



## Title

Morphofunctional Readiness of Joint Force Operation Ukrainian Soldiers

## Abstract

Introduction. Military service in combat conditions requires high mental stress stability and high level of body functional reserves. Thus, systematic monitoring of soldiers' functional reserves level is a priority pathway to provide their health and physical readiness.

Methods: anthropometric methods, pedagogical experiment, statistics methods (the *SW*-test, the *U*-test the *t*-test, the *F*-test).

Joint Forces Operation male servicemen aged 22÷46 years were involved in the study (n=26). Following measurements were collected during one session: body weight, body height, wrist circumference, age, resting heart rate ( $HR_{rest}$ ), heart rate after 20 squats for 30 s ( $HR_{intensity}$ ) and heart rate recovery time after squats ( $t_{recovery}$ ). The real body mass (RBM), the level of functional (FP) and morphofunctional preparedness (MFP) were calculated using the author's method [1].

Results. According to RBM results the servicemen were divided into two groups (servicemen whose RBM was within the physiological norm – Group 1, overweight servicemen – Group 2). The normality of point distribution in the general populations was calculated by the *SW*-test. When parameters' points were not normally distributed *U*-test was used to find statistically significant difference. In the case of normal distribution the significance of difference between assessments was determined by the *t*-test. The comparison of variances was carried out by the *F*-test. The significant differences between all parameters were set (Table 1).

Conclusions:

1. It was found that Group 1 received better scores for all defined parameters in comparison with Group 2 ( $p < 0.001$ ).
2. Servicemen functional testing allows determining their functional systems capabilities reserves. It also could help to pre-assess servicemen physical health level, their readiness for physical activity and the effectiveness of physical training programs.
3. Weight norms are recommended to be developed in Ukrainian Armed Forces as one of the criteria of servicemen physical fitness level.

## Practical Implications

NON APPLICABLE

## References

1. Mykhaylov V. (2021). The Analysis of Morphofunctional and Physical Readiness of Ukrainian Joint Force Operation Servicemen with Different Body Weight. Conference abstract 'Special features of Physical Fitness', DPCS.

## Figures and tables

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## Conflict of interest

The authors declare that there is no conflict of interest.

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