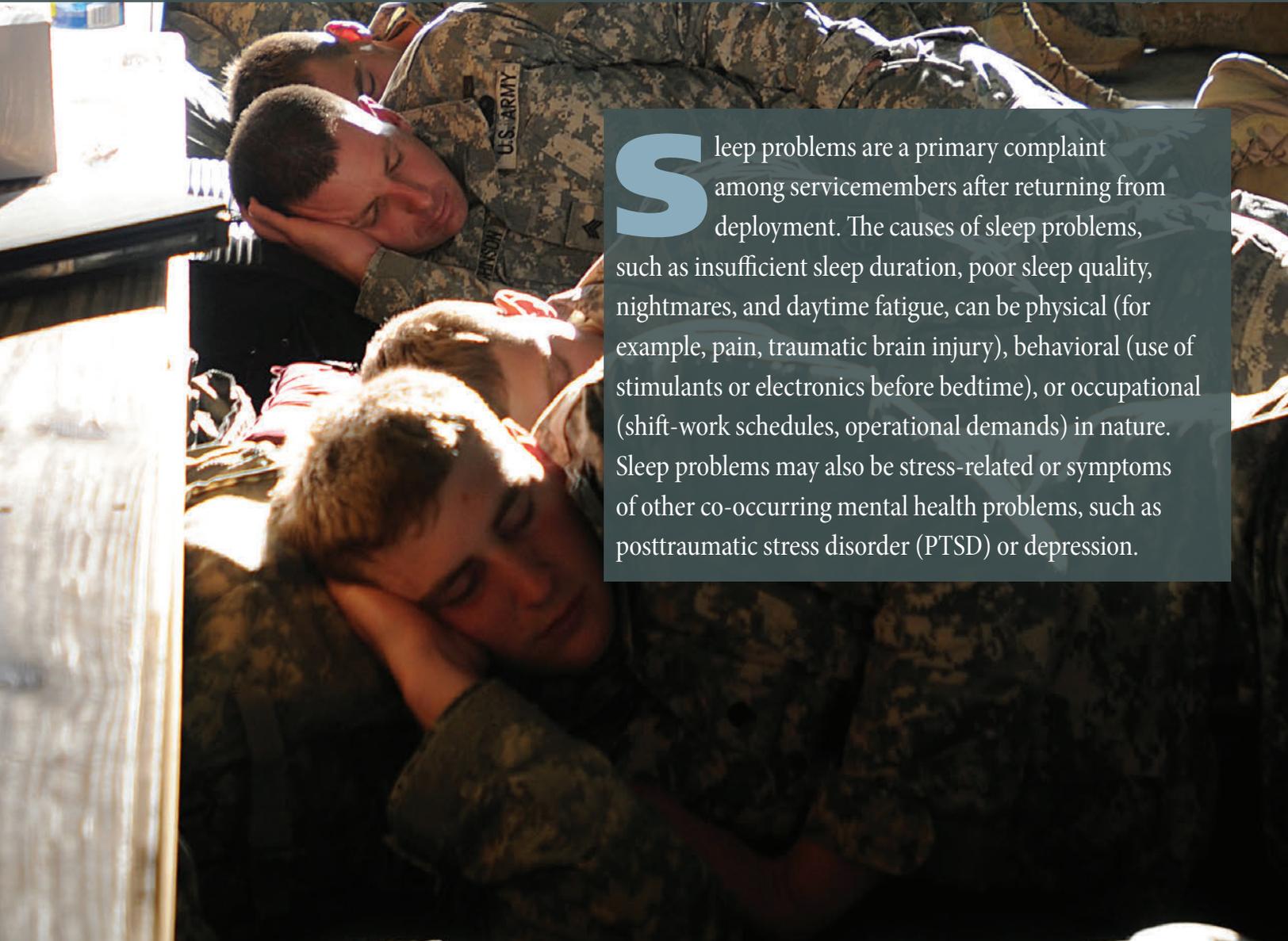


Improving Sleep Health for U.S. Servicemembers

POLICIES, PROGRAMS, BARRIERS TO IMPLEMENTATION,
AND RECOMMENDATIONS

A photograph showing several U.S. Army servicemembers in camouflage uniforms sleeping in a barracks. They are lying on their sides, some with their hands on their heads, suggesting fatigue or stress. The room is dimly lit, with light coming from a window on the left.

Sleep problems are a primary complaint among servicemembers after returning from deployment. The causes of sleep problems, such as insufficient sleep duration, poor sleep quality, nightmares, and daytime fatigue, can be physical (for example, pain, traumatic brain injury), behavioral (use of stimulants or electronics before bedtime), or occupational (shift-work schedules, operational demands) in nature. Sleep problems may also be stress-related or symptoms of other co-occurring mental health problems, such as posttraumatic stress disorder (PTSD) or depression.

