

The effects of comprehensive core body resistance exercise on lower extremity motor functions among stroke survivors

ABSTRACT

This study investigated the effects of comprehensive core body resistance exercise on lower extremity motor function in stroke survivors. This resistance exercise was developed to aid stroke patients with various severity to perform this exercise, aimed to improve their core strength, stability, and control. Thirty-four stroke patients aged 47.7 ± 13.16 years old were selected from the Rehabilitation Department, Queen Elizabeth I Hospital in Sabah, Malaysia. All patients underwent supervised training either assistive, active or active resistance exercise, biweekly for 12 weeks. Motor function was evaluated using Fugl-Meyer Assessment Lower Extremity (FMA-LE). The data were collected at baseline and at four weeks training interval. Repeated measures ANOVA and paired t test were employed to analyse the effects of the resistance exercise on lower extremity motor function. The twelve-week resistance exercise showed statistically significant effects on lower extremity motor function, lower extremity, coordination/speed, passive joint motion, and joint pain. However, sensation was found insignificant. Paired t test showed statistically significant improvement in lower extremity motor function, lower extremity, coordination/speed, passive joint motion, joint pain, and sensation. This study suggested that the obtained results indicate that the core body resistance exercise was applicable without any induced negative effect such as spasticity or joint pain.