Title of bachelor thesis: The Use of Mirror therapy in patients after stroke

Abstract: The topic of my bachelor thesis consisting of theoretical and practical parts relates to Mirror therapy and its use in patients after stroke from the physiotherapeutical point of view. The theoretical part is conceived as a review of the background art. I summarize present information concerning stroke and describe certain methods and concepts which have proved to be useful in the therapy of stroke patients. The Mirror therapy principle consists in observation of the unaffected limb in a mirror being vertically attached to the sagittal axis of the patient's body. Movements performed by the unaffected limb give illusion these are likewise performed by the impaired limb. While watching the reflection in the mirror, the mirror neurons system is activated. The system thereafter provokes activation of motor and somatosensory areas of the cerebral hemispheres controlling the affected limb. Central nervous system effectively uses reparation neuroplasticity and provides both motor and sensory function improvement. In the Mirror therapy chapter, I focus on the principles of the method as well as on its therapeutic effects and ways of application. Results of present studies evaluating Mirror therapy efficacy are also listed. The practical part of my thesis consists of two case studies. In the first one, the Mirror therapy is applied to a patient with affected upper limb, in the second one to a patient with affected lower limb.

Key words: Mirror therapy, Mirror neurons system, stroke, neuroplasticity, physiotherapy