

## **Abstract**

**Title:** Effect of mechanical correction and active exercise in the treatment of deformity of the fifth toe – Tailor's bunion

**Objectives:** The aim of this thesis is to identify the effect of mechanical correction and active physiotherapeutic intervention in the treatment of deformity Tailor's bunion.

**Methods:** This is a quantitative-qualitative experimental study involving 10 probands aged 19 to 25 with flexible Tailor's bunion deformity, 6 out of 10 probands had bilateral deformity and the remaining probands unilateral deformity. In this thesis, passive intervention in the form of mechanical axial correction of V. MTP joint by strapping tape was used and active intervention in the form of selected active exercise aimed at evaluating (identifying) the effect on selected foot parameters. The participants were randomly divided into two groups of five. Group 1 was subjected to active therapeutic intervention and Group 2 was subjected to passive therapeutic intervention for 4 weeks. Before and after the therapeutic intervention, the probands were examined clinically, followed by a postural stability test in static standing on the tensometric plate RS Footscan ® Balance and pressure distribution testing of individual foot segments while walking on a Footscan Gait plate. At the end of the examination we did 3D foot scan performed on Tiger Full foot 3D scanner. The measured data were processed in the programs Footscan ® Balance, RS Footscan Gait, Tiger Full Foot 3D and were recorded in Microsoft Office Excel® 2010. Statistical methods of paired – t-test and the degree of clinical significance (Cohen d) were used for the analysis.

**Results:** The results of the work show that both mechanical correction and active exercises in Tailor's bunion deformity treatment have a statistically significant effect on postural stability in static standing. There were no significant changes in pressure distribution due to mechanical correction and active exercise.

**Keywords:** Tailor's bunion, V. finger, forefoot deformities, Footscan ® Balance, Footscan Gait, postural stability