

**Adapted and Peer group regulated Modified CIMT verses Conventional
Occupational Therapy for Upper Extremity Rehabilitation following Stroke:**

A Randomized Controlled Trial

By

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Abstract

Background. Constraint Induced movement therapy (CIMT) is a relatively novel treatment for upper limb rehabilitation in patients with stroke. In context of the outpatient service at the Centre for the Rehabilitation of the Paralyzed (CRP) in Bangladesh the standard CIMT protocol can't be applied in addition to 'as usual' therapy. To address this barrier, an adapted and peer group regulated modified constraint induced movement therapy protocol has been developed, which reduced therapist's time and patients' cost. Culturally adapted tasks practice allow a comfortable environment for both therapist and patients. **Objective.** The aim of this study this study is to compare the effects of adapted and peer-group trained mCIMT with conventional occupational therapy for upper extremity rehabilitation following stroke. **Design.** Double-blind Randomized Controlled Trial. **Setting.** The study was conducted in the CRP (Savar and Mipur Centre). **Methods.** 80 patients with ischemic stroke who meet the inclusion criteria were randomly allocated to the control and experimental group (1:1 ratio). Each group got 20 treatment sessions (2h/d for 5 days in 4 constructive weeks). Patients were assessed with Wolf Motor Function Test (WMFT; primary outcome measure), and Action Research Arm Test (ARAT), Fugl-Meyer Assessment: upper extremity motor (FMA-UE), Nine Hole Peg test (NHPT), Functional Independence Measure (FIM Self-care) and Motor Activity Log (MAL –Amount Scale, MAL-How Well Scale) (all secondary outcome measures) **Result.** Within group analyses showed statistically significant improvement in both groups ($p < .005$). In-between group comparisons showed that adapted and peer group regulated mCIMT had statically higher improvement than the traditional treatment group (pretest, posttest and three month follow up). The improvements in time also showed clinical relevance in WMFT and other measurements. **Conclusion.** Two hours adapted and peer group regulated mCIMT was proven to be more effective than conventional occupational therapy in improving upper limb function and use of paretic arm in patients with ischemic stroke. **Clinical Rehabilitation impact.** It is advised to use adapted and peer group regulated mCIMT in outpatient occupational therapy services of stroke patients.

Key Words: Stroke, Upper limb Rehabilitation, Modified Constraint induced movement therapy.