

Title of diploma thesis: Grasps evaluation in patients after a stroke

Objective: The main goal of the pilot study was to determine minimal clinically important difference in selected tests focusing on improvement in the grasps of patients in the chronic phase post stroke. The main hypothesis was set to prove that the differences between the initial and final assessments based on the Modified Frenchay Scale characterizes patients' improvement more accurately than the Score for visual evaluation of functional task of the hand.

Methods: The research group consisted of 40 participants (26 men and 14 women) all in the post stroke chronic phase who were selected based on the criteria for inclusion in the research. Data was collected at the Department of Rehabilitation Medicine and the First Faculty of Medicine. Using video documentation of the Modified Frenchay Scale used during both the initial and final assessment, the test itself was then analysed. A 3rd subtest was also used to evaluate the Score for visual evaluation of functional task of the hand. Using the Spearman correlation coefficient, the statistically significant level was established ($p < 0,05$) followed by calculating the critical value of the Spearman correlation coefficient ($r_{sp(0,05,40)} = 0,264$), and thus verifying the hypothesis.

Results: The pilot study confirmed statistically significant results in the comparison of the Modified Frenchay Scale to the Score for visual evaluation of functional task of the hand. Though there is a very strong linear dependence between the evaluation tools and it might not ultimately matter which evaluation tool an occupational therapist decides to use in practice. There is a higher value of the Spearman correlation coefficient between the scores of the initial and final assessments using the Modified Frenchay Scale compared to those found when using the Score for visual evaluation of functional task of the hand. The value of minimal clinically important difference of Modified Frenchay Scale was calculated to be $MCID_{mFAT} = 8,55$ while the value based on the Score for visual evaluation of functional task of the hand was calculated to be $MCID_{SVH} = 1,80$.

Key words: stroke, motor deficit, upper extremity, grasp