

**The State of Women Veterans' Health Research: Results of a Systematic Literature Review  
Evidence Tables**

<b>Table 2a. Evidence Table of Health and Performance of Military/VA Women: <i>Sexual Assault and PTSD</i></b>						
<b>Author</b>	<b>Women Veteran Specific?</b>	<b>Sample characteristics</b>	<b>Sample size [N]</b>	<b>Design</b>	<b>Main measures</b>	<b>Description</b>
Coyle, 1996 (36)	Yes	Women veterans receiving care in the Baltimore VAMC during the last 6 months of 1994	429 women veterans	Descriptive Study	Demographic characteristics; prevalence of different forms of abuse (physical abuse, sexual abuse, rape); time when abuse occurred	Evaluated the prevalence of physical and sexual abuse experiences in a sample of veteran women. 68% of veteran users reported at least one form of victimization; and abuse was associated with lower age at the time of the survey, history of separation or divorce, higher education, and being enlisted rather than being an officer. One third of women reported that their abuse occurred on active duty only and 58% reported that at least some occurred while on active duty.
Hourani, 2003 (28)	Yes	1998 Health Status of Military Women and Men in the Total Force; 1995 Perception of Wellness and Readiness Assessment	15,000 active military personnel; 6800 women	Observ. Study- Assess risk or prognosis	Exposure to trauma; medical conditions; health care use; perceived physical health status; depressive symptomatology; perceived quality of life;	Evaluated the prevalence of lifetime exposure to violence, natural disaster or major accidents in US military personnel. There were high levels of lifetime exposure to traumatic events (65% of sample). Men were more likely to have witnessed or survived violence or a major accident. The most prevalent trauma for women was witnessing a natural disaster. Male survivors were more than twice as likely to have two or more physical health problems and women were more than twice as likely to have two or more mental health problems.

**The State of Women Veterans' Health Research: Results of a Systematic Literature Review  
Evidence Tables**

<b>Table 2a. Evidence Table of Health and Performance of Military/VA Women: <i>Sexual Assault and PTSD</i></b>						
<b>Author</b>	<b>Women Veteran Specific?</b>	<b>Sample characteristics</b>	<b>Sample size [N]</b>	<b>Design</b>	<b>Main measures</b>	<b>Description</b>
Zatzick, 1997 (77)	Yes	Nationally representative sample from the National Vietnam Veterans Readjustment Study (NVVRS), late 1980s	432 Vietnam theater veterans (most nurses)	Observ. Study- Assess risk or prognosis	PTSD diagnosis; current medical or psychiatric co-morbidity; bed days; role functioning; subjective well-being; self-reported physical health status; current physical functioning; perpetration of violent acts	Evaluated the effect of current PTSD on functioning. Veterans with PTSD were more likely to have poorer functioning in all domains except perpetration of violence. After adjusting for demographics and co-morbidities, PTSD was associated with increased odds of bed days, poorer physical health and currently not working.
Read, 1997 (44)	Yes	Sample of women veterans who visited a women's health clinic at one VA Medical Center or outpatient clinic between 10/94 and 11/95	108 veterans or eligible non-veterans	Observ. Study- Assess risk or prognosis	Demographic characteristics included psychiatric and medical treatment reports; trauma screen; lifestyle questionnaire	Evaluated the utility of a brief screening measure to detect victimization and psychological factors and the relationship between these factors and medical care use. Did not report specific characteristics of the screening instruments. Found that 69% of the subjects had at least one lifetime trauma experience with 40% reporting a history of sexual harassment. Psychological symptoms were prevalent in this sample and women with gynecological problems were more likely to be victims of sexual assault and childhood assault. Women with substance use symptoms and eating disorders reported more traumatic experiences.

