

Original Investigation

Differential Risk for Homelessness Among US Male and Female Veterans With a Positive Screen for Military Sexual Trauma

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IMPORTANCE Military sexual trauma (MST) is associated with adverse physical and mental health outcomes following military separation. Recent research suggests that MST may be a determinant in several factors associated with postdeployment homelessness.

OBJECTIVE To evaluate MST as an independent risk factor for homelessness and to determine whether risk varies by sex.

DESIGN, SETTING, AND PARTICIPANTS A retrospective cohort study of US veterans who used Veterans Health Administration (VHA) services between fiscal years 2004 and 2013 was conducted using administrative data from the Department of Defense and VHA. Included in the study were 601 892 US veterans deployed in Iraq or Afghanistan who separated from the military between fiscal years 2001 and 2011 and subsequently used VHA services.

EXPOSURE Positive response to screen for MST administered in VHA facilities.

MAIN OUTCOMES AND MEASURES Administrative evidence of homelessness within 30 days, 1 year, and 5 years following the first VHA encounter after last deployment.

RESULTS The mean (SD) age of the 601 892 participants was 38.9 (9.4) years, 527 874 (87.7%) were male, 310 854 (51.6%) were white, and 382 361 (63.5%) were enlisted in the Army. Among veterans with a positive screen for MST, rates of homelessness were 1.6% within 30 days, 4.4% within 1 year, and 9.6% within 5 years, more than double the rates of veterans with a negative MST screen (0.7%, 1.8%, and 4.3%, respectively). A positive screen for MST was significantly and independently associated with postdeployment homelessness. In regression models adjusted for demographic and military service characteristics, odds of experiencing homelessness were higher among those who screened positive for MST compared with those who screened negative (30-day: adjusted odds ratio [AOR], 1.89; 95% CI, 1.58-2.24; 1-year: AOR, 2.27; 95% CI, 2.04-2.53; and 5-year: AOR, 2.63; 95% CI, 2.36-2.93). Military sexual trauma screen status remained independently associated with homelessness after adjusting for co-occurring mental health and substance abuse diagnoses in follow-up regression models (30-day: AOR, 1.62; 95% CI, 1.36-1.93; 1-year: AOR, 1.49; 95% CI, 1.33-1.66; and 5-year: AOR, 1.39; 95% CI, 1.24-1.55). In the fully adjusted models, the interaction between MST status and sex was significant in the 30-day and 1-year cohorts (30-day: AOR, 1.54; 95% CI, 1.18-2.02; and 1-year: AOR, 1.46; 95% CI, 1.23-1.74), denoting higher risk for homelessness among males with a positive screen for MST.

CONCLUSIONS AND RELEVANCE A positive screen for MST was independently associated with postdeployment homelessness, with male veterans at greater risk than female veterans. These results underscore the importance of the MST screen as a clinically important marker of reintegration outcomes among veterans. These findings demonstrate significant long-term negative effects and inform our understanding of the public health implications of sexual abuse and harassment.

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The US Department of Veterans Affairs (VA) defines military sexual trauma (MST) as “psychological trauma, which in the judgment of a mental health professional employed by the Department, resulted from a physical assault of a sexual nature, battery of a sexual nature, or sexual harassment which occurred while the veteran was serving on active duty or active duty for training.”¹ Approximately 25% of female and 1% of male veterans report having experienced MST during their military service.² Military sexual trauma is related to adverse outcomes following separation from the military, including posttraumatic stress disorder, depressive disorders, substance use disorders,²⁻⁶ and higher rates of cooccurrence among these diagnoses. Military sexual trauma is also associated with poorer family relations and lower quality of life.⁴ Given the negative effect of MST on postdeployment health, the Veterans Health Administration (VHA) initiated MST screening for all veterans seeking care in any of its medical facilities in 2004.

Many outcomes associated with MST are known correlates of homelessness,⁷ and preliminary research has suggested elevated rates of MST among homeless veterans.⁸⁻¹² Veterans are overrepresented in the US homeless population.^{13,14} This presents a serious public health concern because homelessness is associated with major physical and mental health disparities as well as mortality.¹⁵⁻¹⁸ Given the near-universal administration of MST screening to new VHA users, screen results represent a potentially valuable early marker for homelessness. Unlike related mental health and substance abuse risk factors for homelessness, MST screen results are available for most VHA users, regardless of treatment-seeking behaviors or level of care received.

To our knowledge, no study has systematically evaluated MST as a risk factor for postdeployment homelessness in a sample of male and female veterans recently discharged from military service to date. Additionally, although sex differences have been identified in certain MST-related outcomes,¹⁹⁻²¹ it is currently unknown whether risk for homelessness is similar among men and women who have experienced MST. Therefore, the purpose of this study was to address these gaps by using a large, representative cohort of male and female veterans of Operation Enduring Freedom and Operation Iraqi Freedom (OEF/OIF) who have used VHA services to examine the association between MST and postdeployment homelessness. We set out to determine whether: (1) a history of MST, as indicated by a positive screen for MST, serves as a risk factor for postdeployment homelessness; (2) the association between MST status and homelessness varies by sex; and (3) positive MST status remains significantly associated with homelessness after adjusting for additional known correlates of MST and homelessness, such as mental health and substance use disorders.

Identifying and substantiating MST as a risk factor for homelessness, including possible differential effects by sex, may aid in the prevention and mitigation of veteran homelessness and may help explain the current overrepresentation of military veterans in the US homeless population.

Key Points

Question Is exposure to military sexual trauma (MST), as indicated by a positive screen for MST, a risk factor for postdeployment homelessness, and does risk vary by sex?

