Cognitive Multisensory Rehabilitation Improves Upper Extremity Function in Stroke Patients

Abstract

Background: stroke is one of the leading causes of disability worldwide, and upper limb dysfunction is the most challenging morbidity among stroke patients. Upper limb rehabilitation lacks focus on the multisensory aspects to optimize the motor functional output.

Objective: The aim of the study was to examine the effects of cognitive-multisensory rehabilitation (CMR) on the recovery of upper limb function and fatigue in chronic stroke patients.

Subjects and Methods: Forty patients with mild and moderate spasticity chronic stroke were selected (grades 1, 1+, and 2 according to the Modified Ashworth Scale). The participants were randomly assigned into two equal groups, GI and GII. Group I received CMR and a selected physical therapy program and Group II received the same selected physical therapy program only. This study was conducted for four weeks; three sessions per week. Upper limb function was assessed using the box and blocks test for gross manual dexterity and the hand grip strength using an electronic dynamometer . Fatigue was assessed using the Fatigue Assessment Scale.

Results: There was a significant increase in upper limb function and a significant decrease in Fatigue in the study group compared to the control one ($p<0.05$).

Conclusion: Cognitive multisensory rehabilitation was found to improve functional recovery of upper extremity in chronic stroke patients that enable them to participate efficiently in the community**.**

Keywords:

Stroke, Upper limb function, Cognitive multi-sensory rehabilitation.