

## **ABSTRACT**

### **The name of the thesis**

The effect of short running intervals used in the tactical maneuver “peeling“ on dynamic strength of a front kick.

### **The aim of the thesis:**

The aim of this thesis is to find out whether physical load in a tactical scenario of peeling backwards has a significant effect on dynamic indicators of a front kick performed while carrying equipment (boots, a ballistic gear 12 kg and an assault rifle) and carried load (backpack 15 kg).

### **The methods used in the thesis:**

There is a method of cross-sectional study. We tested 10 soldiers' (26,9±4,2 y, 85,6±9 kg; 86,7 ± 8,81 kg, 180±4,62 cm) dynamic strength of a front kick using triaxial force plate (Kistler 9281) while adding military equipment and physical activity. Dynamic indicators that were set for comparison: Peak force (N), Impulse (N.s), Impact force (N), the time to reach Peak Force (s), and kick time (s). Then, the average of the five kicks was calculated and determined as the resulting value. The reliability of all five kicks were verified using ICC – Intraclass correlation coefficient and its' confidential intervals. Shapiro – Wilk test was used to determine whether the data are normally distributed. The comparison of interventions was made using a pair t-test in case of normal distribution of data, or Wilcoxon pair test in case of normality absence. The level of statistical significance was determined for degree  $\alpha = 0,05$ . Cohen's  $d$  was used to determine of the effect size.

### **Results:**

The research confirmed that the gear and physical activity included in the specific test, which simulates the real tactical situation of the retreat of the cooperative, have a main effect on the front kick impact force. For these reasons, we recommend practicing a front kick for training purposes with the load carried in the form of a ballistic vest and assault rifle. Moreover, in accordance with the level of the soldiers' group to perform a front kick with the carried load even after the previous physical activity. The recommendation for further research is the question

of whether such a significant decrease of dynamic indicators could be eliminated by specific strength training and whether this carried load may lead to consequent injury.

**Key words:** Close combat, military equipment, carried load, kick, tactics, kinetics