

Title: Dual-task training in physiotherapy of people with multiple sclerosis

Abstract:

This bachelor's thesis focuses on the use of dual-task elements for patients with multiple sclerosis. The thesis is based on theoretical-practical approach. The main goal is to apply therapy involving dual-task for patients with various conditions of multiple sclerosis and to describe five selected dual-task exercises for each patient with photos attached. A secondary goal is to map out dual-task difficulties in a larger sample of patients.

The theoretical part is focusing on multiple sclerosis and dual-tasking. The practical part describes the implementation of physiotherapeutic intervention with dual-task elements through case studies of 3 patients with varying degrees of neurological disability, targeted to improve the subjective perception of dual-task and reduce deficits detected within kinesiological analysis, selected functional tests and questionnaires. The outcome assessment predominantly demonstrated improvements in specific tests (some even clinically significant), although in some items, patient's performance or perception remained unchanged or deteriorated. In the feedback questionnaire, patients mostly evaluated this type of intervention positively. For each patient, five selected dual-task exercises were subsequently documented and described. Another part of the practical work is the presentation of the results of a questionnaire survey, based on the questionnaire Dual-task Impact on Daily living Activities. The objective of the questionnaire was to determine which common daily activities related to dual-tasking are the biggest challenge for patients. It was discovered, that the most problematic are motor-motor tasks connected with upper-limb ability (for example walking and closing the zipper of the jacket or walking and drinking from a bottle).

Key words: multiple sclerosis, dual-task, cognitive-motor interference, motor-cognitive training