Posttraumatic Stress Disorder Screening Status is Associated with Increased VA Medical and Surgical Utilization in Women

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BACKGROUND: Women with posttraumatic stress disorder (PTSD) report poor health, but associations with health care utilization are understudied.

OBJECTIVE: To determine associations between medical/surgical utilization and PTSD in female Veterans Affairs (VA) patients.

DESIGN: Prospective comparison of utilization rates between women screening positive or negative for PTSD on a mailed survey.

SUBJECTS: Women receiving care at an urban VA medical center between October 1996 and January 2000.

MEASUREMENTS: Survey responses, including a validated screen for PTSD (PCL-C), and VA utilization data through September 2002.

RESULTS: Two thousand five hundred and seventy-eight (2,578) women (78% of those eligible) completed the PCL-C; 858 (33%) of them screened positive for PTSD (PTSD+). In unadjusted models, PTSD+ women had higher rates of medical/surgical hospitalizations and surgical inpatient procedures. Among women ages 35 to 49, mean days hospitalized/100 patients/year was 43.4 (95% CI 26 to 61) for PTSD+ women versus 17.0 (16 to 18) for PTSD negative (PTSD-) women. More PTSD+ women underwent surgical procedures ($P < .001$). Mean annual outpatient visits were significantly higher among PTSD+ women, including: emergency department (ED) (1.1 [1.0 to 1.2] vs 0.6 [0.5 to 0.6]), primary care (3.2 [3.0 to 3.4] vs 2.2 [2.1 to 2.3]), medical/surgical subspecialists (2.1 [1.9 to 2.3] vs 1.5 [1.4 to 1.6]), ancillary services (4.1 [3.7 to 4.5] vs 2.4 [2.2 to 2.6]), and diagnostic tests (5.6 [5.1 to 6.1] vs 3.7 [3.4 to 4.0]). In multivariate models adjusted for demographics, smoking, service access, and medical comorbidities, PTSD+ women had greater likelihood of medical/surgical hospitalization (OR=1.37 [1.04 to 1.79]) and of being among

the top quartile of patients for visits to the ED, primary care, ancillary services, and diagnostic testing.

CONCLUSIONS: Female veterans who screen PTSD+ receive more VA medical/surgical services. Appropriateness of that care deserves further study.

KEY WORDS: mental health; survey research; utilization; veterans; women's health.

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Exposure to traumatic events such as physical assault, sexual assault, combat, or severe injury has negative long-term consequences for both physical and mental health.¹⁻⁶ Female veterans have particularly high rates of lifetime exposure to such events⁷⁻¹⁵ and are thereby susceptible to potentially disabling sequelae such as posttraumatic stress disorder (PTSD).¹⁶⁻¹⁸ Posttraumatic stress disorder has been associated with physical health problems¹⁹⁻²⁷ and increased medical utilization.²⁸⁻³¹ Indeed, PTSD may independently mediate some of the negative effects of trauma on physical health.³²⁻³⁵ Nonetheless, PTSD remains under-recognized in both civilian and military health care settings.³⁶⁻³⁸

We recently completed a longitudinal health survey among women seen for care in a large urban Veterans Affairs (VA) health system. In cross-sectional analyses of year 1 surveys, women who screened positive for PTSD had poorer self-reported health status in both physical and mental domains compared with women who screened negative.³⁹ In the present study, we examined the association between PTSD and inpatient and outpatient VA health care utilization among these women. Specifically, we tested whether women who screened positive for PTSD on a validated screening test had higher rates of subsequent medical and/or surgical utilization than women who screened negative for PTSD.

METHODS

Study Population

Female veterans who received care between October 1, 1996 and January 1, 2000 at VA Puget Sound Health Care System

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($N=3,308$) were mailed a Women's Health Survey (WHS) annually in 1998, 1999, and 2000. This report includes data from 2,578 eligible women who returned at least 1 survey with a completed screening test for PTSD. We only used data from each woman's first completed survey. Although detailed information on nonrespondents was not available for this expanded study population, previous analyses of the first year survey showed that, compared with nonrespondents, respondents were slightly older ($M=47.4$ vs 45.0), more likely to be white (72% vs 66%), and more likely to have ever been married (81% vs 77%).⁴⁰ The University of Washington Institutional Review Board approved the study.

