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PROSPECTIVE ANALYSIS OF POSTTRAUMATIC STRESS DISORDER AND DEPRESSION AMONG MILITARY PROFESSIONAL CAREGIVERS DEPLOYED TO THE WARS IN IRAQ AND AFGHANISTAN. *I G Jacobson, MPH, C A LeardMann, MPH, T C Smith, MS, PhD, B Smith, MPH, PhD, T S Wells, DVM, MPH, PhD, E J Boyko, MD, MPH, M A K Ryan, MD, MPH; for the Millennium Cohort Study Team (Naval Health Research Center, San Diego, CA 92106)

Military personnel providing care during combat deployments in support of the wars in Iraq and Afghanistan may be at increased risk for posttraumatic stress disorder (PTSD) and depression. This prospective analysis used data from the Millennium Cohort Study, a 21-year longitudinal study designed to assess the long and short-term health effects of military service on health, and focused on the mental health of military healthcare workers and chaplains who completed both baseline (2001) and follow-up questionnaires (2004). PTSD and depression symptoms were identified using the PTSD Patient Checklist Civilian version and the Patient Health Questionnaire 9-item screening tools, respectively. Multivariable logistic regression modeling was used to determine the risk of newly-reported or persistent PTSD and depression symptoms at follow-up among military professional caregivers who experienced combat exposures while deployed. These individuals as well as personnel who did not experience combat exposures while deployed were compared with nondeployed personnel. Of more than 43,000 Millennium Cohort participants with complete longitudinal data, approximately 12% were caregivers. Of the caregivers that deployed, about 70% reported exposure to combat or trauma. Analyses are ongoing. Quantifying the risk of PTSD and depression over time among military personnel providing care to their fellow service members is critical to understanding the scope of these mental health problems in this specialized group of military professional caregivers.

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THE MILLENNIUM COHORT STUDY: A 21-YEAR CONTRIBUTION TO THE UNDERSTANDING OF MILITARY HEALTH. *T Smith, B Smith, I Jacobson, C LeardMann, K Welch, L Farnell; for the Millennium Cohort Study Team (Naval Health Research Center, San Diego, CA 92106)

Military service confers unique occupational exposures, and sometimes intensive stressors, that may have profound impact on long-term health. Most studies of military-related exposures are limited by retrospective and cross-sectional design, convenience sampling, and/or short follow-up. The Millennium Cohort Study was established in 2000 to follow the health of participants through 2022. The Cohort consists of three separate panels enrolled in 2001, 2004, and 2007, which total over 150,000 participants from all service branches and includes both active duty and reserve and National Guard personnel. Participants from all three panels have completed a baseline assessment and are surveyed at three year intervals through 2022. At least one follow-up has been completed for over 70% of the cohort submitting baselines in 2001 or 2004. More than 40% of the Cohort has deployed in support of the wars in Iraq and Afghanistan. The study team has produced over 25 peer-reviewed publications and over 100 presentations at scientific meetings on topics including reliability and validity and prospectively assessed posttraumatic stress disorder, depression, weight change, exercise, alcohol use, and smoking. The Millennium Cohort Study is setting a new standard for prospective evaluation of the long-term health consequences of military occupational exposures, both among active military personnel as well as among the growing number of cohort members who have separated or retired from military service and entered the civilian population. The rigorous design and strength of these data will allow the project to address complex issues of national public health importance for years to come.

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A PROSPECTIVE STUDY OF SHIFT WORK AND DEPRESSION IN POLICE OFFICERS. *J M Violanti, J E Slaven, L E Charles, A Mnatsakanova, M E Andrew, T A Hartley, C M Burchfiel (State University of New York at Buffalo, Department of Social and Preventive Medicine, Buffalo, NY)

This study prospectively examined shift work and change in depressive symptoms over a three-year period in 70 randomly selected police officers. The Center for Epidemiological Studies Depression (CES-D) scale was used to measure depression. Shifts were measured using data from daily payroll records over a five-year period prior to examination. Officers were classified by shift (day, afternoon, or night) based on the hours worked per shift. The association between shift work and change in CES-D scores was analyzed by analysis of variance. Mean age of the sample was 40.4 years; 61.4% were males. Officers working the day shift exhibited a trend toward greater mean increases in depressive symptoms (3.6 ± 9.0) than those on afternoons (0.6 ± 5.9) and nights (0.9 ± 4.5), $p=0.287$. Unmarried officers on day shifts had a larger increase in mean CES-D (7.9 ± 9.7) compared to afternoon (1.6 ± 4.0) or night (0.2 ± 4.3) shifts, $p=0.128$. After adjustment for age, gender, and smoking status, the results were only slightly attenuated: day (7.1 ± 2.3), afternoon (3.1 ± 3.6), and night (0.9 ± 4.0), $p=0.413$. In contrast, the mean change in CES-D was similar across shifts for married officers. Contrary to expectations, officers working day but not night shifts had an increase in depressive symptoms over time. Marital status appears to influence this association. Further research is needed to clarify additional factors associated with day shift work that may exacerbate depression.

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THE ASSOCIATION OF FREQUENCY AND DURATION OF DEPLOYMENT AND FUNCTIONAL HEALTH AMONG SERVICE MEMBERS DEPLOYED IN SUPPORT OF THE WARS IN IRAQ AND AFGHANISTAN. *B Smith, D Wingard, M Ryan, D Slymen, C Macera, T Patterson; for the Millennium Cohort Study Team (Naval Health Research Center, San Diego, CA 92106)

Background: Research from previous military conflicts has indicated that veterans may be at risk for anxiety disorders, cognitive dysfunction, lower health-related quality of life, and lower functional status. Recent reports suggest service members returning from Iraq and Afghanistan have significant mental health morbidity. Deployment length, itself, has been related to psychological distress, although it is unknown whether those who deploy multiple times are more likely to report lower functional status or mental health problems. This study prospectively investigates the mental and physical health of a large, population-based US military cohort in relation to deployment. Methods: The Millennium Cohort is a 22-year longitudinal study launched in 2001. Participants in the current study submitted baseline (June 2001–July 2003) and follow-up (June 2004–February 2006) questionnaire data. Using the 36-item Short Form Health Survey for Veterans to measure functional health, analysis of covariance was used to assess mental and physical functioning changes for personnel with multiple and extreme deployments. Results: On average, mental and physical functioning scores decreased significantly among participants who deployed >9 months, or were deployed with combat exposures. Overall scores changed, on average, by <2 points. Conclusions: Statistical differences in adjusted means of mental and physical functioning scores were small and may have little clinical significance. Results suggest a consistency in mental and physical functioning over almost 3 years, regardless of deployment, among a large military cohort.