

Title: Combined group exercise in patients with multiple sclerosis

Abstract:

The bachelor thesis is dealing with the effect of the combined group exercise on mobility and balance disorders in patients with multiple sclerosis. The primary aim of the study is to describe the effect of group exercise based on the combination of aerobic and balance exercises with the use of Homebalance system on balance and mobility in patients with multiple sclerosis. The secondary goal is to observe the impact of the exercise on the specific symptoms of multiple sclerosis (fatigue, reduced quality of life, cognitive disorders, balance and walking disorders). The thesis consists of a theoretical and a practical part. The theoretical part is focused on the description of multiple sclerosis and methods of its treatment with the focus on physiotherapy and physical activity. The practical part compares the results from the initial and final examination by using tables and graphs. For the evaluation of walk, the functional tests were chosen: Timed Up and Go (TUG), Timed Up and Go (TUG) + cognitive task. The balance was evaluated by One-leg stance test and the Limity Stability test using the Balance Master system. For the evaluation of accompanying symptoms of multiple sclerosis, standardized questionnaires were chosen (MSNQ, MFIS, MSWS-12, SF-36, FES-I, ABC Scale). Significant improvement of mobility and balance evaluated by functional and instrumentation tests occurred, but the subjective evaluation of accompanying symptoms remained unchanged.

Keywords: multiple sclerosis, combined exercise, balance, walk, Homebalance