Abstract

Title: Individual movement compensation program influencing the correct postures at professional riders of BMX flatland

Objectives: The aim of this work was to diagnosed the current state of the musculoskeletal system of selected probands. The next aim of this work was to created the individual movement compensation program based on the initial diagnosis and verify its effect. Partial goals were the introduction of the compensation program to probands, the confirmation of hypotheses and the interpretation of results.

Methods of work: The thesis was based on the principle of case studies. Its idea was a creation and more importantly the appliciation of the individual three-months movement compensation program of five professional czech riders of BMX flatland. Part of this work was the kinesiology analysis which included the static and the dynamic testing, and the segment analysis on the Tanita MC-980 device. The Static test was consisted of the aspection and of the evaluation of the postures from three sides - from the back, from the front and from the side. Dynamic tests included the examination of muscle shortening, the examination of movement stereotypes and the testing of hypermobility. From other possible methods I used the interview, the observation and the peer to peer review.

Results: At the initial examination of all probands we found the asymmetric postures, which occurred mainly in the upper and the lower trunk. The compensation program of proband 2 decreased the muscle imbalance of his head, neck, upper and lower trunk and his legs too. The others probands reached the minor changes in their postures. The compensation program of all probands improved their flexibility. The four probands improved their movement stereotypes.

Keywords: interventional program, freestyle BMX, flatland, postures, testing