Heat Strokes in Military Service Members

Adria Cosby

Brian A. Moore
Kennesaw State University

Michael Schlenk
Kennesaw State University

Heatstroke in Military Service Members

Adria Cosby, Michael Schlenk, Brian A. Moore

Scholar Program: Self-Regulation in Military Service Personnel

Research Mentor: Dr. Brian A. Moore

Abstract

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). Heat strokes are a serious health concern for active-duty military service members (SMs) due to extended exertional training (i.e., long-distance running and weight-bearing exercises) which may increase their risk of developing heat strokes (Donham et al., 2020). However, there is a dearth of literature examining heat strokes among SMs. The present study sought to address this by examining diagnostic trends of heatstroke incidence among various military 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 SMs diagnosed with heat strokes. 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 single, white, males between the ages 18 and 24 years, in junior enlisted ranks (i.e., E-1 to E-4) and junior officer ranks (i.e., O-1/WO1 – O-3/CW3) serving in the Army or Marines were among 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.

Keywords: Heat strokes, Military, Service Members