Measures

Survey Instrument. The WHS was 15 pages long in the first year^{39,40} and briefer in subsequent years. Each year, the survey included questions about demographic characteristics, health behaviors, and mental health. The WHS also asked about height, weight, and specific health problems including hypertension, diabetes mellitus, stroke, hepatitis, thyroid disease, cancer, irritable bowel syndrome, and fibromyalgia.

PTSD. The PTSD Checklist-Civilian version (PCL-C) was used to categorize patients based on PTSD symptoms.⁴¹ Women with PCL-C scores ≥ 38 were considered "PTSD positive" (PTSD+); scores < 38 were considered "PTSD negative" (PTSD-). At this threshold, the PCL-C has a 0.79 sensitivity and 0.79 specificity for the DSM-IV diagnosis of PTSD based on the Clinician Administered PTSD Schedule (CAPS) in this population.⁸

VA Health Care Utilization. Information about VA health care utilization was obtained from the VA National Patient Care Database (NPCD) from the first day of the year of study enrollment through September 30, 2002. Duration of follow-up ranged from over 5 years to a minimum of 2.7 years ($M=3.9$, $SD=0.9$).

For inpatient utilization, acute hospitalizations were categorized based on the bed section at discharge. Because these analyses focused on medical/surgical utilization, we excluded psychiatric hospitalizations, domiciliary, rehabilitation, spinal cord injury, and nursing home stays from these analyses. Surgical procedures that required inpatient stays and operating room visits were categorized by ICD codes into cardiopulmonary, gastrointestinal, genitourinary, musculoskeletal, or plastic surgery.

Outpatient utilization was determined using VA "stop codes" that were grouped into 5 mutually exclusive categories (detailed in legend Table 4): emergency department (ED), primary care, medical/surgical subspecialty care, ancillary services, or diagnostic tests. Outpatient mental health care and other clinics with fewer than 100 visits during the study were excluded.

Death. Vital status was ascertained from the Beneficiary Identification Record Locator System (BIRLS) death file and the NPCD. These data sources have high sensitivity for deaths of VA patients.⁴²

Covariates. The WHS provided data on depression, alcohol use disorders, smoking, and specific medical problems that are commonly associated with PTSD.^{17,39} Depression screening was performed using the 5-item Mental Health Index (MHI-5).⁴³ Although it is not the most sensitive screen for alcohol misuse in this population, the 5-item "TWEAK" questionnaire⁴⁴ was used to screen for active alcohol use disorders be-

cause of its high specificity (92%) and a positive likelihood ratio of 5.1 (3.2 to 9.0).⁴⁵ Standard scoring algorithms and screening cutoffs were used for both the MHI-5 (≥ 17) and TWEAK (≥ 2).^{43,45} Body mass index (BMI) was calculated from self-reported height and weight, with obesity defined as $BMI \geq 30$. Disability associated with military service was obtained from the NPCD and categorized as $\geq 50\%$ disabled, $< 50\%$ disabled, or not disabled. Veterans with $\geq 50\%$ service-connected disability receive highest priority for access to VA care.

Statistical Methods

Descriptive analyses compared baseline characteristics and mortality between PTSD+ and PTSD- women, using the χ^2 statistic for categorical variables and the 2-sample t -test for continuous measures. Because of their infrequency, inpatient surgical procedures were dichotomized as present or absent during follow-up and were compared among PTSD+ and PTSD- women by χ^2 . For other bivariate analyses of the association between PTSD and health care utilization, utilization was adjusted to take into account the varied follow-up from time of the survey through September 2002. For hospitalizations, utilization rates were constructed as days hospitalized per person per year of follow-up. For outpatient care, the number of visits per patient per year of follow-up were calculated. Given the non-normal distribution of these inpatient and outpatient utilization rates, differences in the 2 groups were assessed with the non-parametric Wilcoxon's rank sum test. Bivariate analyses were stratified by age group (< 35 , 35 to 49, and ≥ 50 years) based on the expected increase in utilization with increasing age.

