

Effectiveness of Vibration Therapy on Spasticity and Upper Limb Functional Activities in Patients with Chronic Stage of Stroke - A Review of Literature

Pratheep C. N.¹ and Sneha Hattikoti²

¹Post Graduate Student, College of Physiotherapy, School of Health Sciences, Dayananda Sagar University, Harohalli - 562112, Karnataka, India; pratheepchinnu05@gmail.com

²Lecturer, Sapthagiri Institute of Medical Sciences and Research Center, Chikkabanavara, Bengaluru – 560090, Karnataka, India

Abstract

Introduction: A stroke, also known as a Cerebrovascular Accident (CVA), is a sudden neurological deficit caused by a focal vascular lesion in the brain, resulting from either a blockage (ischemic stroke) or a rupture (hemorrhagic stroke) of a blood vessel. Post-stroke spasticity, a prevalent symptom, involves involuntary muscle contractions causing stiffness and pain. Management requires a multidisciplinary approach, including medical care, therapy, and psychological support. Vibration therapy is a promising technique to enhance muscle function and motor recovery in stroke patients by stimulating muscle contractions and improving voluntary movement.

Objective: To determine the effectiveness of vibratory stimulation in the improvement of the motor function of the upper limb in patients with chronic stroke.

Design: To identify relevant studies, databases like PubMed, Cochrane, and ProQuest were used with appropriate search terms. Title, abstract, and full texts were screened to identify studies reporting matrix rhythm therapy. Data was extracted from eligible full-text articles.

Result: The review of 27 articles collectively supports the effectiveness of vibration therapy in the reduction of spasticity during the chronic stage of stroke. The evidence suggests that vibration therapy can lead to significant improvements in spasticity reduction and motor function enhancement among stroke survivors.

Conclusion: Our review suggested that vibration therapy is effectively useful in chronic stroke patients which helps in improving movement intensity and quality. High-intensity, repetitive tasks combined with vibratory feedback enhance motor function.

Keywords: Motor Task; Vibration Therapy; Upper Limb; Chronic Stroke