

ABSTRACT

Author: Bc. Kateřina Kotrbová

Supervisor: Mgr. Kateřina Vondrová

Title:

Variability of Performance of Healthy Adults and Post-Stroke Patients in the Box and Block Test

Abstract:

Introduction: Occupational therapists commonly use the standardized Box and Block Test (BBT) to measure upper limb manual dexterity in individuals with stroke. A consensus lacks among evaluators regarding the frequency of BBT trials.

The aim: To recommend the number of attempts for testing individuals with stroke using BBT in the age group of 20-64 years (inclusive). A partial objective is to propose indication and contraindication criteria for testing these individuals using BBT and to assess the impact of BBT on their subjective levels of pain, fatigue, and tension/stress using an emotional scale.

Methodology: The author conducted a one-time testing using three consecutive BBT attempts. The experimental group consisted of 24 individuals with stroke. The control group comprised a healthy population of the same gender, with similar dominant limbs, and of similar age. Data were analyzed using the statistical program R, using t-tests and ANOVA tests.

Results: A statistically significant difference ($\alpha = 0.05$) was described in the experimental group between the results of the first attempt and the average results of three BBT attempts ($p = 0.0185$). Based on literature analysis and personal experience, a table with indication and contraindication criteria was created for testing individuals with stroke using BBT. Testing did not evoke a significant subjective level of pain, fatigue, or tension/stress to the experimental group.

Conclusion: It is recommended to conduct three attempts for testing individuals after stroke aged 20-64 years (inclusive) using the BBT. Further research on a larger sample size is needed to verify these findings.

Key words:

occupational therapy, stroke, Box and Block Test, motor learning