Multivariate logistic regression was used to evaluate whether adjustment for potential confounding variables altered the observed bivariate associations between PTSD and health care utilization. For inpatient services, logistic regression was used to model the odds of any acute medical/surgical inpatient hospitalization during the follow-up period. For outpatient services, women were ranked based on their average number of visits per year for each type of outpatient care (ED, etc.). Women in the highest quartile were considered to have "high utilization." High utilization was used as the outcome variable for logistic regression analyses of the association between PTSD and each type of outpatient utilization. This approach to multivariate modeling was chosen because of the nonnormal distribution of the outcome (days hospitalized/100 patients per year), the comparable years of follow-up for PTSD+ and PTSD- women, and unavailability of dates of hospitalizations that precluded modeling the time to event (e.g., Cox proportional hazards models).

Logistic regression analyses were conducted using a stepped approach to modeling: (1) unadjusted association between PTSD screening (+/-) and each subtype of utilization, (2) adjusting for age and smoking, (3) separate full models for each type of utilization (any medical/surgical hospitalization and the categories of outpatient care: ED, primary care, medical/surgical subspecialty, ancillary services, and diagnostic testing). In these full models, the remaining covariates were allowed to enter the model in a stepwise fashion with $P < .05$ as the criterion for entry. Potential confounders were selected because of association with increased medical utilization or previously demonstrated association with PTSD in this population.³⁹ Potential confounders included race, marital status, education, service-connected disability $\geq 50\%$, obesity, active

alcohol use disorder, hypertension, diabetes mellitus, stroke, thyroid disease, cancer, irritable bowel syndrome, and fibromyalgia. After adjusting for these other covariates, PTSD status was entered at the last step to test its association with utilization.

Depression was not included in the above multivariate models because of its extremely strong association with PTSD+ in this sample (correlation MHI-5 score and PCL-C score = 0.78). However, secondary analyses compared the strength of the association between PTSD and health care utilization to that between depression and health care utilization. To do this, the final regression model was replicated, substituting depression status based on the MHI-5 (screen positive or negative) for PTSD screening status.

RESULTS

Sample Characteristics

A total of 2,578 women (78% of those eligible) completed the PCL-C on at least 1 survey and are included in these analyses. The mean duration of follow-up was not associated with PTSD screening status: 3.94(SD 0.88) and 3.87(SD 0.89) for PTSD+ and PTSD- patients, respectively ($P=.08$). Table 1 shows baseline characteristics of respondents. Approximately 33% ($n=858$) of the women screened positive for PTSD. Compared with PTSD- women, PTSD+ women were significantly younger ($M=41$ vs 45), less likely to be married, more likely to have a service-connected disability, and more likely to report irritable bowel syndrome, fibromyalgia, and obesity as well as higher rates of screening positive for current smoking, alcohol use disorder, or depression. Despite being younger overall, PTSD+ women reported rates of hypertension, diabetes mellitus, stroke, and other medical illness comparable to the women without PTSD (Table 1). Mortality rates during the study did not differ between PTSD groups.

Inpatient Utilization

Medical/Surgical Hospitalizations. The study sample had 8,646 total days hospitalized, with 3,985 days (46%) in acute medical/surgical bed sections. Overall, 16% of the women were hospitalized on acute medical/surgical wards during the study: 20% and 14% of PTSD+ and PTSD- women, respectively. Table 2 presents the mean number of days hospitalized in medical/surgical wards/100 persons/y by PTSD screening status, stratified by age. Posttraumatic stress disorder positive women had higher inpatient medical/surgical utilization, particularly among women ages 35 to 49 (Table 2).

