

Abstract:

This bachelor thesis deals with the topic of selected bimanual training with people after brain damage with hemiparesis. The bachelor thesis is both theoretical and practical. In the theoretical part are presented the most common causes of brain damage that lead to hemiparesis. Then selected unimanual approaches are described, which focus mainly on the paretic upper limb in therapy. They are followed by bimanual approaches, which emphasize the coordination and involvement of both upper limbs. The unimanual ones are Constraint-induced movement therapy, Robotic Assisted Therapy, Functional Electrostimulation, and Proprioceptive Neuromuscular Facilitation. Bimanual approaches include the HABIT method, COMBined modified constraint induced movement therapy and bimanual intensive training, Mirror therapy, Bilateral isokinematic training, and Task-Oriented bilateral training.

The practical part contains a created set of model bimanual activities, which include a total of 13 activities, from personal and instrumental everyday activities. The set was used with 6 patients after suffering a stroke for 3 weeks of therapy. During these three weeks, the patients performed selected model activities from the created set. Each patient underwent an initial and then final examination and evaluation with selected tests. After the therapy was completed, the results from the initial and final examination were compared and the usability of the created set was evaluated.

Key words: Upper Limb Coordination, Occupational Therapy, Upper Extremity, Bilateral Training, Bimanual Training, Hemiparesis