

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

<b>Table 4a. Evidence Table of Psychiatric: PTSD</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, 1998 (37)	Yes	Sample of women treated in a VA clinical program for women with stress disorders (4 sites) between 5/94 and 1/97	327	Observ. Study- Asses risk or prognosis	Variables related to social support (education, age entered military, ethnicity, service era, premilitary sexual stress) and exposure to stress - particularly duty-related stress or sexual stress experienced during military service	63% reported physical sexual harassment during military service and 43% reported rape or attempted rape. Duty-related and sexual stress were associated with development of PTSD but sexual stress was 4 times as influential as duty-related stress.
Wolfe, 1992 (58)	Yes	Cohort of female Vietnam veterans not seeking treatment for PTSD	76 Vietnam veterans	Descriptive Study	PTSD symptomatology; SCL-90-R (psychological symptoms); change in symptoms of PTSD	Evaluated the status of PTSD symptoms in female Vietnam veterans after the start of Operation Desert Storm. Women with PTSD symptoms prior to the start of the Gulf War had greater increases in reexperiencing, avoidance/numbing and hyperarousal. They also had higher levels of somatization, obsessive-compulsive activities and hostility.

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

<b>Table 4a. Evidence Table of Psychiatric: PTSD</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, 1997 (59)	Yes	National Vietnam Veterans Readjustment study (NVVRS) – national samples of Vietnam theater and era veterans	433 theater and 300 Vietnam era veterans	Observ. Study- Asses risk or prognosis	Premilitary risk factors and traumas including family stability, antisocial behaviors, marital status and education; role or traumatic exposure while in military (including sexual and war trauma); homecoming reception; post-military trauma; PTSD	Evaluated roles of war and sexual trauma in the development of chronic PTSD in female Vietnam veterans. For both theater and era veterans, war trauma and sexual trauma made approximately equal contributions to the likelihood of developing PTSD and were responsible for approximately 25% of the PTSD risk. Low support at homecoming was even more important in the development of PTSD.
Wing, 1998 (42)	Yes	Women veterans in northeastern Oklahoma being treated in VA mental health clinics for PTSD resulting from service-related sexual abuse; 8/97 through 4/98	16	Qualitative Research	Open-ended interview to determine factors contributing to participants' trauma, decision to seek assistance and recovery	Sexually abused women veterans gained an identity that was autonomous and free of unexplained fear through the social process of "transforming self", a five-stage process that includes reacting to triggers, seeking validation, sorting through confusion, becoming intentional and affirming self.

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

<b>Table 4a. Evidence Table of Psychiatric: <i>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>
Murdoch, 2003 (125)	No	Random sample of all veterans filing PTSD disability claims between 1/1/94 and 12/31/98	2700 men and 2700 women veterans	Observ. Study- Asses risk or prognosis	Race/ethnicity; service connection for PTSD; PTSD symptomatology; work/role/social functioning; physical functioning; combat exposure; military sexual trauma; other trauma	Evaluated whether there are racial discrepancies in the granting of service connection for PTSD. 55% of black respondents were female compared with 49% of all other respondents. Blacks were significantly less likely to be service connected for PTSD (46% vs 65.2% for all others) but about as likely to be service connected for other disorders. Controlling for gender, blacks had similar combat exposure scores but were less likely to have had a combat injury or in-service sexual assault. They did not differ in terms of PTSD symptomatology. There appears to be a disparity in service-connection for PTSD for blacks.
Mohanakrishnan, 2003 (145)	No	Sample of men and women veterans with PTSD and control group without PTSD	12 male veterans and 2 female veterans with PTSD; 6 male controls and 1 non-veteran female control	Observ. Study- Asses risk or prognosis	Single-voxel proton MR spectra from the hippocampal region bilaterally	Evaluated whether there is laterality of hippocampal dysfunction in PTSD. PTSD subjects demonstrated a decrease in hippocampal NAA/creatine ratio significantly higher on the left than the right for the entire study group.

