Balance Strategy Exercise versus Lower Limb-ROM Exercise for Reducing the Risk of Falls among Older People

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Abstract	1 Background: Falls are a significant health problem and the most common cause of injuries in older people. Different types of exercise have been recommended to prevent falls, including balance exercise and range of motion. However, there is a lack of evidence to compare the effect of the two exercises.Purpose: This study aimed to compare the effect of Balance Strategy Exercise (BSE) and Lower Limb-Range of Motion (ROM) exercise on reducing the risk of falls among older people living in long-term care facilities. Methods: This was a quasi-experimental study using a pre-post design without a control group. A total of 30 older adults from two nursing homes who met the inclusion and exclusion criteria participated in the study. A cluster randomization technique was used to assign the older people into either BSE or Lower-Limb ROM groups evenly. Treatment was given for 30 minutes per session, three sessions per week for three weeks. The risk of falls was measured using the Timed Up and Go (TUG) test. The paired t-test, Wilcoxon and Mann-Whitney U-test were used to analyze the data. Results: Results showed significant differences in the TUG scores before and after the intervention within both the BSE (p=0.001) and the Lower Limb-ROM group (p=0.001). However, the Lower Limb-ROM group demonstrated a significantly higher reduction in TUG score than the BSE group after the intervention (p=0.008).Conclusion: Lower Limb-ROM exercise is better to reduce the risk of falls among older people living in institutional care than BSE. This exercise can be applied as part of a fall prevention program in nursing homes.
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