**The State of Women Veterans' Health Research: Results of a Systematic Literature Review  
Evidence Tables**

<b>Table 2a. Evidence Table of Health and Performance of Military/VA Women: <i>Sexual Assault and PTSD</i></b>						
<b>Author</b>	<b>Women Veteran Specific?</b>	<b>Sample characteristics</b>	<b>Sample size [N]</b>	<b>Design</b>	<b>Main measures</b>	<b>Description</b>
Ouimette, 1996 (63)	Yes	Sample of women who served overseas during the Vietnam era from the New England area	52 women veterans	Observ. Study- Assess risk or prognosis	PTSD measures; lifetime substance abuse disorders; psychiatric symptoms both Axis I and II; life stressors; traumatic events and their impact; war-time exposures; dissociative experiences; alcohol screening	Evaluated trauma characteristics and symptoms in women with alcohol abuse, with PTSD or without PTSD. Women with PTSD and alcohol abuse had more childhood sexual abuse and war-time sexual victimization, and had more PTSD, dissociation and borderline personality traits. The groups did not differ on other childhood trauma variables, adult physical assault or traditional wartime stressor exposure.
Kang, 2003 (9)	No	Population-based stratified sample of Gulf War veterans and non-Gulf War veterans, 1995-1997	11,441 Gulf War and 9,476 non-Gulf War veterans; 2123 Gulf War women and 2076 non-Gulf War women and	Observ. Study – Assess risk and prognosis	Symptom inventory for prevalence of somatic and psychological symptoms; PTSD screen; stressor severity based on combat exposure	Evaluates the prevalence of PTSD and chronic fatigue syndrome (CFS) in Gulf War and non-Gulf War veterans, and evaluates the relations between deployment-related stress and the risk of PTSD or CFS. In bivariate analysis, veterans who were female, older, non-White, enlisted and in the Army and National Guard were more likely to meet criteria for PTSD. Veterans with CFS-like illness were more likely to be younger, single, enlisted, in the Army or Marines and in the reserves. In regression analysis, Gulf veterans were 3 times as likely to have PTSD and 4.8 times as likely to have CFS.

**The State of Women Veterans' Health Research: Results of a Systematic Literature Review  
Evidence Tables**

<b>Table 2a. Evidence Table of Health and Performance of Military/VA Women: <i>Sexual Assault and PTSD</i></b>						
<b>Author</b>	<b>Women Veteran Specific?</b>	<b>Sample characteristics</b>	<b>Sample size [N]</b>	<b>Design</b>	<b>Main measures</b>	<b>Description</b>
Ouimette, 2004 (78)	Yes	Single VA	134 male (52) and female (82) veterans	Observ. Study- Assess risk or prognosis	PTSD symptoms severity and diagnoses; other psychopathology; health conditions; HRQOL; health risk behaviors; demographics	Evaluated a sample of male and female patients from the general medical and women's health clinics at Palo Alto. Found that patients with PTSD were more likely to have circulatory and musculoskeletal disorders and had poorer health-related quality of life.
Wagner, 2000 (10)	Yes - compares men and women	Sample of Gulf War army veterans from the Ft. Devens ODS Reunion Survey, a longitudinal study of 2949 US Army active, reserve and national guard soldiers deployed to the Gulf 1990-1991	Time 2: 2108 men and 193 women	Observ. Study – Assess risk and prognosis	Demographics; PTSD symptomatology; combat exposure; psychological symptoms; health symptoms	Evaluates the relationship between PTSD symptoms in men and women veterans immediately upon returning from the Gulf War and 18-24 months later. For both men and women, PTSD symptomatology at initial assessment was predictive of self-reported health problems over time, even after controlling for the effects of combat exposure. Women veterans reported significantly more health problems though gender did not influence the impact of PTSD symptoms on health problems.

**The State of Women Veterans' Health Research: Results of a Systematic Literature Review  
Evidence Tables**

<b>Table 2a. Evidence Table of Health and Performance of Military/VA Women: <i>Sexual Assault and PTSD</i></b>						
<b>Author</b>	<b>Women Veteran Specific?</b>	<b>Sample characteristics</b>	<b>Sample size [N]</b>	<b>Design</b>	<b>Main measures</b>	<b>Description</b>
Kimerling, 2000 (68)	Yes	Convenience sample of Vietnam era women veterans from the New England area	52 women veterans	Observ. Study – Assess risk and prognosis	PTSD and other psychiatric assessment; wartime stress; life stress; demographic questionnaire; medical history	Evaluated the impact of PTSD symptoms on the relationship between traumatic exposure and subsequent health problems. 86.8% of women reported at least one traumatic event during active military duty; 12 met full criteria for current PTSD. PTSD symptoms were associated with reports of greater physical health impairment.
Taft, 1999 (33)	Yes	Sample from the National Vietnam Veterans Readjustment Study (NVVRS), late 1980s	1200 male and 432 female Vietnam theater veterans	Observ. Study- Assess risk or prognosis	Combat exposure; hardiness; social support; PTSD; physical health conditions; functional health status; age and education	Evaluated the associations of combat exposure and PTSD with physical health conditions, hardiness, social support and functional health status. For male and female Vietnam veterans, combat exposure was associated with PTSD; and PTSD was associated with more physical health conditions and poorer functional status.
Butterfield, 2000 (79)	Yes	Sample of women referred for outpatient mental health services at one VA Medical Center's Women's Health Clinic	90 women veterans	Observ. Study- Assess risk or prognosis	Trauma questionnaires; PTSD symptomatology; hostility; depression; health status (SF-36)	Evaluated the relationship between hostility and functional health status in patients with and without PTSD. Women with PTSD had higher hostility, cynicism, hostile affect and depression. Minority status was significantly related to increased total hostility, cynicism and aggressive responding. In regression analyses, hostility was significantly associated with poorer health functioning in women with PTSD.

