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Exertional Heatstrokes Incidents in Service Members

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Scholar Program: Self-Regulation in Military Service Personnel

Research Mentor: Dr. Brian A. Moore

Abstract

A serious health concern active-duty service members (SMs) face is heat strokes (Donham et al., 2020). Heat strokes are caused when the body is overworked by extended periods of heat and dehydration that can result in convulsions, brain damage, and death (Shimazaki et al., 2022). Active-duty requires a lot of exertional training on their soldiers such as long-distance runs and weight-bearing exercises which may increase their risk of developing heatstrokes (Donham et al., 2020). However, there is a dearth of literature examining heat strokes among SMs. As such, the present study sought to examine incidence rate trends of heatstroke diagnoses among various SM demographic classifications between 2016 and 2021. The Defense Medical Epidemiology Database (DMED) was utilized to extract data and conduct a retrospective cohort study to identify all diagnosed cases of heat strokes among SMs. The primary goal was to calculate the incidence rate of heat strokes (per 10,000). The overall incidence rate of heat strokes was calculated to be 2.94 (per 10,000). Results indicated that young single white males in junior enlisted ranks and junior officer ranks serving in the Army or Marines are the most at-risk demographics to experience heat strokes. Future research should examine underrepresented demographics such as Female SMs, non-White SMs, and SMs in older age groups for more targeted interventions. The incidence rate trends and demographics most at risk for heat strokes elucidate the need for further research to improve military readiness and operations.