



U.S. Department
of Veterans Affairs



Servicewomen's Deployment Health

Anne G. Sadler, Ph.D., R.N.

VA Iowa City Health Care System

Department of Psychiatry

University of Iowa



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Deployment Health Defined



Deployment health is defined as health issues that arise prior to, during, and following armed forces deployments.

Institute of Medicine. Returning Home from Iraq and Afghanistan: Preliminary Assessment of Readjustment Needs of Veterans, Service Member, and their Families. Washington, DC: The National Academies Press 2010



Servicewomen's Expanding Roles



- Women have carried arms & been at risk in every US war since the American revolution.
- Women's recent unrestricted service:
 - Repeal of the military ban on women in combat (2013)
 - All US military combat positions open to women (2015)



Women Essential to Military Readiness

Concerns about the adverse impact of expanded roles for women have **NOT** been realized regarding:

- military readiness
- unit cohesion
- military effectiveness in war

Schaefer, A. G., Wenger, J. W., Kavanagh, J., Wong, J. P., Oak, G. S., Trail, T. E., & Nichols, T. (2015). *Implications of integrating women into the Marine Corps infantry*. Retrieved from http://www.rand.org/pubs/research_reports/RR1103.html



Military Women and Deployment

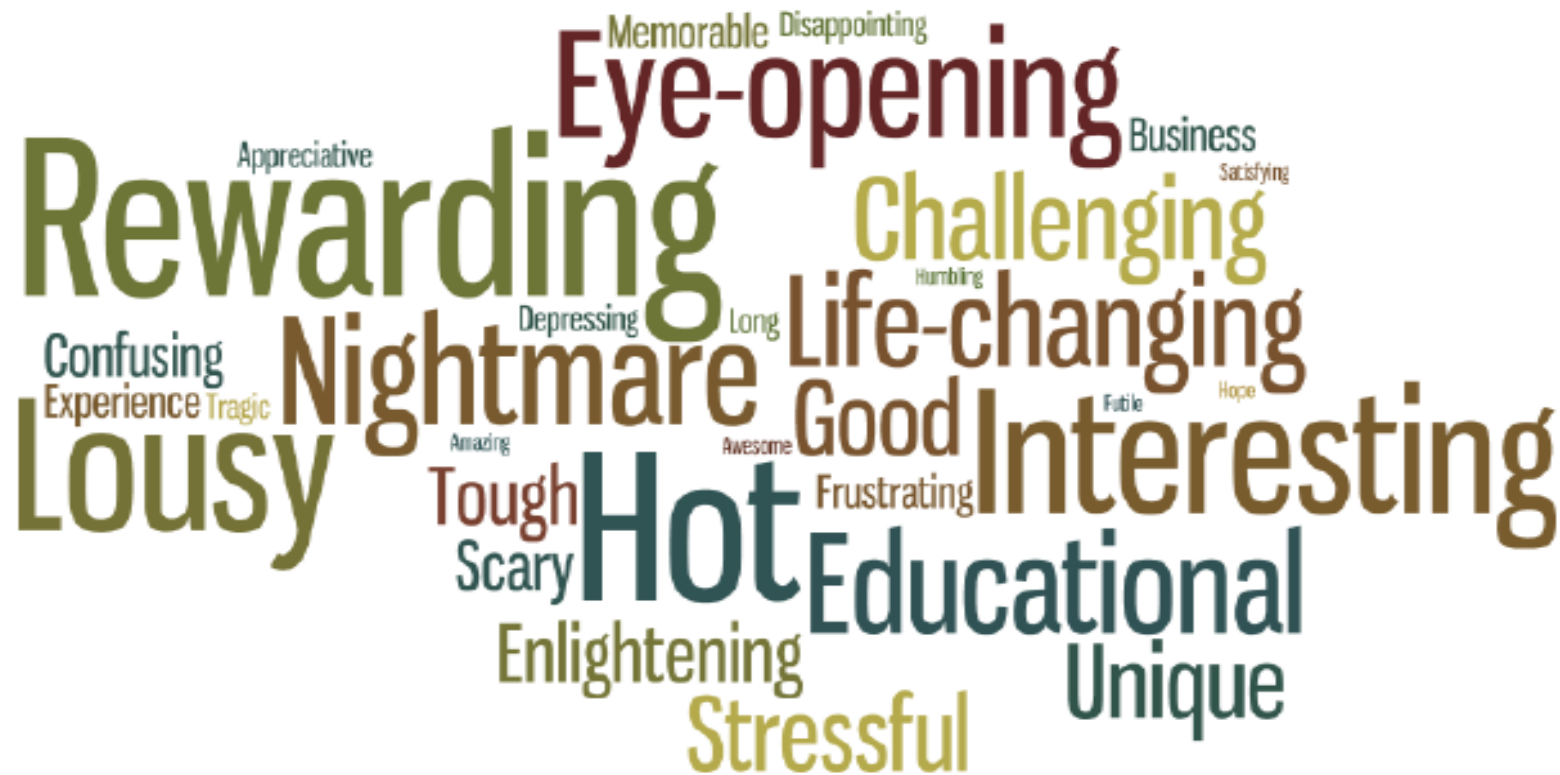


- Women 11% of Iraq/Afghanistan (I/A) service members.
- ~300,000 women have served in I/A in last decade.
- ↑ racial mix- relative to men (45% nonwhite vs 28%).
- Female and Reserve/National Guard(RNG) among fastest growing Veteran populations.
- RNG have unique stressors and ↑ rates of mental health concerns.

Boyd, M.A., Bradshaw, W., & Robinson, M. (2013). Mental Health Issues of Women Deployed to Iraq and Afghanistan. *Archives of Psychiatric Nursing*, 27(1), 10-22.



Iraq/Afghanistan Veterans' Experiences



Notes: A total of 262 of 336 Iraq and Afghanistan veterans volunteered 304 words. Veterans who served in both countries could give a word to describe each experience.

PEW RESEARCH CENTER V/16|



Invincible Combatants





Invincible Combatants





Health Disparities



Among Military Members and Veterans

- ↑ Risk factors that influence health
- ↑ Morbidity and mortality
- ↑ Barriers to care

The health domains of vulnerable populations:
physical, psychological, social



Military Women in Combat Locations



- Women are seeing more combat.
Since 1990, ~25% of women report combat experiences relative to 7% of those serving previously.
- Women also at risk of sexual violence.