A RAND study—the first comprehensive review of sleep policies and programs in the U.S. military—examined codified U.S. Department of Defense (DoD), U.S. Department of Veterans Affairs, and Service-level policies and programs related to sleep to make recommendations for improving sleep among servicemembers. Sources included more than 100 instructions, issuances, and regulations that address the (1) prevention of sleep disturbances, (2) medical screening and treatment, (3) sleep during training, and (4) sleep in operational environments. In addition, RAND researchers conducted key informant interviews and convened an expert working group panel, which included line leaders, clinicians, sleep medicine experts, and policymakers, to identify the barriers to implementing sleep-related policies and programs across DoD.

Prevention Programs and Policies

Sleep disturbances have strong implications for concurrent and future psychological, physical, and operational readiness, so promoting healthy sleep and preventing sleep disorders may enhance the readiness and resilience of the force. While no codified prevention policies exist, each military Service has at least one program or campaign to promote resiliency in which healthy sleep is identified as an important component of resilience, along with recommendations to encourage healthy sleep behaviors (known as sleep hygiene). However, these prevention programs are not evidence-based. In addition, surveys of servicemembers indicate that guidance provided in these programs may go unheeded, particularly during deployments, when it may be difficult for units to provide personnel with designated time off or dark, quiet areas for rest and when operational demands supersede individual servicemembers' sleep needs.

Other DoD policies offer tips for managing sleep and stress in the post-deployment period, including getting seven to eight hours of rest in each 24-hour period to prevent combat stress, and tips for increasing awareness that poor sleep could be a warning sign for suicide. However, experts indicate that these resources are decentralized and that there is no oversight to ensure the accuracy of the recommendations.

One of the most concerted and systematic efforts to promote sleep health as a critical component of resilience and readiness is the Army's Performance Triad (nutrition, exercise, and sleep) initiative. The Army continues to fund research into how poor sleep quality and quantity can affect the performance of soldiers. So far, however, the efficacy of such programs for improving sleep health has yet to be demonstrated.

Medical Programs and Policies

Overarching DoD policies related to sleep exist primarily to set medical standards and qualifications for initial and continued military service or referral to a medical evaluation board. While sleep is mentioned as a symptom under clinical practice guidelines for common mental health disorders, there are no clinical practice guidelines tailored specifically to sleep in the U.S. Department of Veterans Affairs. This could lead to the underdiagnosis and insufficient treatment of sleep disorders. Providing targeted interventions for sleep disorders is supported by research showing that treating sleep disorders (e.g., insomnia) can also improve co-occurring symptoms (e.g., depression or PTSD).

In addition to setting medical standards, medical policies address screening for sleep disorders. Self-report assessments are the most commonly used tools to identify sleep problems, but servicemembers may underreport symptoms following a deployment to avoid additional medical examinations and delays in returning home.

Training Programs and Policies

Duration of required rest periods stated in training policies was relatively consistent across the Services for new recruits; however, the policies apply to initial-entry forces and not necessarily to operating forces. These policies typically specify seven to eight hours of uninterrupted sleep per night, with exceptions for certain activities, such as final culminating exercises or standing guard duty. Air Force policies additionally recommend suitable

POLICY GAPS AND RECOMMENDATIONS TO PROMOTE HEALTHY SLEEP

	Prevention	Medical	Training	Operational
GAPS	No codified policies, but each military Service has at least one program or campaign to promote resiliency that identifies healthy sleep as an important component. They may fall short on evidence-based strategies to promote sleep health.	Policies mention sleep mostly as a symptom of other conditions. No policies specifically address continuity of care. Medical screening tools are often brief.	Duration of rest periods was specified, but only for initial-entry servicemembers. Service-level policies specifying seven to eight hours of uninterrupted sleep per night for recruits allow exceptions for certain activities. It is unclear to what extent line leaders and recruits adhere to these policies.	Operational policies mandate sleep plans, but they do not give leaders guidance on how to structure sleep plans. While the majority of policies dictating the duration of rest periods are fairly recent, they may not reflect current research or clinical practice.
RECOMMENDATIONS	Increase servicemember and line leader education about healthy sleep. Fund or conduct research on sleep and effects on operational readiness and resilience to develop policies and programs that better identify risk factors and prevent sleep problems.	Develop a clinical practice guideline specifically for sleep disorders and increase the use of mobile technology for assessing and clinically managing sleep disorders.	Establish DoD-wide training policies to improve sleep duration and quality. Ideally, such policies and related programs will echo recommendations from the medical and scientific research.	Educate line leaders and disseminate positive messages about sleep as an operational imperative to increase awareness and reduce cultural barriers. Examine data on accidents and mishaps for links to fatigue and educate line leaders to develop sleep plans that better align with circadian rhythms.

