

## Effects of action observation training in gait speed of stroke patients

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Stroke is considered as a primary cause of disability and results to problems in activities of daily living. Action Observation Training (AOT) is an emerging cost-effective physical therapy intervention (PT) which involves facilitation of mirror neurons through viewing of video clips of a healthy individual performing an activity similar to that of the desired task. This intends to describe the effects of AOT used in conjunction with conventional PT interventions in gait speed of stroke patients. This case series involves four stroke patients with over 6 months of stroke and can ambulate independently, who underwent PT sessions for three times a week for four weeks. Interventions included an hour of conventional PT intervention for the lower extremity and AOT done by watching a video clip of a healthy individual while walking on even surface, with anterior, lateral and posterior views. The gait speed was assessed in pretest and posttest using 10-Minute-Walk Test (10-MWT). A difference of 0.16 m/s in 10-MWT from baseline reveals a clinically significant change in gait speed. Results showed one patient had a clinically significant improvement in fast gait speed with 0.23 m/s difference from baseline. Meanwhile, one patient had a difference of 0.25m/s in preferred walking speed considered as clinically significant. Two patients did not present a clinically significant difference in the pretest and posttest scores of 10-MWT but with a statistically significant difference in their preferred walking speed. While the study and results showed better understanding of AOT and its clinically significant improvements in gait speed, the effects cannot be generalized nor be sufficient enough to conclude its effectiveness, but opens direction for future research and possible utilization in healthcare