CORRELATION ANALYSIS OF ANTHROPOMETRIC INDICATORS AND THEIR SIGNIFICANCE IN ASSESSING MILITARY FITNESS

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Abstract. Background: Anthropometric indicators are important components of physical development and functional assessment. The analysis of correlations between anthropometric parameters provides valuable information about body proportions, physical constitution, and the potential functional capabilities of individuals. In military service, these indicators may contribute to the assessment of physical preparedness, health status, and the ability to perform activities requiring endurance, strength, and coordination.

Objective: To identify correlations between anthropometric indicators and evaluate their significance in assessing physical preparedness and fitness for military service.

Materials and Methods: The study is designed to include young adult males of military service age. Anthropometric measurements may include body height, body weight, chest circumference, waist circumference, hip circumference, shoulder breadth, and selected body proportions. Body mass index (BMI), waist-to-height ratio, and other anthropometric indices will be calculated. Statistical analysis will be performed using descriptive statistics and Pearson's or Spearman's correlation coefficients, depending on the distribution of the variables. The strength and direction of correlations will be evaluated, with statistical significance established at $p < 0.05$. Where available, anthropometric indicators will be compared with physical fitness parameters, including muscular strength, endurance, and functional performance.

Results: The proposed analysis is expected to identify significant relationships between body height, body weight, chest circumference, and other anthropometric measurements. Particular attention will be given to correlations between body mass index, waist circumference, and body proportions, as well as their associations with physical performance indicators. The findings may help identify anthropometric characteristics associated with favorable physical preparedness and distinguish body composition patterns that require additional medical or functional assessment. Actual correlation coefficients and statistical results will be reported after completion of the study.

Conclusion: Correlation analysis of anthropometric indicators provides an important scientific approach to evaluating physical development and its relationship with

military fitness. The comprehensive assessment of body dimensions and proportions, together with functional performance tests and medical examination, may improve the objectivity of evaluating physical preparedness among young men of military service age. Anthropometric indicators should be considered complementary assessment parameters rather than independent criteria for determining fitness for military service.

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