<http://www.pewsocialtrends.org/2011/12/22/women-in-the-u-s-military-growing-share-distinctive-profile>

Sadler AG, Booth BM, Torner JC, Mengeling MA. Sexual Assault in the US Military: A Comparison of Risk in Deployed and Non-Deployed Locations Among OEF/OIF Active Component and Reserve/National Guard Servicewomen, *American Journal of Industrial Medicine*, in press.



More Troops Surviving Combat Wounds



Percentage of servicemembers surviving combat injuries continues to increase:

- 90% in Iraq/Afghanistan survive
- 72% in Vietnam survived
- 63% in WWII survived

Source: Pew Research Center
analysis of Military Casualty
Information, Department of Defense
Personnel & Procurement Statistics



Female Casualties Recent Operations



	Army	Navy	Marine Corps	Air Force	Total
Wounded in Action	873	12	70	63	1,033
Deaths	125	15	10	14	166

Source: Defense Manpower Data Center (DMDC) Defense Casualty Analysis System.



Mental Health Consequences of War



Women experience complex mental health consequences of deployment(s).

- PTSD the leading mental health condition
- Substance abuse /Binge drinking
- Depression

Tanielian, T. & Jaycox, L. (2008). Invisible wounds of war: Psychological and cognitive injuries, their consequences, and services to assist recovery. Santa Monica, CA: Rand Corporation.

Cucciare MA, Sadler AG, Mengeling MA, Torner JC, Curran GM, Han X, Booth BM. Associations between Deployment, Military Rank, and Binge Drinking in Active Duty and Reserve/National Guard US Servicewomen. *Drug and Alcohol Dependence*, 2015, Aug 1; 153: 37-42.



VA Research of Women in War



Health VIEWS Study:

10,000 Women Who Served in the Vietnam War (VN)

- Women VN era relative to other American women had ↓ risk of death from:
 - All causes combined -
 - Diabetes, Heart disease, Central nervous system
- Nurses who served in VN compared with nurses served only in US
 - 2x risk of death from pancreatic cancer
 - 5x the risk of brain cancer
- Women serving in VN or near VN had ↑ odds of PTSD relative to peers in US service associated with wartime exposures
 - including sexual discrimination or harassment
 - job performance pressures



VA Healthcare Access



Returning Servicemembers (OEF/OIF/OND) Have Enhanced Eligibility for VA Health Care:

Veterans who served in a theater of combat operations after November 11, 1998 are eligible for an extended period of eligibility for health care for 5 years post discharge.

https://www.va.gov/healthbenefits/apply/returning_servicemembers.asp

Additional information is available at the nearest [VA medical facility](#).

Veterans can also call VA toll-free at 877-222-VETS (8387).



