

BACHELOR THESIS ABSTRACT

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Title: Application of the rhythmic auditory stimulation in training of paretic upper limb

Abstract:

My bachelor thesis is divided into the theoretical and the practical part and its topic is the use of rhythmic auditory stimulation in patients after a stroke. In the theoretical part in the first chapter I deal with the problems of stroke, its origin, manifestations, diagnostics, consequences and possibilities of rehabilitation treatment. In the next part I deal with the function of the hand and fine motor skills due to the focus of the practical part mainly on the paretic upper limb. In the music therapy chapter I characterize the general principles of this therapeutic field, I also deal with for example the effect of music on human body and the use of music therapy in health care. At the end of this chapter I describe the principles of neurological music therapy and the rhythmic auditory stimulation itself.

The practical part presents three case reports of patients after a stroke with motor problems in the upper limb. In addition to the kinesiological and neurological examinations I also tested all patients using the Ashworth scale and the Modified Frenchay scale. Elements of rhythmic auditory stimulation were used in keyboard playing during several therapies, and the rhythm stimulation was performed using a metronome. The patients tried to synchronize the performed finger exercises with the specified rhythm.

The aim of the thesis is based on the information described in the theoretical part and the knowledge from the practical part. Further I created an information leaflet and a short instructional video on neurologic music therapy and rhythmic auditory stimulation. Patients accelerated their keyboard playing, increased some range of motion in the upper limb, and increased points on the Modified Frenchay Scale.

Key words: stroke, music therapy, rhythmic auditory stimulation, neurologic music therapy