

Perceived Recovery States and Physical Fitness in Reserve Officers' Training Corps Cadets

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ABSTRACT

Reserve Officers' Training Corps (ROTC) cadets are challenged mentally, emotionally, and physically with the physical fitness requirements (e.g., Army Combat Fitness Test or ACFT) required within their military science curriculum. Common physical fitness tests such as those for strength, power, and balance can provide insight into the recovery and readiness status of tactical athletes. **PURPOSE:** The purpose of this study was to explore the relationship between scores on the Short Recovery and Stress Scale (SRSS) and performance on a physical fitness test battery assessing balance, mobility, body composition, muscular strength, and power in collegiate ROTC cadets. **METHODS:** Seventeen ROTC cadets (20.1 ± 1.2 y, 171.1 ± 11.2 cm, 76.7 ± 21.0 kg) volunteered to participate in a test battery and complete the eight items on the SRSS during the same week they conducted the ACFT. The test battery included measures of body composition (skinfolds), muscular strength (hand-grip), power (vertical jump), balance (Y-Balance), and mobility (sit and reach test). The SRSS consisted of the short recovery scale (SRS) and the short stress scale (SSS). The SRS contains 4 items on physical (PPC) and mental performance capabilities (MPC), emotional balance and overall stress. The SSS contains 4 items on muscular stress (MS), lack of activation (LA), negative emotional state (NES), and overall stress (OS). Descriptive statistics and correlations were calculated using SPSS version 28 (IBM Corp, Armonk, NY). **RESULTS:** For the SRS, significant correlations were found between 1) vertical jump power and both PPC ($r = 0.59$, $p = 0.02$) and MPC ($r = 0.74$, $p < 0.01$), 2) MPC and body composition ($r = -0.64$, $p = 0.01$), and 3) PPC and right hand-grip ($r = 0.52$, $p = 0.03$). For the SSS, significant correlations were found for 1) vertical jump power and MS ($r = -0.59$, $p = 0.02$), LA ($r = -0.51$, $p = 0.04$), and OS ($r = -0.51$, $p = 0.04$), 2) NES and Y-Balance composite score for the right side of the body ($r = 0.57$, $p = 0.02$), and 3) OS and body composition ($r = 0.64$, $p = 0.01$). **CONCLUSION:** Conducting regular physical tests such as hand grip strength or vertical jump to give ROTC cadets feedback on current performance status may help increase awareness of the impact of physical, mental and emotional stress on their readiness for the demanding requirements of the military science curriculum.