

# Effects of Retro-Walking Training on Kinesiophobia and Cognition in Geriatric Population: A Quasi - Experimental Study

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## Abstract

**Introduction:** Aging brings challenges such as Kinesio phobia and cognitive decline, significantly impacting quality of life and fall risk in older adults. Retro-walking, a novel exercise modality, has shown promise in improving balance and motor control. Objective: This study aimed to assess the effects of retro-walking training on kinesiophobia and cognition in geriatric subjects.

**Methodology:** A quasi-experimental design was employed with 60 geriatric participants aged 65-75 years. Participants were divided into control and experimental groups. The experimental group underwent retro-walking training thrice weekly for 6 weeks, complemented by home exercises. Kinesio phobia was assessed using the Tampa Scale of Kinesiophobia (TSK), and cognition was evaluated using the Montreal Cognitive Assessment (MoCA) scale.

**Result:** Significant improvements were observed in both TSK (pre:  $50.6 \pm 8.6$ , post:  $27.6 \pm 6.9$ ,  $p < 0.001$ ) and MoCA scores (pre:  $25.0 \pm 3.1$ , post:  $27.7 \pm 1.8$ ,  $p < 0.001$ ) post- intervention. The experimental group showed a marked reduction in kinesiophobia and enhanced cognitive function compared to the control group.

**Conclusion:** Retro-walking training demonstrated beneficial effects on reducing kinesiophobia and enhancing cognition in geriatric subjects. These findings suggest that retro-walking can be an effective intervention to improve functional outcomes and mitigate fall risks in the elderly population.

**Keywords:** Cognition; Fall Prevention; Geriatric Population; Kinesiophobia; Retro-Walking