

Psychophysiological response of air mobile protection teams in an air accident manoeuvre

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Abstract

Different extreme contexts elicit a stress response on human body, specifically on combat produces an increase of sympathetic nervous system and a direct effect on the organic response. This research aimed to study the psychophysiological response of an air security force in a simulated air accident in a hostile area and its subsequent subterfuge to a safe area. We analyzed 13 soldiers (32.4 ± 8.0 years) from an air security force unit of the Spanish Air Force who were divided into three teams to conduct the manoeuvre. We analyzed before and after the manoeuvre psychological well-being scale, personal views survey, recovery-stress questionnaire (REST-52 Sport); heart rate variability, visual analogue scale, rated of perceived exertion, spirometry, hydration and hand strength were analyzed during the four days of the manoeuvre: This produced a significantly ($p < .05$) increase in sympathetic modulation, hand strength, dehydration status, general and specific stress from RESTQ-52. With this data we can conclude that an air accident manoeuvre of three nights and four days causes in the air mobile protection team a high sympathetic nervous system modulation, increases on muscle strength manifestations and stress and a dehydration status.

Keywords Stress, Combat, Sleep deprivation, Ultraendurance, Military