

Abstract

This thesis investigates compensatory mechanisms arising from playing the violin. It summarizes the existing literature on the topic of the influence of violin playing on the posture of violinists and proposes a compensatory exercise according to the DNS method.

The theoretical part describes the „ideal” position for violin playing, the effect of ergonomic aids, kinesiology of playing, anatomy of the shoulder girdle, and finally the compensatory mechanisms stemming from holding and playing the violin while sitting and connected health problems.

The experimental part presents the results of case studies of 8 non-professional violin players aged from 18 to 30 years, evaluation of their posture and musculoskeletal disorders, and the proposed compensatory exercise according to the DNS method. The anamnestic data were obtained through a survey and the health condition of the musculoskeletal system is investigated using a kinesiological examination (inspection and palpation, anthropometric measurements, and specific tests for deep stabilizing system and scapula). Inspection and palpation measurement cannot be objectively measured and therefore the obtained measurements serve only as a relative guide for the evaluation. The greatest muscle load is generally in the areas of cervical spine and shoulder girdle. The thesis, therefore, focuses on DNS method exercise and its effect on shoulder blade fixators, where TrPs are anticipated due to the forced violin holding position. A further focus is on the effect of the DNS method on the deep stabilizing system. Finally, the effect of compensatory exercise on the treatment group of half of the probands 3 months after the start of the therapy are discussed, where the differences between the start and end of therapy are compared, as well as the differences between the treatment and control groups.