**The State of Women Veterans' Health Research: Results of a Systematic Literature Review  
Evidence Tables**

<b>Table 2a. Evidence Table of Health and Performance of Military/VA Women: <i>Sexual Assault and PTSD</i></b>						
<b>Author</b>	<b>Women Veteran Specific?</b>	<b>Sample characteristics</b>	<b>Sample size [N]</b>	<b>Design</b>	<b>Main measures</b>	<b>Description</b>
DeRoma, 2003 (45)	Yes	Sample of women veterans scheduled in the gynecological clinic at the Biloxi VA Hospital, 1994	336 women veterans	All Other Observational	Demographic characteristics; perceived social support; perceived stress; depression; anxiety; history of childhood, military or civilian assault or harassment	Evaluated the prevalence of sexual victimization and its relationship to psychological variables. 74% of the cohort reported lifetime sexual harassment and 39% lifetime sexual assault. 8.7% and 9.3%, respectively, experienced military or military and civilian sexual assault. Those who experienced civilian or military and civilian assault had lower scores for perceived social support, and higher depression and anxiety scores.
Sadler, 2000 (48)	Yes	National sample of women veterans, contacted via telephone survey	537 Vietnam and subsequent eras	Observ. Study- Assess risk or prognosis	Physical or sexual assault history; Health status (SF-36); demographic characteristics	Telephone survey of women veterans that found that women who had been sexually or physically assaulted in the military had more chronic health problems, lower health-related quality of life, took more medications for emotional problems, were less likely to complete college and were poorer than women who had not been assaulted.

**The State of Women Veterans' Health Research: Results of a Systematic Literature Review  
Evidence Tables**

<b>Table 2a. Evidence Table of Health and Performance of Military/VA Women: <i>Sexual Assault and PTSD</i></b>						
<b>Author</b>	<b>Women Veteran Specific?</b>	<b>Sample characteristics</b>	<b>Sample size [N]</b>	<b>Design</b>	<b>Main measures</b>	<b>Description</b>
Fontana, 2002 (80)	Yes	Convenience sample of women veterans admitted to the Women's Stress Disorder Treatment Teams at four VA medical centers between 7/98 and 6/00; comparison sample of male veterans admitted for specialized outpatient treatment from 1/00 through 8/01	224 women veterans; 195 male veterans	All Other Observational	Demographic characteristics; exposure to military trauma; personality orientation; PTSD symptoms; clinical status including workdays, quality of life, functioning; therapeutic alliance; comfort with VA; satisfaction with treatment	Evaluated outcomes for women entering specialized stress disorder treatment teams. Women in the program demonstrated significant improvement in PTSD, violence, medical conditions, overall adjustment, quality of life and social functioning. Women with a history of recent substance abuse improved more as did those who were more highly committed to the program. Participation in the program did not increase women's comfort with VA. Clinical outcomes were similar when compared to the male control group, though women were more satisfied with their treatment.
Frayne, 2004 (81)	Yes	National sample	30, 865 women veterans enrollees	Observ. Study- Assess risk or prognosis	PTSD or depression diagnosis; medical conditions; physical health status	Women with PTSD had more medical conditions and worse physical health status than women with depression alone or neither diagnosis.

**The State of Women Veterans' Health Research: Results of a Systematic Literature Review  
Evidence Tables**

<b>Table 2a. Evidence Table of Health and Performance of Military/VA Women: <i>Sexual Assault and PTSD</i></b>						
<b>Author</b>	<b>Women Veteran Specific?</b>	<b>Sample characteristics</b>	<b>Sample size [N]</b>	<b>Design</b>	<b>Main measures</b>	<b>Description</b>
Asmundson, 2004 (82)	Yes	National sample of women veterans who used general medical clinics in the VA Healthcare System between 1998 and 1999	221 women veterans	Observ. Study- Assess risk or prognosis	Demographic characteristics; current pain assessment; military combat and sexual assault; physical and mental health (SF-36); childhood trauma; PTSD symptomatology	Evaluated the association between pain and PTSD symptoms. Subjects meeting criteria for PTSD were significantly more likely to have bodily pain compared to those without PTSD. PTSD was predicted by higher bodily pain scores, other pain questions, military and non-military sexual assault and childhood trauma.
Dobie, 2004 (83)	Yes	Sample of women who received care at the VA Puget Sound Health Care System between 10/96 and 1/98	266 women veterans	Observ. Study- Assess risk or prognosis	Demographic and clinical characteristics; PTSD symptoms; other psychiatric disorders; alcohol and drug abuse; health-related quality of life	Evaluated the health problems and functional impairment associated with screening positive for PTSD. 21% of subjects screened positive for current PTSD and they reported more psychiatric problems, substance abuse, lifetime exposure to domestic violence and physical health problems. In regression analyses, higher PTSD symptomatology was associated with lower health functioning and health-related quality of life.