See the full report at www.rand.org/t/RR739 for the full set of recommendations.

sleeping provisions; Army policies offer trainees tips for managing sleep and recognizing sleep problems as a symptom of stress. The Navy and Marine Corps give recruits “rights” in terms of sleep, stating that they will normally be permitted eight hours of uninterrupted sleep per night except when assigned to certain guard duties, when the program of instruction includes night training, or during the culminating exercise. In these Services, “maintain sleep hygiene” is a training task; to demonstrate proficiency, trainees must understand the performance effects of sleep deprivation and ways to combat fatigue and be able to evaluate their own sleep hygiene. However, research suggests that individuals are generally poor at judging the extent to which sleepiness or fatigue affects their performance.

Despite this guidance, training policies that require opportunities for rest may not translate to eight hours of continuous sleep, particularly when servicemembers face competing demands and environmental factors that interfere with sleep, such as light and noise exposure.

For example, “rest time” may be sacrificed for studying or preparing equipment or uniforms for the next day’s activities.

Operational Programs and Policies

Operational policies were the most common type of policy identified. Sometimes multiple policies within a single Service differ in the degree of emphasis placed on sleep. In addition, while the majority of stress and resilience policies that address sleep are fairly recent, they may not reflect current research or clinical practice. For example, some manuals still state that sustaining four hours of sleep for as long as a week will not affect performance; this may lead to misunderstanding on the part of servicemembers or line leaders about what is the minimal acceptable amount of sleep, and it directly contradicts the robust scientific evidence demonstrating sleep deprivation’s adverse effects on performance.

Implementing Policies and Programs That Promote Healthy Sleep and Improve Force Readiness

Even the best evidence-based practices, programs, and policies to prevent and treat sleep problems among servicemembers face barriers to implementation. Military medical professionals, commanding officers, and other sleep medicine experts cited several factors that might make it particularly challenging for servicemembers to get the sleep they need.

CULTURAL BARRIERS

The ability to perform on little sleep can be seen as a “badge of honor.” There is still stigma associated with help-seeking, but it may be less common for sleep disturbances than for mental health disorders; perhaps self-identification or system-level screening for sleep disturbances could combat stigma associated with other problems. Senior line leaders, under intense pressure to be available to their units and advise on mission planning, may be particularly sleep-deprived. Unit personnel may model their own behaviors on those of their commanders.

OPERATIONAL BARRIERS

“Mission first” is the creed of every servicemember. Mission needs and training requirements may take priority over sleep—and units may not have the manpower to provide sufficient rest time. In addition, characteristics of the deployed environment (e.g., noise, uncomfortable or unsafe sleeping environments) can directly interfere with sleep quality and duration.

KNOWLEDGE BARRIERS

Servicemembers may lack knowledge about healthy sleep behaviors, including the risks of chronic stimulant or sleep medication use. And they may be unaware of how sleep deprivation can impair cognitive functioning and operational readiness. At the DoD level, no centralized resource on sleep policies and educational information exists.

MEDICAL AND TREATMENT SYSTEM BARRIERS

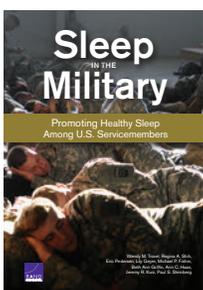
Servicemembers may perceive negative attitudes or career-related consequences in seeking help for sleep problems through the military health care system. Experts also cited a shortage of sleep clinicians, a lack of focus on adequate screening, and gaps in care in the post-deployment period.

Conclusions

RAND conducted the first comprehensive review of policies and programs related to sleep in the military to inform recommendations to improve sleep health among servicemembers. Results of the policy analysis revealed a dearth of prevention policies or programs, and medical treatment policies primarily mention sleep as a symptom of mental health or general readiness. By contrast, operational policies were abundant but focused on minimum sleep duration required during operations that were occasionally in conflict with established recommendations for optimal sleep. Guidance to line leaders on how to develop and execute sleep plans that dictate crew work/rest cycles during continuous operations, for example, is lacking.

Although the vast majority of publications cited seven to eight hours as the appropriate amount of sleep for servicemembers, they provided little guidance on how to achieve quality sleep. Like many training policies, operational policies that focused on providing rest periods did not include conditions to ensure that an adequate amount of time was allocated to quality sleep, or guidance for line leaders on how to create and implement sleep plans.

Strengthening policies and programs that encourage healthy sleep will be one important step in preventing the consequences of sleep problems for individual servicemembers and the force as a whole.



This research brief describes work done in the RAND National Defense Research Institute and documented in *Sleep in the Military: Promoting Healthy Sleep Among U.S. Servicemembers*, by Wendy M. Troxel, Regina A. Shih, Eric Pedersen, Lily Geyer, Michael P. Fisher, Beth Ann Griffin, Ann C. Haas, Jeremy R. Kurz, and Paul S. Steinberg, RR-739-OSD (available at www.rand.org/t/RR739), 2015. To view this brief online, visit www.rand.org/t/RB9824. The RAND Corporation is a research organization that develops solutions to public policy challenges to help make communities throughout the world safer and more secure, healthier and more prosperous. RAND is nonprofit, nonpartisan, and committed to the public interest. RAND's publications do not necessarily reflect the opinions of its research clients and sponsors.

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