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## Effect of Task-Oriented Exercises on Improving Hand Function in Subacute Stroke Patients: A Randomized Controlled Trial

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Abstract : Background and Purpose: Hand function impairment is one of the main causes of functional disability in stroke patients. The study aimed to determine the effect of taskoriented exercises combined with a selected physical therapy program on improving hand function in subacute stroke patients. Subjects: Thirty patients (17 males and 13 females) diagnosed with stroke were included. The patients were randomly assigned into two equal groups a task-oriented group (n=15) or conventional group (n=15). Patients and Methods: The task-oriented group carried out task-oriented exercises directed for the affected hand for 30 min per day, 3 days a week for 6 consecutive weeks in addition to a selected physical therapy program. The conventional group carried out only the selected physical therapy program that was lasted for 30 minutes. The outcome measures were the hand grip, lateral pinch, and palmar pinch strength; the box and block test; and the Modified Barthel Index. The measured variables were accomplished before and after the training. Results: The taskoriented group showed a significant improvement in terms of hand grip, the box and block test and Modified Barthel Index scores. Conclusion: According to the results of this study, taskoriented exercises were found to add benefits in improvement of hand function if accompanied by conventional physical therapy program in treating subacute stroke patients. Key words : Stroke, task-oriented exercise, hand functions, activities of daily living.

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