**The State of Women Veterans' Health Research: Results of a Systematic Literature Review  
Evidence Tables**

<b>Table 2a. Evidence Table of Health and Performance of Military/VA Women: <i>Sexual Assault and PTSD</i></b>						
<b>Author</b>	<b>Women Veteran Specific?</b>	<b>Sample characteristics</b>	<b>Sample size [N]</b>	<b>Design</b>	<b>Main measures</b>	<b>Description</b>
Stein, 2004 (84)	Yes	Sample of women seen in the VA San Diego Healthcare System primary care clinic in 1998	221 women veterans	Observ. Study- Assess risk or prognosis	Traumatic exposure; somatization measures; health anxiety and illness attitudes	Evaluated the association between sexual assault history and measures of somatic symptoms and illness attitudes. 44.3% of the subjects reported experiencing sexual assault. Regression analyses demonstrated a significant difference in physical symptoms between women with and without a history of sexual assault and women with a history of sexual assault were more bothered by 9 of 10 symptoms. Their somatization scores were also significantly higher as were their health anxiety. Both somatization and anxiety were predictors of sick days and healthcare use.
Wolfe, 1994 (72)	Yes	Sample of Vietnam theater women veterans, non-treatment seeking	109 women veterans	Observ. Study – Assess risk and prognosis	Wartime stress, PTSD symptoms; demographic information; medical history and status	Evaluated the association of PTSD and wartime exposure to current perceived health. Higher PTSD scores were associated with poorer health on all measures of health status. War-zone exposure predicted poorer current health and decline in health during the Vietnam War.

**The State of Women Veterans' Health Research: Results of a Systematic Literature Review  
Evidence Tables**

<b>Table 2a. Evidence Table of Health and Performance of Military/VA Women: <i>Sexual Assault and PTSD</i></b>						
<b>Author</b>	<b>Women Veteran Specific?</b>	<b>Sample characteristics</b>	<b>Sample size [N]</b>	<b>Design</b>	<b>Main measures</b>	<b>Description</b>
Suris, 2004 (55)	Yes	Women veterans using a medical and/or mental health clinic in the VA North Texas Health Care System, interviewed between 1997 and 2000	270 women veterans	Observ. Study – Assess risk and prognosis	Sexual harassment, sexual assault experiences; PTSD symptoms, utilization of VA care, health care costs	Evaluates the impact of military, civilian adult and childhood sexual assault on the likelihood of developing PTSD; and the association of military sexual assault to service utilization and health care costs. Women with a history of sexual assault were 5 times more likely to have PTSD and military sexual assault was associated with a >9-times increased risk of PTSD. A history of sexual assault was associated with higher utilization and cost of care, but this was primarily because of higher utilization by women with histories of civilian sexual trauma.
Forneris, 2004 (85)	Yes	Convenience sample of women veterans seen for outpatient primary health care or specialty service in gynecology or psychiatry at the Women Veterans Comprehensive Health Center in Durham, NC	92 women veterans	Observ. Study- Assess risk or prognosis	Demographic characteristics; prescribed medications; mental disorders; health status; history of trauma; trauma questionnaire; PTSD symptoms; physiological measures included height, weight blood pressure, heart rate and temperature.	Evaluated baseline physiological arousal in women veterans with PTSD. Women with PTSD had significantly higher heart rates than women without PTSD, even when controlling for use of psychotropic medications.

**The State of Women Veterans' Health Research: Results of a Systematic Literature Review  
Evidence Tables**

<b>Table 2a. Evidence Table of Health and Performance of Military/VA Women: <i>Sexual Assault and PTSD</i></b>						
<b>Author</b>	<b>Women Veteran Specific?</b>	<b>Sample characteristics</b>	<b>Sample size [N]</b>	<b>Design</b>	<b>Main measures</b>	<b>Description</b>
Skinner, 2000 (56)	Yes	National sample of female veterans with at least one ambulatory visit between 7/94 and 7/95.	3632 women veterans	Observ. Study- Assess risk or prognosis	Military sexual harassment and sexual assault, sociodemographic characteristics, military experiences, health status (SF-36)	Evaluates the prevalence of military sexual harassment or assault and finds that 55% of the sample had experienced sexual harassment and 23% military sexual assault. Women with a history of harassment or assault scored worse on every scale of the SF-36.