

## **ABSTRACT**

The normalization study of the motoric tests focusing on strength, endurance and dexterity performance at the artillery and air force military personnel.

The physical preparedness of soldiers is an important component of the military's combat capability. In peacetime, soldiers increase their physical level in all-military training, where they also undergo physical performance examinations. Standardised motor tests are used for the objective assessment of physical performance, where it is necessary to set the norms to which the performance is assessed.

### **The objectives**

This diploma thesis aimed to set the norms for the motor test “Deadlift“, “Hand Release Push-up“, “3000-Metre Run“ and “Carrying the Load“, in which reliability during repeated measurements was also assessed.

### **The method**

The research set consisted of 105 artillerymen for the first three above mentioned motor tests and 65 men (44 artillerymen and 21 men from the helicopter airbase) for “Carrying the Load“. The set of soldiers was divided into age groups within five years. To calculate the norms, the normal distribution of the data was first verified and then the possible difference between the ages was compared using parametric and non-parametric ANOVA. Potential differences between the categories were compared using the Mann-Whitney test or t-test to set the alpha level = 0.05. The calculation using quartiles and percentiles was used to create the norms. The intra-class correlation coefficient was used to calculate the reliability between two measuring.

### **The results**

There were no significant differences between the men's age groups ( $p = 0.998$ ;  $p = 0.139$  and  $p = 0.121$  and  $p = 0.121$ ) when comparing the results in the “Deadlift“, “Hand Release Push-up“ and “3000-Metre Run“. For the tests in the above order, the standards for the whole research set were calculated using quartiles: rated excellently = 130 kg or more, 56 push-ups or more, 14.15 minutes or less, respectively; very good = 105 kg, 47 push-ups, 15.37 minutes, respectively; compliant = 98 kg, 41 push-ups, 17.20 minutes, respectively; non-compliant = 97 kg or less, 40 push-ups and less, 17.21 minutes or more, respectively. The reliability calculated on the re-measurement of the test “Carrying the Load“ was 0.81. There

were no significant differences between the age groups of men ( $p = 0.872$ ). The standards for the whole research set were calculated using quartiles: rated excellent = 55 sec and lower; very good = 57 sec; compliant = 61 sec; non-compliant = 61.01 sec and more.

**Keywords**

Physical readiness, Army, Motor tests.