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

<b>Table 4a. Evidence Table of Psychiatric: PTSD</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	Women from a nationally representative sample of Vietnam veterans - the National Vietnam Veterans Readjustment Survey (NVVRS, 1988)	432 Vietnam theater veterans (most nurses)	Observ. Study- Asses risk or prognosis	PTSD diagnosis; current medical or psychiatric comorbidity; bed days; role functioning; subjective well-being; self-reported physical health status; current physical functioning; perpetration of violent acts	Veterans with PTSD were more likely to have poorer functioning in all domains except perpetration of violence. After adjusting for demographics and comorbidities, PTSD was associated with increased odds of bed days, poorer physical health and currently not working.
Metzger, 2002 (146)	Yes	Paid volunteers from the Women's Vietnam War Memorial database who met criteria for PTSD and control group without PTSD but with similar stress exposures	29 Vietnam nurses with PTSD; 38 without PTSD	All Other Observational	Structure Clinical Interview for DSM-IV (SCID) for mental disorders; symptoms; Impact of Event Scale; event-related brain potentials	Evaluated whether nurses with PTSD had event-related brain potential abnormalities to auditory stimuli. Findings were not consistent with previous studies in PTSD. Women Vietnam nurse veterans had significantly greater target P3b amplitudes and P2 amplitude/intensity slopes. It was not clear whether these findings represent gender-specific, trauma-specific or sample-specific differences when compared with previous research.

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

<b>Table 4a. Evidence Table of Psychiatric: <i>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>
Carson, 2000 (60)	Yes	Sample of medication-free female Vietnam nurse veterans with and without a diagnosis of PTSD related to military service.	17 with current PTSD; 21 without a history of PTSD	Observ. Study- Asses risk or prognosis	PTSD scale and psychiatric assessment; demographics; physiologic measures	Evaluated the effect of exposure to death and injury in women with and without PTSD. Women listened to scripts describing traumatic exposures. Both groups experienced physiologic responses but the response was significantly greater in the PTSD group. Emotional responses were not different between the two groups.
Wolfe, 2000 (61)	Yes	Vietnam era women veterans who had experienced Vietnam war-zone trauma	30 military veterans and 6 service organization volunteers	Descriptive Study	Demographics, psychometric tests (Women's Wartime Exposure Scale-Revised); PTSD symptomatology; physiologic measures	Evaluated responses of women veterans to audiovisual material representative of women's wartime experiences. Women with current PTSD demonstrated more psychological symptoms and greater psychophysiological responses to the AV materials than women without PTSD.
Wing, 2000 (147)	Yes	Two student nurse groups, 1998	N/A	Qualitative Research	N/A	Describes nursing student projects to create guides for patients and primary care clinicians caring for women with PTSD.

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

<b>Table 4a. Evidence Table of Psychiatric: PTSD</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 and 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 PTSD and 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.
Schnurr, 2003 (148)	No, but includes some male-female comparisons	Samples of patients included in the National Vietnam Veterans Readjustment Survey (NVVRS) and the Hawaii Vietnam Veterans Project	530 male and female Vietnam veterans (small number of women but data not provided on total)	Observ. Study- Assess risk and prognosis	PTSD diagnosis, age, PTSD chronicity	Described the chronicity of PTSD. Women did not differ from men in terms of lifetime prevalence of PTSD. There was a trend toward women being more likely to have late onset of PTSD

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

<b>Table 4a. Evidence Table of Psychiatric: PTSD</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>
Butterfield, 2000 (79)	Yes	Sample of women referred for outpatient mental health services at a one VA Medical Center's Women's Health Clinic	90 women veterans	Observ. Study - Assess risk and 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.
Gurvits, 2002 (69)	Yes	Sample of Vietnam theater nurses, unmedicated, with and without PTSD	32 Vietnam nurses with current PTSD; 50 without PTSD	Observ. Study - Assess risk and prognosis	PTSD scales; demographics; alcohol history; neurological soft signs	Compared PTSD and non-PTSD nurses on the presence of eight neurological soft signs but found no differences between the groups.
Dobie, 2002 (107)	Yes	Sample of all women who received care at the VA Puget Sound Health Care System between 10/1/96 and 1/1/99	282 women veterans	All Other Observational	PTSD checklist; clinician administered PTSD scale; demographic characteristics	Evaluated the validity of the self-administered PTSD checklist in screening for PTSD. The area under the ROC Was 0.86. A PCL score of 38 optimized the performance as a screening test with sensitivity of 0.79 and specificity of 0.79.

