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Role of Balance Training in Enhancing Gait Speed and Postural Control in Elderly with Mild Cognitive Impairment: A Narrative Review

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ABSTRACT

Introduction: Ageing leads to physiological changes that impair balance, gait speed, and postural control. These issues are particularly pronounced in individuals with Mild Cognitive Impairment (MCI), increasing their risk of falls and reducing mobility. Balance training has emerged as an effective intervention to enhance postural stability and functional movement, addressing both physical and cognitive deficits in this population.

Aim: This narrative review synthesises recent research on the effectiveness of balance training in improving gait speed and postural control among elderly individuals with MCI. It explores the impact of structured balance interventions on mobility and fall prevention.

Methodology: A literature review was conducted using peer-reviewed journal articles, Randomised Controlled Trials (RCTs), systematic reviews, and meta-analysis from the last five years. Studies evaluating the effects of balance training on gait speed and postural control in elderly individuals with MCI were selected from databases such as PubMed, Scopus, and Google Scholar.

Results: Recent studies highlight that balance training significantly improves postural control, reduces sway, and enhances stability in older adults with MCI. Structured programmes incorporating dynamic stability tasks, single-leg stance exercises, and reactive balance training demonstrate effectiveness in mitigating fall risks. Additionally, motor-cognitive interventions that combine balance exercises with cognitive tasks show promise in improving both mobility and executive function.

Conclusion: Balance training is a critical intervention for enhancing gait speed and postural control in elderly individuals with MCI. Its incorporation into rehabilitation programmes can significantly improve mobility, reduce fall risks, and support cognitive function. Future research should explore optimal training intensities and long-term benefits.

Implication: Healthcare professionals should prioritise balance training in physiotherapy programmes for older adults with MCI. Developing structured, evidence-based protocols can improve functional independence and quality of life in this population.

Keywords: Balance training, Gait speed, Postural control, Mild cognitive impairment, Fall prevention, Elderly, Cognitive function

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