

## **Abstract**

**Title:** Postural stability assesment of female physiotherapists

**Objectives:** The aim of this thesis is to evaluate and compare the level of dynamic postural stability of female physiotherapists with former or current sports (racing) careers versus physiotherapists without sports careers. Another aim is to compare how the level of postural stability of physiotherapists differs from the general population.

**Methods:** This study is among quantitative experimental studies. The research was done from August 2020 to February 2021. The research involved 20 probands – women. Participants were divided into two groups by ten based on a former or current sports career or without a sports career. The control group was provided with normative data from the instrument manufacturer. The analysis and information on sports activities were collected using a questionnaire. Postural stability was measured with The Neurocom's The EquiTest Smart. The following tests were used: The Sensory Organization Test, The Motor Control Test, The Adaption Test, and The Limits of Stability Test. The results were processed with tables in Microsoft Excel. In Microsoft Excel, data were evaluated statistically and compared with each other. The mean, standard deviation, median and interquartile range were calculated. The following statistical methods were used for statistical analysis: Shapiro-Wilk test, unpaired T-test, Mann-Whitney U test. The statistical significance level was determined to be  $\alpha = 0.05$ . Clinical significance was analyzed by using Cohen's d. The magnitude of clinical significance was determined by intervals of: 0.00-0.19 (none), 0.2-0.49 (small), 0.5-0.79 (medium),  $0.8 \leq$  (large). In the control group, only Cohen's d was analyzed.

**Results:** None of the endpoints evaluated showed a statistically significant difference. Only COND 1 and the MR Backward Latency in The Motor Control Test showed a difference of great clinical significance. In the case of COND 1, there was a better group without a sports career. The Motor Control Test was a better group with a sports career. Compared to the experimental control group, varying degrees of clinical significance was shown, with 63,2 % better physiotherapists.

**Keywords:** physiotherapists, postural stability, athletes, computerised dynamic posturography, NeuroCom Balance Manager System, Smart EquiTest