Abstract

Title: Evaluation of the effect of exercise according to the Propriofoot concept and the methodology of Sensorimotor Training by Janda and Vávrová on foot pressure distribution

Objectives: In this thesis the following three goals were set: First, to find out if and how does the percentual foot pressure distribution between the left and right foot in standing change after a four-week long exercise according to either the methodology of Sensorimotor training by Janda and Vávrová or the Propriofoot concept. Second, if and how will the segmental foot load change. Third, if the prospective changes of foot load will agree or differ between the two groups.

Methods: A pilot study for quantitative research using experimental scientific method was conducted, with two groups consisting of ten members each, aged thirty to fifty and diagnosed with flat foot. At the beginning, all probands underwent diagnostic measurement using the "Plantograf V10" device. Then they attended a four-week long individual therapy with an exercise plan created according to one of the two methods in consideration. At the end the probands were again measured by the same device. Entrance and control measurements obtained for each participant and both groups were evaluated, compared and statistically analyzed.

Results: Analysis of the experimental data revealed that after a four-week therapy none of the two methods in question had a statistically significant effect on segmental foot load. In contrast, both methods affected the percentual foot pressure distribution between the left and right foot. However, the Propriofoot concept was not confirmed to achieve better results. Out of the five hypotheses that were set, three were confirmed. Subjectively, probands from both groups considered the therapy effective because of a reduction or complete disappearance of feet and leg pain.

Keywords: Propriofoot, sensorimotor training, foot arch, proprioceptor, segmental foot activation, forefoot, hindfoot, unstable platform