ABSTRACT

Name: Lenka Derflová
Supervisor: Ing. Kristýna Plevová

Title: Using the principles of Dynamic Neuromuscular Stabilization in patients with scoliosis

Abstract:

The bachelor's thesis deals with the problem of idiopathic scoliosis in adults, treatment options and physiotherapeutic approaches with a strong focus on Dynamic Neuromuscular Stabilization (DNS). The bachelor's thesis aims to design a therapeutic unit with elements based on the principles of DNS, application of the unit and subsequent evaluation of the therapeutic procedure and benefits for patients.

The theoretical part of the thesis describes scoliosis, its classification, examination and therapeutic options, then the concept of DNS, its principles, application and testing, and finally a special examination focused on scoliosis and the condition of the deep spinal stabilization system (DSSS). The practical part consists of two case studies, including an initial and an output kinesiological examination and a physiotherapeutic intervention.

The final comprehensive exit examination after six months of therapy and home exercise shows positive changes in some postural and motor aspects in the patients. The most significant improvements were noted in the areas of DSSS involvement and function, trunk stabilization, postural stability, balance and axial symmetry of the body, root joint centration, establishment of diaphragmatic breathing, and subjective assessment.

Key words: scoliosis, physiotherapy, conservative treatment, deep stabilization system, dynamic neuromuscular stabilization