



# International Journal of Medical and Exercise Science

(Multidisciplinary, Peer Reviewed and Indexed Journal)

## ORIGINAL ARTICLE

**COMPARATIVE STUDY OF COMBINED EFFECT OF TASK ORIENTED MOTOR RELEARNING PROGRAMME (MRP) AND THERMAL STIMULATION OVER ITS INDIVIDUAL EFFECTS TO IMPROVE UPPER LIMB MOTOR FUNCTION OF MIDDLE CEREBRAL ARTERY(MCA) STROKE SUBJECTS**

Search engine:  
[www.ijmaes.org](http://www.ijmaes.org)

**Dr.Shameer P S<sup>1</sup> and Dr.Jibi Paul<sup>2</sup>**

**Author:** <sup>1</sup>Physiotherapist, Qatar Armed Force Medical Service, Doha, Qatar.

Mail Id: [drshameer123@gmail.com](mailto:drshameer123@gmail.com)

**Corresponding Author:** <sup>2</sup>Associate professor, Department of physiotherapy, School of Health Sciences, KPJ Healthcare University College, Nilai, Negeri Sembilan, Malaysia, Mail id: [jibipaul@rediffmail.com](mailto:jibipaul@rediffmail.com)

### **Abstract**

**Background and Objectives:** Functional recovery is one of the major causes of concern in stroke subjects with performing activities of daily living. Upper limb impairment affects the performance of many activities of daily living. Our major objective of the study is to investigate the effectiveness of the individual and combined effect of motor relearning programme and Thermal stimulation to improve upper limb motor function. **Methods:** Thirty subjects with right MCA stroke were selected for the study and randomly divided into three groups by using lottery method, with ten in each group A, B and C. Group A, B and C had underwent a MRP, Thermal Stimulation and combination of these two techniques respectively. The outcomes are measured by the MMAS, and STREAM scale. **Results:** Analysis of variance has been used to find the significance of study parameters between different groups. Paired t' test has been used to find the significance of the study within each group. According to Results Group A shows better improvement than group B and It shows that upper limb motor function improved significantly higher in Group C ( $P < 0.001^{**}$ ) when compared to Group A and Group B in MMAS and STREAM scale evaluation. **Conclusion:** The present study indicates that physiotherapy treatment showed that the use of individual effect of motor relearning programme is more effective than Thermal Stimulation technique but the combined effect of these two techniques is more effective than the individual effect can bring out significant changes in the upper limb motor function of MCA Stroke subjects.

**Keywords:** Stroke, Motor Relearning Program, Thermal Stimulation, Stroke Rehabilitation Assessment of Movement (STREAM), Modified Motor Assessment Scale (MMAS).