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

<b>Table 4a. Evidence Table of Psychiatric: <i>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>
Rauch, 2003 (149)	Yes	Sample of women veterans exposed to emotional trauma while in service as combat nurses during the Vietnam War	18 women	Observ. Study- Assess risk and prognosis	Current PTSD; MRI data	Evaluated whether patients with PTSD had reduced volumes of the pregenual anterior cingulate cortex or reduced or increased volume of the subcallosal cortex and found that the PTSD group had selectively decreased pregenual ACC and SC volumes, suggesting specific regional cortical pathology in PTSD.
Wolfe, 1998 (50)	Yes	Cohort of women deployed from Ft. Devens to serve in the Persian Gulf War, interviewed within 5 days of return to US (1991) and again from 1993-1994	160 women, Persian Gulf veterans	Observ. Study – Assess risk and prognosis	Persian Gulf combat exposure, other deployment stressors, coping style, demographics, sexual harassment or assault, PTSD symptomatology	Evaluate impact of sexual harassment and assault on PTSD symptoms and compare to impact of other stressors. 7.3% experienced sexual assault, 33% physical sexual harassment, 66% verbal sexual harassment and 30% no sexual harassment. Women who were sexually assaulted were at increased risk for greater PTSD symptomatology than women who were harassed.
Wing, 1999 (51)	Yes	Women with PTSD related to military sexual trauma	10 women	Qualitative Research	Understand about addiction in these traumatized patients – when it started, why the women used chemicals, how they recovered from addiction	Chemicals were used to “escape” bad memories and life problems but impaired coping mechanisms.

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

<b>Table 4a. Evidence Table of Psychiatric: PTSD</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.
Lang, 2003 (139)	Yes	Sample of women veterans from a San Diego VAMC primary care clinic in 1998	221 women veterans	Observ. Study- Assess risk and prognosis	Demographics, psychological and medical symptoms, exposure to traumatic stressors, health behaviors and health-related quality of life	72% reported some type of sexual trauma and 44% reported sexual assault. Sexual assault history was associated with increased substance use, risky sexual behaviors, less vigorous exercise and increased preventive healthcare. PTSD mediated the history of sexual assault and health behaviors.

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

<b>Table 4a. Evidence Table of Psychiatric: <i>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>
Frayne, 2004 (81)	Yes	National sample	30, 865 women veterans enrollees	Observ. Study- Assess risk and 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.
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 and 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.
David, 2004 (96)	Yes	Sample of female outpatient veterans with physical or sexual assault histories receiving mental health services at a VA hospital in the northwestern US	67 women veterans	Descriptive Study	Feelings of vulnerability, agoraphobic behaviors, desire for personal safety/self defense training	Evaluated perceptions of vulnerability and desire for self-defense training among traumatized women veterans. All subjects had been victims of physical or sexual attack and 86.6% had been assaulted while on active duty. More than ¾ of the sample were concerned about future assaults and 85% believed that formal training in personal safety/self defense would be moderately or very helpful in increasing their feeling of safety.

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

<b>Table 4a. Evidence Table of Psychiatric: PTSD</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>
Greenberg, 2004 (136)	Yes	Sample of women veterans receiving treatment in one of four specialized PTSD treatment programs, 7/98 – 6/00; national outpatient treatment files	224 women veterans; 149 women veterans at 1 <sup>st</sup> follow-up; 131 at 2 <sup>nd</sup> follow-up	All Other Observational	Sociodemographic characteristics; treatment process measures; clinical measures including PTSD symptoms, substance abuse, general psychiatric/physical health, violent behavior and employment; continuity of care and intensity of care	Evaluated the relationship of changes in health status to continuity of care in women entering a PTSD treatment program. There were few consistently significant associations between continuity of care and outcome measures in the full regression models thereby providing weak and inconsistent evidence of the benefits of continuity of care.
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 4a. Evidence Table of Psychiatric: PTSD</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>
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 and 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.
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 and 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 4a. Evidence Table of Psychiatric: PTSD</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>
Escalona, 2004 (150)	Yes	Sample of veteran and non-veteran women from a VA-based primary care women's clinic	264 women – 134 veterans, 130 non-veterans	Observ. Study – Assess risk and prognosis	Demographic characteristics; trauma history; PTSD symptoms; somatization; other psychiatric disorders	Evaluated the association of trauma, PTSD and somatization. 73.9% of subjects reported a self-experienced trauma. The lifetime prevalence rate of PTSD was 27.3% and of somatization was 19.3%. In regression analysis, PTSD was the only significant predictor of somatization with an OR of 3.09.
Norman, 1992 (66)	Yes	Sample of Vietnam nurses, interviewed between 11/83 and 12/85	50 Vietnam nurse veterans	Descriptive Study	Clinical jobs; off-duty experiences; social networks in Vietnam and post-Vietnam; PTSD symptoms	Describes responses to interviews evaluating the intensity of nurses' experiences and its relation to PTSD. Women with more intense Vietnam experiences had more intrusive thoughts after returning; and women with more poorly defined social networks after Vietnam had higher incidences of PTSD.
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 4a. Evidence Table of Psychiatric: <i>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.