Post-deployment Mental Health



Mental Health Care Engagement

Approximately half of OEF/OIF/OND service men and women DO NOT seek needed post-deployment mental health care either in VA or their community.

Seal, K. H., Maguen, S., Cohen, B., Gima, K. S., Metzler, T. J., Ren, L., & Marmar, C. R. (2010). VA mental health services utilization in Iraq and Afghanistan veterans in the first year of receiving new mental health diagnoses. *Journal of Traumatic Stress*, 23, 5–16.

Tanielian, T., & Jaycox, L. (2008). *Invisible wounds of war: Psychological and cognitive injuries, their consequences, and services to assist recovery*. Santa Monica, CA: Rand Corp.



New Research in Deployment Health





New VA Deployment Health



- **Deployment research has been a high priority of VA research.**
- **54 recent/current studies in process.**

<https://www.hsrd.research.va.gov/research/search.cfm>



New Research For Women Warriors



Women Veterans Cohort Studies

- Haskell SG, Mattocks K, Goulet J, Krebs E, Skanderson M, Leslie D, Justice A, Yano E, Brandt C.

The Burden of Illness in the first year home: Do Male and Female VA Users Differ in Health Conditions and Healthcare Utilization?"

Women's Health Issues. 2011 Jan-Feb: 21(1): 92-7

- Haskell SG, Ning Y, Krebs E, Goulet J, Mattocks K, Kerns R, Brandt C.
- Prevalence of Painful Musculoskeletal Conditions in Female and Male Veterans in Seven Years after Return from Deployment in Operation Enduring Freedom/Operation Iraqi Freedom.***

Clin J Pain 2012 Feb: 28(2) 163-7.



Reproductive health:

- Impact of sexual assault and combat-related trauma on Fertility (PI: Ginny Ryan)
- Urogenital Symptoms, Depression & PTSD in OEF/OIF Women Veterans (PI: Cate Bradley)

Ryan GL, Mengeling MA, Booth BM, Torner JC, Syrop CH, Sadler AG. Voluntary and Involuntary Childlessness in Female Veterans – Associations with Sexual Assault. *Fertility and Sterility*, August 2014, 102(2):539-547.

Bradley CS, Nygaard I, Torner JC, Hillis S, Sadler AG. Longitudinal Associations between Mental Health Conditions and Overactive Bladder in Women Veterans. *American Journal of Obstetrics & Gynecology*, 2017 Jun 20 [Epub ahead of print].



New Research For Women Warriors



Pregnancy/Next Generation

- Patterns and Experiences of VA **Maternity Care** Coordinator for Women Veterans (PI: Mattocks)
- **Pregnancy Outcomes** of Veterans (PI Phibbs)
- A Quality Improvement Program to Improve **Perinatal Mental Health Care** for Women Veterans (Lead: Jodie Katon)





New Research For Women Warriors



Technology for Expanded Access Responding to Veteran Preferences

- **Telemedicine Outreach** for PTSD in Small Rural CBOCs (PI: Fortney)
- PE Coach - Prolonged Exposure Therapy
Mobile APP (PI: Reger)
- Evaluation of **Web-based CBT** for Women Veterans with PTSD (CDA PI: Lehavot)
- **Interventions Online** to Facilitate Post-War Access of Reserve and National Guard Servicewomen (PI: Sadler)



New Research For Women Warriors



Focus on Access: Rural/CHOICE

- Developing Measures to Evaluate Network Adequacy for VA Community Care (Co-PI: [Mengeling & Mattocks](#))
- Rural Veterans' Access to VA and non-VA Health Care Providers: Current Conditions and Future Scenarios ([ORH PI: Mengeling](#))
- Identification of Reoccurring and Systematic Issues of Choice Implementation among Community Healthcare Providers ([PI: Mengeling](#))





New Research For Women Warriors



Veteran-centered care engagement

- Online and Shared Decision-Making Interventions to Engage Service Men and Women in Post-Deployment Mental Health Care (PI: Sadler).
- Partnered research, e.g. Veteran consumers, VA providers, VA Central Office
- Women's PBRN





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wore
these.

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Acknowledgments



- **VHA Office of Research & Development**
 - VHA Health Services Research & Development
 - Women's Health Research Network (SDR 10-012)
 - Women Veterans Healthcare CREATE
 - VHA Quality Enhancement Research Initiative
 - EMPOWER QUERI Program (QUE 15-272)
- **VHA Women's Health Services**
 - Women's Health Evaluation Initiative (WHEI)
- **VHA Office of Mental Health & Suicide Prevention**
- **VHA Women's Health Providers and Women Veteran Program Managers (WVPMs)**
- **And the women who serve or have served**



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