To evaluate whether these unadjusted associations between PTSD and inpatient utilization reflected confounding because of measured covariates, stepwise logistic regression analyses were performed. In unadjusted analyses, PTSD screening status was associated with an increased risk of medical/surgical hospitalizations (OR = 1.5; 95% CI = 1.2 to 1.8), which persisted after adjustment for age and smoking (OR = 1.7; 1.3 to 2.1), and remained significant in the model adjusted for potential confounders, which included age, smoking, race, marital status, education, service-connected status $\geq 50\%$, stroke, cancer, and thyroid disease (OR = 1.37; 1.04 to 1.79).

Inpatient Surgical Procedures. Among women under 50, the incidence of inpatient surgical procedures, specifically gastro-

Table 1. Baseline Characteristics by PTSD Screening Status

	PTSD+ ($n=858$) (%)	PTSD- ($n=1,720$) (%)	P
Age (y)			<.001
<35	28	28	
35-49	52	41	
≥ 50	21	32	
Race			.30
White	66	67	
Black	14	12	
Other/unknown	20	19	
Marital status			<.001
Never married	16	15	
Married	38	48	
Divorced/widowed/separated	44	32	
Education			.024
High school graduate or less	12	14	
Some college	49	46	
College graduate or more	37	39	
Service-connected disability			<.001
$\geq 50\%$ disabled	42	24	
<50% disabled	30	34	
Not disabled	27%	41	
Self-reported medical conditions			
Obesity*	41	30	<.001
Hypertension	30	28	.37
Diabetes mellitus	9	8	.16
Stroke	4	3	.19
Hepatitis	5	4	.12
Thyroid disease	15	13	.07
Cancer	8	8	.74
Irritable bowel syndrome	31	14	<.001
Fibromyalgia	16	7	<.001
Current cigarette smoking	36	22	<.001
Alcohol use disorder screen positive	27	19	<.001
Depression screen positive	75	11	<.001

*Based on body mass index ≥ 30 calculated from self-reported weight and height.

PTSD, posttraumatic stress disorder; PTSD+, posttraumatic stress disorder positive; PTSD-, posttraumatic stress disorder negative.

intestinal procedures, was higher for PTSD+ women (Table 3). Among women over 50, there was no association between PTSD screening status and the overall incidence of surgical procedures; there were significantly more musculoskeletal

Table 2. Comparison of Inpatient Medical or Surgical Utilization Between Women who Screened Positive and Negative for PTSD: Mean Days Hospitalized in the VA/100 Patients/Year of Follow-Up (95% CI)*

Age Group (y)	PTSD+		PTSD-	
	n	Mean Days Hospitalized†	n	Mean Days Hospitalized†
< 35	238	14.0 (7.8 to 20.1)	473	14.1 (1.4 to 26.8)
35-49	442	43.4 (26.1 to 60.7)	706	17.0 (15.9 to 18.1)
50+	178	132.6 (36.7 to 228.5)	541	117.7 (84.5 to 150.9)
Total	858	53.8 (31.9 to 75.7)	1720	47.9 (36.2 to 59.6)

*Age stratum-specific comparisons between PTSD+ and PTSD- women were significant at $P<.0001$ for women <35 and those 35 to 49 years old, whereas for women 50 years or older $P=.81$ (Wilcoxon's rank sum test).

†Per 100 patients per year of follow-up.

PTSD, posttraumatic stress disorder; CI, confidence interval; PTSD+, posttraumatic stress disorder positive; PTSD-, posttraumatic stress disorder negative.

