

# Putting Research to Work for Military Families



**Focus:**  
Multiple  
Branches

## Sleep Patterns Before, During, and After Deployment to Iraq and Afghanistan

Seelig, A. D., Jacobsen, I. G., Smith, B., Hooper, T. I., Boyko, E. J., Gackstetter, G. D., ... Smith, T. C. (2010). Sleep patterns before, during, and after deployment to Iraq and Afghanistan. *Sleep*, 33(12), 1615-1622.

**SUMMARY:** As part of the Millennium Cohort Study, 41,225 Service members who deployed in support of OEF/OIF completed baseline and follow-up questionnaires to determine the associations between deployment and sleep quantity and quality. Deployment was shown to significantly influence sleep quantity and quality. Personnel reporting combat exposure or mental health symptoms had increased odds of trouble sleeping.

### KEY FINDINGS:

- Service members who were currently deployed to Iraq or Afghanistan or had returned from deployment had significantly shorter sleep duration and increased odds of reporting trouble sleeping compared with those who had not deployed.
- Deployment status did not significantly affect sleep duration in the models that adjusted for follow-up mental health conditions and combat exposures.
- Deployment status resulted in significantly reduced odds of reporting trouble sleeping among those in the post-deployment groups with no symptoms of anxiety or panic at follow-up.
- Adjusted average sleep duration was fairly short; every subgroup mean ranged from 6.46-6.56 hours.

### IMPLICATIONS FOR PROGRAMS:

Programs could:

- Develop modules in educational curricula for Service members about the importance of getting adequate sleep and helpful tips for maximizing sleep duration and quality
- Educate both Service members and families about the relationship between shortened sleep duration and mental health symptoms, and recruit family members to help monitor these issues in their loved ones
- Offer workshops during reintegration to help families and Service members adjust to the Service member's return, especially when the deployment has included combat exposure

### IMPLICATIONS FOR POLICIES:

Policies could:

- Recommend routine assessment and treatment of sleep problems among Service members, especially among those who experienced deployment
- Continue to support programs that address the unique challenges faced by deployed Service members
- Recommend training for community providers to educate them about unique factors that contribute to poor sleep habits and experiences for Service members

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## METHODS

- Participants in the Millennium Cohort Study were used. A representative sample of members of all service branches were recruited, and participants completed a broad range of questionnaires regarding physical and mental health, deployment and deployment related exposures, occupation, demographics, and behavioral health habits (smoking, drinking, sleep).
- This study includes participants who completed baseline and follow-up questionnaires. Participants were separated into groups of those who were not deployed prior to the follow-up survey, those who completed the follow-up survey while deployed, and those who completed the survey post-deployment.
- Statistical analyses were used to predict self-reported sleep duration and difficulty with sleep, and to compare the groups on variables.

## PARTICIPANTS

- A total of 41,225 Service members who deployed to OIF/OEF were included.
- No deployment group (73%; n = 30,190) characteristics were as follows: 71% were male, average age was 35.70 years, 72% were White, and 68% were married.
- Survey while deployed group (4%; n = 1,771) characteristics were as follows: 85% were male, average age was 32.20 years, 68% were White, and 65% were married.
- Survey post-deployment group (23%; n = 9,264) characteristics were as follows: 83% were male, average age was 33.10 years, 71% were White, and 66% were married.

## LIMITATIONS

- All data were self-report and subject to bias, especially sleep data.
- Sleep data were collected in whole number increments (1, 2, 3 hours) which may have impacted the results.
- There was no information on sleep medications, and so the impact of these variables could not be assessed.

## AVENUES FOR FUTURE RESEARCH

Future research could:

- Examine possible short- and long-term health outcomes among those reporting shortened sleep duration
- Gather additional research that uses non-self-report measures of sleep duration
- Explore individual and personality variables (e.g., health status, energy levels) that may impact sleep habits and experiences among Service members

## ASSESSING RESEARCH THAT WORKS



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