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RESEARCH REVIEW | ISSUE 256

■ Post-9/11 Deployment History and the Incidence of Breast Cancer Among Women Veterans

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SOURCE: Annals of Epidemiology**DATE:** 2023**LINK:** https://www.sciencedirect.com/science/article/pii/S1047279722003039?ref=pdf_download&fr=RR-2&rr=811e775c2916431c**KEYWORDS:** Breast Cancer, Prevention, Risk, Veterans, Women**ABSTRACT:****“Purpose**

To determine if women veterans who deployed in support of Operations Enduring Freedom/Iraqi Freedom (OEF/OIF) would show a greater likelihood of breast cancer (BC) than other women veterans who did not deploy during that service era.

Methods

This was a retrospective cohort study of women aged <60 years who were followed in Veterans Affairs medical center primary care, 2001-2021. The exposure was OEF/OIF deployment, and the outcome was a BC diagnosis after entering Veterans Affairs care. Poisson models evaluated the association between deployment and BC incidence, covarying demographics, lifestyle factors, and hormonal contraceptive and hormone replacement therapy use. Analyses were also stratified by age and race, and a sensitivity analysis adjusted for healthcare utilization over the initial 2 years.

Results

Of 576,601 women, 24.6% (n = 141,935) deployed during post-9/11 conflicts. Across follow-up [median: 8.2 years], 1.2% women were diagnosed with BC. Those who deployed in support of OEF/OIF were 23% less likely to be diagnosed with BC than women who did not deploy (95% CI: 0.73, 0.86). The association remained in stratified models and when including healthcare utilization.

Conclusions

Despite the exposures of OEF/OIF deployment, there was a significantly lower incidence of BC among women who deployed versus not, possibly due to a healthy soldier effect or to differences in screening.”

RESEARCH HIGHLIGHTS:

- The study focused on women veterans who received care from the Veterans Health Administration (VA) between 2001 and 2021, excluding those aged 60 or older at enrollment. Researchers examined VA electronic health records, which included data on demographics, medical history, deployment history, and healthcare utilization, including breast cancer (BC) diagnoses and medication records.
- Women with a history of deployment in support of Operations Enduring Freedom/Iraqi Freedom (OEF/OIF) were initially 58% less likely to be diagnosed with BC compared to women who did not deploy at that time, and after accounting for other factors, they were 23% less likely.
- Further analysis found consistent lower BC risk associated with deployment, especially among younger and older women, regardless of healthcare utilization or certain demographics.

Implications

FOR PRACTICE

Implications for practice from this study include recognizing the “healthy soldier/warrior effect” as a potential factor contributing to lower morbidity and mortality in women veterans, particularly those who deploy, and considering the importance of stringent military entry and deployment standards. Additionally, healthcare providers should be aware of potential disparities in breast cancer (BC) screening practices among women veterans, including limited access to mammography during deployment and deferred screening upon return, and should prioritize comprehensive data collection to better understand cancer risk factors, screening practices, and incidence based on women’s military service duties. Further investigation into BC risk factors such as delayed age at first birth, lower parity, exposure to carcinogens, and sexual violence may also be necessary to develop better risk stratification and resource allocation for timely and cost-effective BC prevention among younger women veterans.

FOR POLICY

Implications for policy based on this study include addressing potential disparities in breast cancer (BC) screening practices among women veterans, ensuring that resources are available for access to mammography during deployment and post-deployment screening. Furthermore, policymakers should support further research into BC risk factors among women veterans to inform targeted prevention and mitigation strategies. Lastly, this study suggests that more uniform accounting of women veterans’ reproductive health factors as discrete data in the VA electronic health record is essential to provide quality, equitable healthcare for this group. That said, policymakers should prioritize the enhancement of data collection and information sharing to better address reproductive health factors among women veterans within the VA electronic health record system, aiming for equitable healthcare provision.

FOR FUTURE RESEARCH

Further research is essential to address the limitations of this study, including the primary focus on women veterans who utilized VA primary care, potentially missing those receiving care in the private sector only. Detailed information about deployment, such as theater of combat, exposure specifics, and duration, is lacking in administrative data, necessitating further investigation to understand potential disparities in BC screening and incidence influenced by deployment-related factors. Comprehensive studies on BC screening practices among women veterans are also needed, accounting for deployment impacts, to ensure equitable healthcare outcomes. Expanding the study’s scope to include a broader range of women veterans, collecting more detailed deployment data, and considering lifestyle and reproductive health factors will aid in a deeper understanding of BC risk in this population.

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