

## **The Effect of Bilateral versus unilateral reaching forward On Attention Concentration in Patients with stroke**

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**Abstract:Background:** Impairment of the upper limb function in stroke patients is the main problem of those patients. Attention concentration also has an impact on the performance of the upper limb function. Finding new method for improvement of the upper limb function and attention concentration is main target of this paper. **Purpose of the study:** to compare the effectiveness of bilateral versus unilateral reaching forward on attention concentration and arm function in stroke patients **Methods:** Thirty male chronic stroke patients with moderate impairment of function of the left upper extremity were assigned into two equal groups. Patients in group 1(G1) received task oriented in form of unilateral reaching forward in addition to attention concentration by rehacome training while patients in group 2(G2) received task oriented in form of bilateral reaching forward in addition to attention concentration by rehacome training. Assessment of the impairment of the upper limb function and attention concentration were done two times before and after eighteen sessions of training by Fugle-Meyer motor performance scale(FMAS) and rehacom **Results :** The training program of the patients in G2 showed a significant decrease of the time needed for attention concentration after bilateral reaching forward. The training program of the patients in G2 showed also a significant increase of the motor performance of the affected upper extremity after bilateral reaching forward. **Conclusion:** Bilateral reaching forward has a favorable effect on the motor performance of the affected arm and also on the attention concentration in patients suffering from chronic stroke.

**Key words:** Bilateral reaching forward – Unilateral reaching forward – Rehacom- FMAS- Attention concentration.