

Abstract

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Variability of Selected Motor Abilities Under the Influence of Targeted Training among uniformed class students

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The aim of this study was to evaluate changes in selected motor abilities of students enrolled in uniformed classes as a result of systematic and targeted training implemented within the Military Preparation Unit (OPW) program. The study sought to determine the extent to which a one-year training cycle influences the development of physical fitness and abilities essential for future service in uniformed forces.

A total of 56 students participated in the study, comprising 31 males and 25 females aged 16–17.

Measurements were conducted at three points over the course of the training year, which allowed for the identification of both the direction and the rate of observed changes.

The assessment protocol encompassed a comprehensive battery of measurements, including body composition and morphological indices, the Cooper aerobic endurance test, explosive lower-limb power evaluations (squat jump and countermovement jump), isometric handgrip strength testing, multidirectional agility assessments, and postural stability trials conducted on a stabilometric platform.

The results clearly demonstrate the highly beneficial effects of OPW training. Significant improvements were observed in key motor abilities, particularly in aerobic endurance, explosive strength, handgrip isometric strength, and overall physical fitness. Most students also exhibited favourable changes in body composition, including increased muscle mass and reduced body fat percentage, with these effects being especially pronounced among

male participants. Female participants, on the other hand, showed marked progress in coordination and balance, further confirming the overall effectiveness of the program.

The most pronounced improvement was observed between the first and second measurement points, suggesting a rapid physiological adaptation to the intensified training regimen. By the time of the final assessment, the results indicated a stabilization of these gains, while maintaining a consistently high level of physical fitness.

In conclusion, the targeted training implemented within uniformed classes constitutes an effective means of developing motor abilities of students and may be regarded as a valuable model of physical preparation. The findings obtained in this study offer a compelling rationale for the continued refinement and expansion of OPW programs, as well as for their broader integration into recruitment and pre-service training pathways for candidates aspiring to enter uniformed services. Such initiatives have the potential to enhance not only physical readiness but also long-term effectiveness and resilience within future professional service roles.