

ABSTRACT

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Title: The Inter-rater Reliability of the Nine Hole Peg Test in Patients with Multiple Sclerosis

Abstract:

Introduction: The Nine Hole Peg Test (NHPT) is used by occupational therapist as a standardized tool which evaluates fine motor skills and manual dexterity. The aim of this thesis was to establish the inter-rater reliability and variability of the results of the NHPT administered according to the Czech extended version of the manual in patients with multiple sclerosis (MS).

Methods: 33 probands with MS (27 females, 6 males) were tested by NHPT. Video recordings taken during testing were analyzed by two independent raters. Pearson correlation coefficient was used for statistical data processing. Recording sheets from the testing were analyzed in order to determine invalidated trials for each subtest and reasons for the invalidation.

Results: A very high positive correlation was established for inter-rater reliability (0,999902 to 0,999965) and variability of the results (0,999902 to 0,999965). The invalidation of trials was most frequent in the 2nd trial of the dominant hand (24.24% of 33 trials). The least frequent was in the 3rd trial of the non-dominant hand (6.06%). The most frequent reasons for invalidation of trials were: grasping two pegs at the same time, assistance by the non-tested hand and drop peg on the ground.

Conclusion: The results obtained from the analysis of the videos by two independent raters and the results gained in two different ways by the same rater are not significantly different. The Czech extended version of the NHPT manual is reliable, objective and usable in practice to assess the fine motor skills in patients with MS.

Key words: Nine Hole Peg Test, inter-rater reliability, variability of results, multiple sclerosis, fine motor skills