POSTER PRESENTATION
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Effects of Dual-Task Training on Gait Speed in Stroke Patients: Insights from a Historical Systematic Review

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ABSTRACT

Background: Stroke is a leading cause of long-term disability worldwide with gait impairment significantly limiting functional independence and community participation. Gait speed is a key indicator of walking ability and recovery following stroke. Dual-task training which integrates walking with simultaneous cognitive and motor tasks emerged as a promising rehabilitation strategy. At the time this review was undertaken (2018), evidence evaluating the effectiveness of dual-task training on gait speed was limited with considerable heterogeneity in intervention, protocols, training dosage and outcome measures, then making it difficult to establish clear clinical recommendation. Therefore, this systematic review aimed to synthesise the available evidence on the effects on dual-task training on gait speed in individuals following stroke. **Methods:** A systematic search of PEDro, AMED, MEDLINE and CINAHL identified randomized controlled trials published up to March 2018. Methodological quality was assessed using PEDro scale with including scoring between 5 and 7 out of 10 indicating fair to high quality. Two independent reviewers conducted study selection, quality appraisal and data extraction. Due to methodological heterogeneity, findings were synthesised narratively. **Results:** Eight randomized controlled trials involving 228 participants were included. Overall, dual-task training improved gait speed compared with conventional rehabilitation or single-task training. Across individual studies, gait speed increased approximately 47.8-85.6 cm/s at baseline 58.9-115.4 cm/s following intervention, with several studies reporting statistically significant improvements However, intervention protocols and outcome measures varied across studies. **Conclusion:** Dual-task training showed positive effects on gait speed in individuals following stroke. This review provides historical evidence supporting its role in stroke rehabilitation and highlights the need for further high-quality research.

Keywords: Stroke; Dual Task Training; Gait Speed; Stroke Rehabilitation; Systematic Review

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