

Wounded in Action: What the Sleep Community can Learn from Sleep Disorders of US Military Service Members

Commentary on Mysliwicz et al. Sleep disorders and associated medical comorbidities in active duty military personnel. *SLEEP* 2013;36:167-174.

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The tragic events of September 11, 2001, changed the fabric of American society in a myriad of ways. On that single day, thousands of lives were lost, all commercial flights were cancelled, and our nation and the world adjusted to a new normal that acknowledged terrorist organizations could dramatically disrupt our existence. For most civilians, the changes following the 9/11 attacks were slight inconveniences: for example, screening in airports and public buildings was heightened and travel restrictions were intensified. However, for members of the U.S. military, the events of 9/11 resulted in a significant increase in operational tempo and combat tours away from family and friends to support the operational mission of the “global war on terror.”

The military population enters service after being closely screened for illness and disability. In general, members of the military start out as comparatively healthy young men and women, entering the service between 17 and 20 years of age.¹ The entry and retention standards for US military service are rigorous: applicants must meet and maintain minimum standards in physical fitness, body fat, medical screening (to include both physical and mental health), and aptitude.^{2,3} However, these relatively healthy individuals do not stay that way. The reasons for the change in their health status—in particular, the development of sleep disorders—is of paramount interest to the sleep community.

The military has long been known for its culture of insufficient sleep. For many individuals in the military, sleep is considered a luxury or even a weakness. In his illuminating article on the ethical responsibilities of military commanders, Shay⁴ argues that leaders must get adequate sleep in order to properly care for their troops. He cites historical examples dating back to the ancient Greeks which explore the origins of the mythical warrior who rarely sleeps. For millennia, military life and combat exposure have been inextricably linked to psychological stress and problematic sleep. Studies of “battle fatigue,” now termed posttraumatic stress disorder, or PTSD, from as far back as the U.S. Civil War document the central role of sleep disorders following combat exposure.⁵⁻⁸

The military culture requires round-the-clock operations, which produces acute and chronic sleep deprivation levels in a population that makes high-risk decisions and oper-

ates complex equipment in extremely dangerous situations. The pervasive use of *ad hoc* shift work schedules that run counter to known circadian patterns contributes to mounting sleep debt in this population.⁹ Low manning levels and extended working hours further exacerbate the sleep deprivation in this population. In past military conflicts, we could plead ignorance about the detrimental physical and mental effects of restricted sleep on health and performance but that is no longer the case. With the increasing focus on PTSD and other combat-related comorbid diagnoses that have been linked to sleep, we must positively influence the sleep culture and overall health of our military members through policy changes guided by scientific principles.

In the current issue of *SLEEP*, Mysliwicz and colleagues¹⁰ have expanded our understanding of the prevalence of sleep disorders in military personnel and the relationship between comorbid diagnoses such as PTSD and specific sleep disorders. Notably, they found significant associations between PTSD, pain syndromes, and insomnia. In their cohort of military personnel, both the treatment and control groups reported higher levels of sleepiness and shorter sleep duration than the civilian population. In the past decade, the military services have increased their knowledge of PTSD and other combat-related diseases through their efforts to diagnose and treat these diseases in veterans returning from deployment. PTSD screening has become a standard requirement for combat veterans returning from deployment. This screening is especially important since an alarming rise in suicide rates has been reported in this group.¹¹ This increased scrutiny may partially explain why Mysliwicz and his colleagues¹⁰ found such a significant increase in the incidence of sleep disturbances such as insomnia and obstructive sleep apnea (OSA) diagnosed since 2000.

The retrospective study presented by Mysliwicz and colleagues begins to identify service-related illnesses that are associated with sleep disorders. However, additional questions should be investigated. In some ways, military service members represent an ideal population for research since they are a cross-section of the healthiest of our citizens. Longitudinal studies of this population hold great promise for exploring the complex etiology of sleep disorders. The relationship between deployment experience (both length and intensity) and sleep disorder diagnosis needs further examination. Service members with anxiety and poor stress coping mechanisms may be predisposed to sleep disorders and service-related illnesses such as PTSD.¹² Longitudinal studies should be conducted, comparing service members’ medical records pre- and post-deployment, to determine the relationship between the reported sleep disorders

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and service-related illnesses such as PTSD, pain syndromes, anxiety, depression, and mild traumatic brain injuries (mTBI). Such studies also could provide evidence to support personnel selection methods to reduce the occurrence of PTSD for individuals who are at a high risk. In addition, further studies need to be conducted to determine if the findings of Mysliwiec and colleagues¹⁰ are generalizable across the military population, beyond those individuals referred for sleep evaluations due to self-reported sleep problems.

Mysliwiec and colleagues have made a significant contribution to our understanding of the link between sleep disorders and service-related illnesses associated with combat operations. Their findings highlight the need for policy and culture change in our military organizations and continued research to understand and ameliorate the injuries these veterans have sustained. Better appreciation of the causal factors associated with veteran's health will lead to better policies for transition to civilian life and ultimately minimize the cost of veterans' health care to society. Our nation's military service members have made tremendous personal sacrifices and they deserve our best efforts for rehabilitation and renewed health. Sleep scientists have a vital role to play in this effort.

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DISCLOSURE STATEMENT

The authors have indicated no financial conflicts of interest.

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