Table 3. Percent of Women Undergoing Inpatient Surgical Procedures During Follow-Up

	Age <35 y			Age 35 to 49 y			Age ≥ 50 y		
	PTSD+ (n=238)	PTSD- (n=473)	P*	PTSD+ (n=442)	PTSD- (n=706)	P*	PTSD+ (n=178)	PTSD- (n=541)	P*
Cardiopulmonary	0.4	0.6	.72	2.7	1.0	.026	6.2	5.4	.68
Gastrointestinal	1.3	0.2	.08	2.3	0.4	.004	3.4	3.9	.76
Genitourinary	0.0	0.2	.48	0.7	0.1	.13	0.6	1.5	.34
Musculoskeletal	0.4	0.0	.16	0.0	0.1	.43	1.1	0.0	.014
Plastic	0.8	0.2	.22	0.7	0.1	.13	1.7	0.4	.07
Any surgical procedures	2.9	0.8	.033	5.9	1.7	<.001	9.0	8.9	.96

*P, probability based on χ^2 values.

PTSD, posttraumatic stress disorder; PTSD+, posttraumatic stress disorder positive; PTSD-, posttraumatic stress disorder negative.

procedures among older PTSD+ women. Although all surgical hospitalizations were included in the logistic regression model above, inpatient surgical procedure subtypes were not separately analyzed using logistic regression methods.

Outpatient Utilization

Table 4 presents the mean number of medical/surgical outpatient visits per patient per year of follow-up. Within each type of clinic, PTSD+ women had more VA outpatient clinic visits than PTSD- women. These differences were statistically significant across all 3 age groups (age-stratified data not presented). Table 5 shows the results of multivariate logistic regression models used to evaluate whether these associations between PTSD and outpatient utilization reflected confounding based on other measured covariates. For each type of outpatient utilization, we tested the association between PTSD+ screening status and being in the top quartile of utilization (the quartile of patients with the highest numbers of visits). After adjusting for age and smoking, the association between PTSD and outpatient utilization was preserved across all clinic categories. With the exception of visits to medical and surgical subspecialists, the association remained significant in the fully adjusted models (Table 5).

Table 4. Mean Number of Outpatient Visits Per Patient Per Year by Type of Visit (with 95% Confidence Interval)

Type of Visit	PTSD+ (n=858)	PTSD- (n=1,720)	P*
Emergency department	1.1 (1.0 to 1.2)	0.6 (0.5 to 0.6)	<.001
Primary care	3.2 (3.0 to 3.4)	2.2 (2.1 to 2.3)	<.001
Medical/surgical subspecialists†	2.1 (1.9 to 2.3)	1.5 (1.4 to 1.6)	<.001
Ancillary services‡	4.1 (3.7 to 4.5)	2.4 (2.2 to 2.6)	<.001
Diagnostic tests§	5.6 (5.1 to 6.1)	3.7 (3.4 to 4.0)	<.001

*Probability based on Wilcoxon's rank sum test.

†Includes all medical and surgical subspecialty clinics staffed by MD or Advanced Registered Nurse Practitioner (ARNP) providers.

‡Represents 35 clinic stop codes with services by provider other than MD or ARNP: most common were physical therapy, dental, nursing follow-up, podiatry, optometry, general social work, occupational therapy, nutrition, homeless veteran health care outreach, VA-shared housing, audiology.

§Outpatient diagnostic tests: laboratory, non-interventional radiology, ultrasound, pulmonary function, ECG, MRI, EEG, nuclear medicine, computerized tomography, electromyogram.

PTSD, posttraumatic stress disorder; PTSD+, posttraumatic stress disorder positive; PTSD-, posttraumatic stress disorder negative.

Depression

Posttraumatic stress disorder and depression are highly comorbid conditions.¹⁷ Not unexpectedly, in our sample, 77% of the women who screened positive for depression were PTSD+, and 75% of the PTSD+ women screened positive for depression. This resulted in a degree of collinearity too high to allow placement of both variables in the same regression model. In a secondary analysis, we compared the strength of the association between PTSD+ and health care utilization with the strength of the association between depression+ and health care utilization. Using the previously described fully adjusted models, we substituted MHI-5 depression screening status into the last step instead of PTSD screening status. Posttraumatic stress disorder screening status had a reliable association with inpatient medical/surgical hospitalization (OR=1.37; 1.04 to 1.79), whereas depression did not (OR=1.21; 0.92 to 1.60). However, the CIs largely overlapped, suggesting PTSD status and depression status were generally comparable. Posttraumatic stress disorder and depression were similarly comparable in predicting outpatient utilization (data not presented).

