



## Women Veterans

## Estimated Prevalence of Insomnia among Women Veterans: Results of a Postal Survey



Jennifer L. Martin, PhD<sup>a,b,\*</sup>, C. Amanda Schweizer, PhD, MPH<sup>c</sup>,  
Jaime M. Hughes, PhD, MPH, MSW<sup>d</sup>, Constance H. Fung, MD, MSHS<sup>a,b</sup>,  
Joseph M. Dzierzewski, PhD<sup>e</sup>, Donna L. Washington, MD, MPH<sup>b,c</sup>,  
B. Josea Kramer, PhD<sup>a,b</sup>, Stella Jouldjian, MSW, MPH<sup>a</sup>, Michael N. Mitchell, PhD<sup>a</sup>,  
Karen R. Josephson, MPH<sup>a</sup>, Cathy A. Alessi, MD<sup>a,b</sup>

<sup>a</sup> VA Greater Los Angeles Healthcare System, Geriatric Research, Education and Clinical Center, Los Angeles, California

<sup>b</sup> David Geffen School of Medicine at the University of California, Los Angeles, California

<sup>c</sup> VA Greater Los Angeles Healthcare System, HSR&D Center for the Study of Healthcare Innovation, Implementation & Policy, Los Angeles, California

<sup>d</sup> Durham VA Healthcare System, Center for Health Services Research in Primary Care, Durham, North Carolina

<sup>e</sup> Virginia Commonwealth University, Department of Psychology, Richmond, Virginia

Article history: Received 21 April 2016; Received in revised form 3 December 2016; Accepted 7 December 2016

### A B S T R A C T

**Objectives:** Insomnia is a significant public health concern known to particularly impact women and the veteran population; however, rates of insomnia disorder among women veterans are not known.

**Method:** Women veterans who had received health care at VA Greater Los Angeles Healthcare System between 2008 and 2010 and resided within 25 miles of the facility were sent a postal survey assessing sleep, demographics, and other related patient characteristics.

**Results:** A total of 660 women (43.1% of potential responders) returned the postal survey and provided sufficient information for insomnia diagnosis. On average, women reported 6.2 hours of sleep per night. The prevalence of insomnia, determined according to diagnostic criteria from the International Classification of Sleep Disorders-2, was 52.3%. Women with insomnia reported more severely disturbed sleep, and more pain, menopausal symptoms, stress/worries, and nightmares compared with women without insomnia. There was a quadratic relationship between age and insomnia with women in their mid-40s, most likely to have insomnia.

**Conclusions:** This survey study found that insomnia symptoms were endorsed by more than one-half of the women veterans in this sample of VA users, highlighting the critical need for enhanced clinical identification and intervention. Further research is needed to establish national rates of insomnia among women veterans and to improve access to evidence-based treatment of insomnia disorder.

Published by Elsevier Inc. on behalf of Jacobs Institute of Women's Health.

There are 2.2 million women veterans in the United States, a number that is expected to increase to 2.4 million by 2020, based on the number of women currently serving in the armed forces

(National Center for Veterans Analysis and Statistics, 2013). Women veterans are accessing health care through the Veterans Health Administration (VHA) in rapidly growing numbers. From 2000 to 2010, the number of women veterans receiving care through VHA doubled (Whitehead et al., 2013). As a result, there is an increasing call to understand this growing segment of patients served by VHA. At present, little is known regarding the prevalence of insomnia and need for sleep disorder treatment among women veterans. Yano et al. (2011) included "sleep issues" as part of the "VA Women's Health Research Agenda for the Future"; however, as of 2011, a systematic review of VA women's health research did not identify published studies of sleep disorders among women veterans (Bean-Mayberry et al., 2011;

Research supported: VA Health Services Research and Development Service (HSR&D; PPO 09-282-1; PI: Martin), VA Quality Enhancement Research Initiative (QUERI; RRP 12-189; PI: Martin), and Research Services of the VA Greater Los Angeles Healthcare System. Dr. Schweizer was supported by the VA Office of Academic Affiliations through the VA Advanced Fellowship Program in Women's Health.

\* Correspondence to: Jennifer L. Martin, PhD, VAGLAHS GRECC (11E), 16111 Plummer St., North Hills, CA 91343. Phone: 818-891-7711x9173; fax: 818-895-9519.

E-mail address: [Jennifer.Martin@va.gov](mailto:Jennifer.Martin@va.gov) (J.L. Martin).

Goldzweig, Balekian, Rolon, Yano, & Shekelle, 2006). Since 2011, Hughes, Jouldjian, Washington, Alessi, and Martin (2013) have reported that women veterans with insomnia have higher rates of posttraumatic stress disorder, and a recent publication based on the Women's Health Initiative reported that women veterans had similar overall rates of insomnia compared with nonveteran women (30.5% vs. 30.8%, respectively), but women veterans had higher risk for insomnia co-occurring with sleep apnea risk factors (Risling et al., 2016). Recently, changes in rates of diagnosed sleep disorders among more than 9,000,000 VA users was described by Alexander et al. (2016). Rates of diagnosed insomnia differed between men and women who receive VA care; however, these differences were not consistent across fiscal years. Women had the same or higher rates of insomnia through fiscal 2008, and lower rates thereafter. Because multiple factors impact documented diagnosis in medical records, it is not clear whether this represents a difference in actual prevalence rates. We were unable to identify additional studies focused on sleep disorders among women veterans, and this remains an area in which research is needed.

