Physical and Physiological Comparison between Marine Corps Forces Special Operations Command Operators and Combat Support Personnel

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Tactical demands of a Marine Corps Forces Special Operations Command (MARSOC) Operator require high levels of physical performance. During combat deployments, teams of Operators may be supplemented with Combat Support personnel (CSP), who specialize in mission-specific tasks. MARSOC Operators and CSP may serve alongside each other in extreme combat environments, often enduring the same physical demands; however, they do not go through the same tactical training. PURPOSE: To examine the differences in physical and physiological characteristics between MARSOC Operators and CSP. METHODS: Testing including body composition (BF), anaerobic power (PAnP), anaerobic capacity (MAnP), aerobic capacity (AC), and knee and torso isokinetic strength testing (KF, KE, TF, TE) were collected on 42 Operators (Age: 28.4 ± 6.1 years, Height: 178.8 ± 6.7 cm, Mass: 85.4 ± 7.9 kg) and 19 CSP (Age: 28.0 ± 7.1 years, Height: 178.0 ± 6.0 cm, Mass: 81.4 ± 11.3 kg). Differences between groups were evaluated using independent samples t-tests, or Mann-Whitney U tests if required (p < 0.05).

RESULTS: Operators demonstrated greater physiological performance in MAnP (9.2 ± .9 W/kg, 8.0 ± 1.3 W/kg; p=.001), and AC (51.8 ± 4.4 ml/kg/min, 47.7 ± 5.6 ml/kg/min; p=.009). Operators also demonstrated greater right KF (135.4 ± 27.4 %BW, 112.8 ± 26.9 %BW; p=.005), left KF (132.3 ± 25.7 %BW, 113.3 ± 29.1 %BW; p=.007), right KE (263.3 ± 47.5 %BW, 218.4 ± 60 %BW; p=.002), left KE (250.8 ± 50.7 %BW, 215.4 ± 54.3 %BW; p=.011), TF (231.1 ± 35 %BW, 198.1 ± 37.8 %BW; p=.002), and TE (404.2 ± 101.8 %BW, 355.3 ± 50.2 %BW; p=.019). No significant differences were found in BF and PAnP. CONCLUSION: Results exhibit significant discrepancies in physical and physiological performance between Operators and CSP. These findings suggest the need for CSP to incorporate additional training designed to enhance their ability to maintain performance at a higher standard, similar to that of Operators. Special operations teams require all personnel to perform as a unit; not having all team members perform at the required physical levels may be detrimental to the mission and all members of the combat team. Future research is needed to examine the physiological and physical dichotomy between Operators and CSP and minimum necessary standards to achieve successful tactical performance.

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