: Falls risk and utilization of balance training by physical therapists for adults with symptomatic knee osteoarthritis

Purpose: Knee osteoarthritis (OA) is a prevalent disease that impacts mobility and activity participation in 27.8% of adults over the age of 45. Individuals with knee OA are at an increased risk of falling due to physiological changes and symptoms associated with this disease. Despite the increased risk for falls in individuals with knee OA, there is limited evidence of individuals with knee OA participating in balance training programs to reduce falls risk. Assessment of physical therapy (PT) practice patterns for patients with knee OA may offer insight into treatment approaches to address symptomatic knee OA, specifically for individuals who are considered high falls risk. The aim of this retrospective data analysis is to determine the proportion of participants at risk for falling in the PATH-IN trial (physical therapy vs. internet-based exercise training for patients with knee osteoarthritis), as well as the frequency with which participants who were allocated to standard PT intervention and classified as high falls risk performed balance training interventions. In addition, this study will assess the frequency and type of balance training interventions utilized by the physical therapists.

Number of Subjects: 118

Materials and Methods: Participants allocated to the standard PT intervention group of the PATH-IN trial received up to 8 one-hour sessions of physical therapy. Electronic progress notes in the study database and written exercise flow sheets were reviewed and coded as including balance training or not for each physical therapy visit. Participants were classified as high falls risk at baseline, 4-month, and 12-month time points based 2 physical performance measures, Timed Up and Go Test ≥ 13.5 seconds or single leg stance time < 5 seconds.

Results: Upon enrollment, 35.5% (N=344) of all participants in the PATH-IN trial and 36.2% (N=138) of participants in the standard PT intervention group were identified as having falls risk. For the participants allocated to the standard PT group, 35.4% (N=113) classified as falls risk at the 4-month follow-up, and 21.7% (N=106) classified as falls risk at the 12-month follow-up. Of the 118 participants included in the standard PT group whose interventions could be coded as including balance training or not, 62.7% (N=74) received balance training interventions. Fourteen of the 44 participants (31.8%) who were classified as at high falls risk did not receive balance training. For participants who received balance training, it was a component in 69% of all PT sessions.

Conclusions: The findings of this study are consistent with previous reports that significant portions of adults with knee OA are at an increased risk for falling. The majority of patients (62.7%) allocated to PT received balance training. However, an appreciable proportion (31.8%) of participants classified as falls risk did not receive balance training. The proportion of participants who were classified as falls risk progressively decreased for participants allocated

to the standard PT group. This may indicate that balance training helps to decrease falls risk in this population.

Clinical Relevance: This study confirms the high proportion of individuals with knee OA who are at an increased falls risk. Integrating balance training into a comprehensive plan of care for patients with knee OA may be underutilized in clinical practice, especially for individuals who are considered high falls risk.

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