Insomnia (defined as sleep disturbance that is sufficiently severe to cause distress or impact functioning) is a significant public health concern that contributes to lost productivity, psychological distress, poor quality of life, poor health, medical morbidity, and mortality risk (Godet-Cayre et al., 2006; Katz & McHorney, 2002; Kripke, Garfinkel, Wingard, Klauber, & Marler, 2002; Zammit, Weiner, Damato, Sillup, & McMillan, 1999). A Canadian study showed that direct and indirect costs for individuals with insomnia exceeds costs for good sleepers by 10-fold (Daley, Morin, Leblanc, Gregoire, & Savard, 2009). Importantly, treatment of insomnia improves quality of life and may reduce depression and pain symptoms as well (Edinger, Wohlgemuth, Krystal, & Rice, 2005; Manber et al., 2008; Vitiello, Rybarczyk, VonKorff, & Stepanski, 2009). In fact, the VA has invested resources in training mental health providers in the treatment of insomnia disorder through a national dissemination of cognitive-behavioral therapy for insomnia (Manber et al., 2012; Trockel, Karlin, Taylor, & Manber, 2014).

Insomnia prevalence among women veterans has not been widely studied; however, there are reasons to suspect it will be more common among women veterans than among male veterans. Estimated rates of insomnia among male veterans vary from 24% to 54% (Hoge et al., 2008), but similar estimates are not available for women veterans. Among nonveterans, insomnia is more common among women than men, with a mean prevalence of 23% among U.S. civilian women compared with 17% among men (National Sleep Foundation, 2007; Zhang & Wing, 2006). A meta-analytic review found that women are 1.4 times more likely to have insomnia than men, worldwide (Zhang & Wing, 2006). In light of the sex and gender differences that may contribute to high risk for sleep difficulties among women, a recent report highlighted the need to examine women's sleep health issues (Mallampalli & Carter, 2014).

Risk factors for insomnia include psychiatric disorders, medical conditions, psychosocial stressors, and sleep disorders (e.g., sleep apnea, restless legs syndrome; Martin, 2005). These conditions are not exclusive to women; however, women do suffer from higher rates of some psychiatric disorders known to contribute to insomnia (e.g., depression), and insomnia complaints increase significantly during pregnancy (Dorheim, Bjorvatn, & Eberhard-Gran, 2012), and as women enter menopause (Eichling & Sahni, 2005).

The objectives of the current study were to characterize patient-reported sleep, estimate the prevalence of insomnia, and identify common sleep-disruptive factors among women veterans who receive VA health care. A secondary objective was to identify differences between women with and without insomnia in terms of demographics and other characteristics assessed in the postal survey used in the study. Based on prior research, we hypothesized that the prevalence of insomnia would be at least as high among women veterans in this study as it is in the general population, and that women with insomnia would be older and would endorse more sleep-disruptive factors than women without insomnia.

## Materials and Methods

### Study Sample and Recruitment

The sample for the current study was drawn from the population of women veterans who received care at the VA Greater Los Angeles Healthcare System between 2008 and 2010 and resided within 25 miles of the VA Sepulveda Ambulatory Care Center, where the study was conducted ( $N = 1,632$ ). The list of eligible women was put into random order, and approximately 500 surveys were mailed at 4-month intervals between August 2010 and August 2011 until all 1,632 women had been sent a survey. These steps were taken to reduce the risk of a "seasonal response bias" (Halbesleben & Whitman, 2012). If we did not receive a returned survey within 3 weeks, a second survey was mailed. This step was taken both to increase response rate and to reduce potential nonresponse bias (Halbesleben & Whitman, 2012). Of the 1,632 mailed surveys, 102 were not delivered (3 because the veteran was deceased, and 98 because the veteran did not reside at the address listed and no forwarding address was available). This formed a pool of 1,530 potential responders. Of these, 671 (43.9%) returned a survey, 499 (74.4%) after the first mailing and 172 (25.6%) after the second mailing. The 671 returned surveys were examined for completeness, and we attempted to contact respondents with missing or ambiguous responses, yielding 69 additional completed and corrected surveys. There was sufficient information to determine whether the veteran met criteria for insomnia disorder for a final sample of 660 women (43.1% of potential responders). The study procedures were reviewed and approved by the Institutional Review Board at the VA Greater Los Angeles Healthcare System and a waiver of documentation of informed consent was obtained.

### Survey Content

The survey was developed for the purpose of identifying women veterans with insomnia complaints who were likely to meet clinical diagnostic criteria for an insomnia disorder, according to the International Classification of Sleep Disorders, 2nd Edition (ICSD-2; American Academy of Sleep Medicine, 2005). The survey included cover material describing the survey as research and a total of 37 items, which are described in detail herein.

### Demographics

Demographic, military-related, and health care use variables included in the current study were age, sex, race/ethnicity, employment status, marital status, period of military service, time since last medical visit (within 2 years), and distance from the medical center. Age, sex, time since last medical visit, and

Download English Version:

<https://daneshyari.com/en/article/5123432>

Download Persian Version:

<https://daneshyari.com/article/5123432>

[Daneshyari.com](https://daneshyari.com)