DISCUSSION

This study of female VA patients found that PTSD+ women were more likely than PTSD- women to be hospitalized for medical or surgical conditions. Moreover, outpatient utilization of ED, primary care, subspecialty care, ancillary services, and diagnostic testing was higher among PTSD+ women. The association between PTSD and utilization of health services was particularly strong in the 35- to 49-year-old age cohort, and the observed associations persisted after adjusting for other predictors of increased health care utilization (most notably age and smoking).

Trauma exposure, primarily sexual assault, is associated with negative physical and mental health outcomes in female veterans.^{9,11-13} Fewer studies have explored the association of PTSD with health outcomes in female VA patients; such studies have relied primarily on self-report.^{14,25,26,32,46} Our findings are consistent with previous studies and extend these findings by including a broadly selected sample of women seen for VA care, by using VA administrative records to evaluate the association of PTSD with VA health care utilization, and by prospectively following utilization for 2 to 5 years.

Findings from this study complement findings for male veterans.^{6,20,22,24,33,47} Other investigators have used structural equation modeling to conclude that PTSD is an important mediator between trauma exposure and physical health in

Table 5. The Association of PTSD with High-Outpatient Utilization (Highest 25% of Users) of Various Outpatient Services

Variables in Model	Emergency Department	Primary Care	Sub-specialty Care	Ancillary Services	Diagnostic Tests
	OR (95% CI)				
PTSD unadjusted (n=2,578)	2.41 (2.02 to 2.84)	1.65 (1.37 to 1.98)	1.44 (1.20 to 1.74)	1.96 (1.63 to 2.35)	1.73 (1.44 to 2.08)
PTSD adjusted for age+smoking (n=2,541)	2.33 (1.94 to 2.80)	1.79 (1.48 to 2.17)	1.58 (1.30 to 1.92)	2.11 (1.75 to 2.56)	1.95 (1.61 to 2.38)
PTSD in fully adjusted models* (n=2,041)	2.04 (1.66 to 2.52)	1.30 (1.03 to 1.63)	1.09 (0.86 to 1.38)	1.66 (1.32 to 2.09)	1.54 (1.22 to 1.94)

*Full models all include age, smoking, and service-connected disability $\geq 50\%$; Emergency Department model also includes education, marital status, and BMI ≥ 30 ; Primary Care model also includes marital status, hypertension, irritable bowel syndrome, diabetes mellitus, cancer, education, thyroid disease; Subspecialty Care model also includes diabetes mellitus, fibromyalgia, marital status, education, BMI ≥ 30 , and irritable bowel syndrome; Ancillary Services model also includes marital status, fibromyalgia, cancer, diabetes mellitus, prior stroke, and BMI ≥ 30 ; Diagnostic Tests model also includes thyroid disease, diabetes mellitus, irritable bowel syndrome, marital status, BMI ≥ 30 , and hepatitis. PTSD, posttraumatic stress disorder; BMI, body mass index.

male veterans.^{28,33,35} While our analyses cannot address the presence of a causal association between PTSD and medical utilization, PTSD does appear to be associated with an increased use of inpatient and outpatient services in women seen for VA care.

Posttraumatic stress disorder is not unique among psychiatric conditions in its association with increased health care utilization. However, investigators have suggested that physical health problems may be particularly prominent in PTSD.^{21,23,25,48,49} The very high comorbidity between PTSD and depression observed in our sample make it difficult to analyze the effects of PTSD independent of depression. The use of a screening measure for depressive symptoms, the MHI-5, rather than a clinical diagnostic instrument further complicates our ability to precisely assess the impact of comorbid depression. Nonetheless, our secondary analyses suggest that screening positive for PTSD has an association with medical utilization at least comparable in strength to screening positive for depression. Lending support to this observation is a recent study of a national sample of female VA patients showing that women who endorsed coexisting PTSD and depression (representing 89% of the women with PTSD) reported a greater burden of medical illness than did those with depression alone.²⁵

