

## **Neuro-functional Client Centered Intervention Among Adults in the Chronic Phase After Stroke: A Randomized Controlled Trial**

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**Introduction:** Stroke survivors live with chronic disability and restricted participation in meaningful life roles. There is a much research documenting the efficacy of occupational therapy (OT) in the rehabilitation process post stroke, however only scarce evidence exists regarding the chronic stage, several years post onset. The Neuro-functional approach is an occupation-focused treatment that utilizes behavioral learning principles such as errorless learning, positive reinforcement, and antecedent control. This approach is recommended for individuals with stable and severe neurological involvement, yet has not been studied in the chronic stage after stroke.

**Objectives:** The objective of the study is to examine the efficacy of a Neurofunctional, client-centered treatment in achieving occupational goals and promoting quality of life among adults suffering from the long standing implications of stroke.

**Methods:** The study design was a pre-post intervention, randomized controlled trial. The sample included 29 adults aged 51-77, average 6.72 years post onset of stroke, enrolled in a community stroke survivor program, randomly allocated to treatment (n=15) or wait list control group (n=14). The treatment group received approximately 10 OT sessions (over an average of 12 weeks) targeting three of five occupational goals identified by the client and therapist. The other two goals were not trained, to examine transfer of treatment effect. The control group continued the usual activities in the community center. Outcome Measures included the Canadian Occupational Performance Measure (COPM), Goal Attainment Scaling (GAS), and Stroke impact Scale (SIS). The measures were administered before and after the intervention phase.

**Results:** A significant group effect was found on the COPM and the GAS ( $p < .01$ ). The treatment group demonstrated significant improvements on the COPM and GAS ( $p < .01$ ) regarding intervention goals. However, no significant improvements were found regarding occupational goals that were not targeted in the intervention, nor on the SIS. Within the control group, no significant improvements were found on any of the outcome measures.

**Conclusion and contribution to the practice/evidence base of occupational therapy:** The results from this randomized controlled design, provide a high standard of evidence supporting occupational therapy Neuro-functional treatment in achieving client-centered occupational goals, among adults in the chronic phase after stroke.