

## **Abstract**

**Title:** Analysis of the immediate effect of kinesiotaping on the upper limbs when landing into a press-up position when doing gymnastic aerobics

**Objectives:** The aim of this diploma thesis is to find out if the use of the tape on the upper limbs changes the acceleration associated with the reaction inertial force of the arm, the angle in the elbow joint and wrist when landing into the press-up position, as well as subjective evaluation of probands. The hypothesis for the practical part is that the angles in the joints mentioned and the magnitude of the force with the applied tap change, which would result in better stabilization of the upper limbs in this element, as well as positive evaluation of the probands.

**Methods:** The theoretical part deals with kinesiological-biomechanical description of upper limbs and the characteristics of gymnastic aerobics. Moreover, biomechanical analysis and kinesiotaping are described. The practical part is devoted to the measurement of landings into the press-up position – first without tape and then with tape. The tape is described in detail. The XSens MVN was used to record motion.

**Results:** The results showed that kinesiotape had no effect on the angle of the elbow and wrist joints or shoulder joints when landing into the press-up position. However, a positive effect was seen in the reduction of the reaction inertia force on the arms, but this result was not confirmed when conducting the t-test. Last but not least, positive evaluation of probands when performing a land into the press-up position with the applied tape should be mentioned.

**Keywords:** biomechanical analysis, kinesiotaping, upper limbs, gymnastic aerobics, landing to press-up