There are several possible explanations for the observed association between PTSD and health care utilization. Many investigators describe increased somatization in PTSD patients and attribute increased treatment utilization to subjective physical distress in these patients.^{24,46,50,51} Comorbid conditions such as obesity, smoking, or substance abuse could also contribute to poorer health in individuals with PTSD.^{17,39} Increased medical utilization may arise from injuries sustained during trauma, although little is known about this potential contribution. Other investigators have argued that the underlying neurobiology of PTSD may be associated with the early development of some medical conditions,⁵² a hypothesis consistent with longitudinal studies of health in male veterans with PTSD showing that their use of medical care at a younger age was not inappropriate.^{28,35} A recent study of male veterans found a particularly robust association between VA primary care clinic visits and PTSD in men under the age of 52.³¹ Similarly, in our study, increased utilization was strongest among women ages 35 to 49; this age group may be particularly vulnerable to the negative impact of PTSD on physical health.

There are a number of limitations to this study. Participants were seen at one 2-site urban VA facility, suggesting caution before generalizing these findings to female veterans

who are seen in other VA or non-VA facilities. However, our prior studies indicate that women in our sample are comparable with women seen elsewhere for VA care.^{39,53} Although it is a validated screening instrument, the PCL-C is not a diagnostic interview for PTSD. Hence, our findings rely on a screening approximation of the actual prevalence of PTSD in this population. Another limitation is that we examined only VA services and so underestimated total health utilization, especially in nonservice-connected women (who were also less likely to have PTSD). We attempted to address this bias by incorporating service-connected disability into our regression models. Even after controlling for this and other potential confounding variables in our stepwise regression analyses, the impact of PTSD on utilization remained significant. Although our data do not capture community medical utilization, the results nonetheless illustrate a significant public health problem within the growing population of women served by VA. Finally, our data do not evaluate the appropriateness of the care received. Increased surgical utilization is of particular concern, given its related morbidity and costs. Although evidence suggests that VA provides high-quality care,⁵⁴ the appropriateness of this care deserves further study.

In summary, symptoms of PTSD are common among women seen for care at VA facilities and are associated with higher medical/surgical utilization. Preliminary studies of Iraq War veterans suggest that, although stigma associated with mental illness discourages soldiers from seeking psychiatric care,⁵⁵ the mental health consequences of the current conflict are substantial.⁵⁶ Underutilization of VA mental health services may be particularly apparent in women.⁵⁷ Thus, identification of PTSD in VA primary care settings is crucial, as specific and effective treatments for this condition are available.⁵⁸ Future studies should focus on whether successful treatment of PTSD will result in a decrease in medical utilization. As more women serve in the military, the impact of PTSD on women's physical health presents an important consideration for the design of VA health services.

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Voices of Women Veterans (continued)

HARASSMENT AND ABUSE

"In the 50s, there was some prejudice against women in the military, but for the most part I was treated well. There were the usual passes made by men, but I handled it pretty well. Only once did I report an incident and was backed up by my chief."

"I worked hard, became pregnant, and then lost the baby due to a miscarriage. My Commanding Officer had no sympathy and repeatedly would say 'women should not be allowed to have children if they are in the military,' then would gloat about his wife being pregnant. I had gained a few pounds due to the pregnancy and had a hard time taking it back off. I tried all kinds of diets and even worked out during my lunch breaks. I was not allowed to receive awards I had achieved nor be promoted due to the issue. Eventually, I tried to transfer out of my unit just to get away from my CO. He denied them all. I became so depressed due to his badgering that I tried to commit suicide. I was eventually honorably discharged, but I still wanted to serve my country. Being unable to transfer without his authorization, I was forced to go home. Even with that, I still enjoyed serving my country even as little as I did."

"In 1952, military careers were limited. I was schooled as a radio mechanic but was never allowed to work in the field. The men refused to work with females."