

VALIDATION OF SPECIFIC SKILLS' POLYGON AMONG STUDENTS IN THE
ACADEMY OF CRIMINALISTIC AND POLICE STUDIES: METABOLIC
AND FUNCTIONAL INDICATORS FOR EXERCISE

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Summary: This paper's subject is the validation of the polygon, as a test that can be used for specific skill evaluation among members of Ministry of Internal Affairs in Republic of Serbia, during anaerobic – lactate regime exercise (Pol_SSP1). Research included 50 third year students of basic studies from all courses at The Academy of Criminalistic and Police Studies in Belgrade, from which 26 male students and 24 female students. Validation of the polygon is determined by using two basic parameters for metabolic and functional indicator evaluation of reached physiological load level: lactate concentration in capillary blood, as a measure of metabolic acidosis, and heart rate, as a measure of functional load of cardiovascular system. The results showed that the average time required for the polygon realization is 97.71 ± 8.66 i 109.17 ± 9.10 seconds for men and women, respectively. In relation to the maximum heart rate reached after the polygon, it was determined that heart rate level in men was from 186.5 ± 6.4 , and in women 184.6 ± 7.3 beat/min. The measured values of lactate concentration in the blood after the polygon realization were 11.52 ± 2.25 i 11.78 ± 2.07 in men, and 10.35 ± 1.39 i 10.46 ± 1.63 mmol/L in women, in third and fifth minute of recovery, respectively. Based on these results it can be concluded that Pol_SSP, as an instrument for the evaluation of specific skills for police officers, is a valid motoric task, during which realization dominant load in anaerobic lactate mechanism is provoked for creating energy for exercise.

Pages 185-199