Findings In this cohort study of 601 892 recently discharged veterans, a positive screen for MST was significantly and independently associated with homelessness among men and women, with a differentially stronger risk among men. By 5 years, nearly 10% of veterans with a positive screen for MST had experienced homelessness.

Meaning Results from MST screening represent a clinically important marker for homelessness. These findings demonstrate significant long-term negative effects of sexual abuse and harassment.

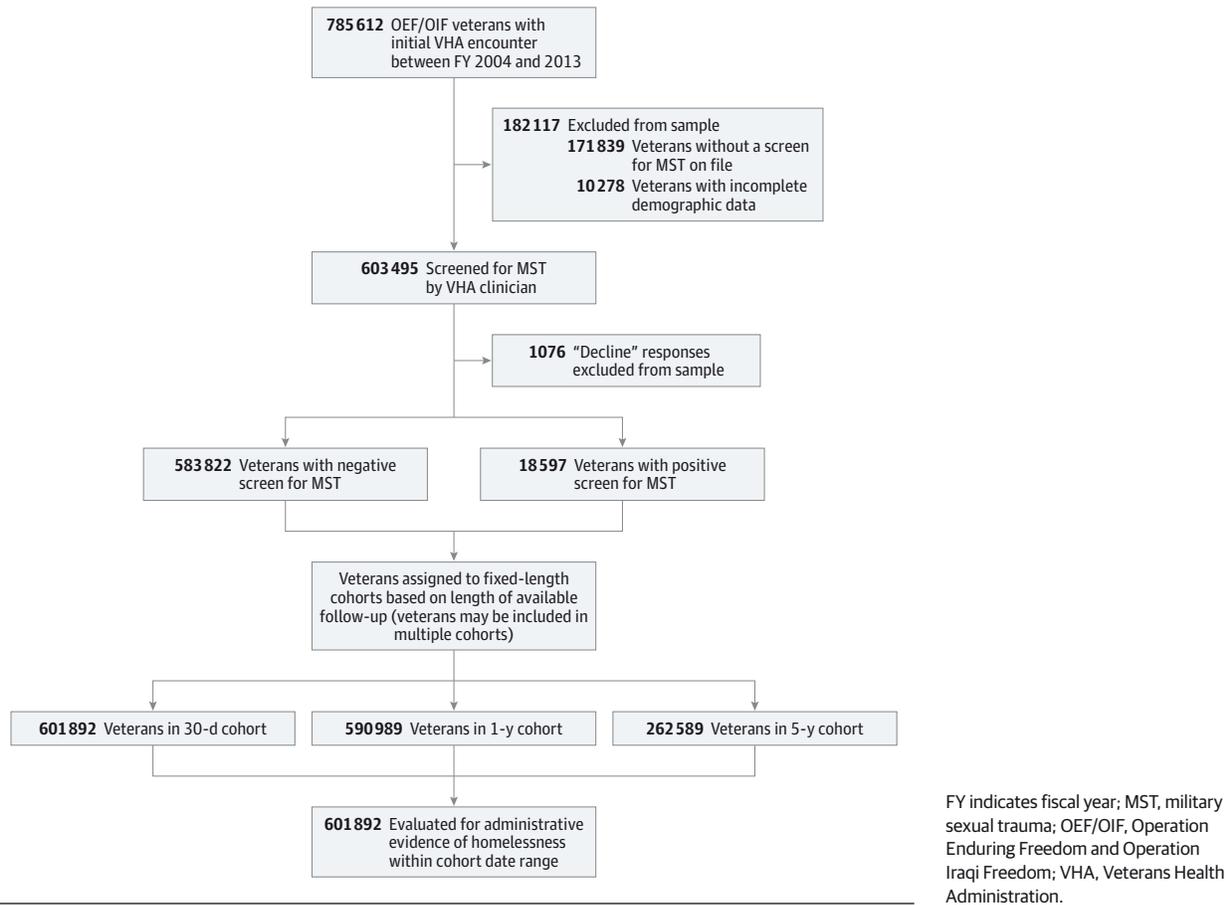
Methods

The working data set was created by merging demographic and military service data from the 2011 OEF/OIF official roster file with health care data from VHA. The roster included veterans who separated from the military between fiscal years (FY) 2001 and 2011. The roster contained the following administratively determined demographic and military service variables: age, education, race/ethnicity, marital status, branch of service, rank, and component (Active Duty, Reserve, or National Guard). Data from the VHA were extracted from the Managerial Cost Accounting National Data Extracts from FY 2004 to 2013 and contained information on nationwide clinical service usage, including inpatient, outpatient, and pharmacy use. Visit-level data were used to create variables for MST screen results, indicators of homelessness, and mental health and substance use diagnoses. The merged data set included 785 612 veterans found on the roster and whose first VHA encounter occurred from FY 2004 to 2013.

Approval for this study was granted from the institutional review boards of the University of Utah School of Medicine and of Utah State University as well as the Research and Development Committee for the VA Salt Lake City Health Care System. Because of the large number of veterans involved and the retrospective nature of the study, Health Insurance Portability and Accountability Act authorization and informed consent were waived.

To address individual variability in the available length of follow-up in VHA clinical data and to evaluate both the short- and long-term associations between MST screen status and postdeployment homelessness, 3 cohorts were constructed to determine the incidence of homelessness within 30 days, 1 year, and 5 years from initial VHA encounter.²² Administrative surveillance in each cohort began on the date of each veteran's first VHA encounter after the last deployment noted in the OEF/OIF roster file and ended after the specified length of follow-up for the given cohort. Included in each analytical cohort were MST screening results recorded at any point over administrative follow-up, static demographic and military service characteristics, indicators for mental health and substance

Figure. Selection Process for the 30-Day, 1-Year, and 5-Year Analytic Cohorts



use conditions as primary diagnosis codes, and evidence of homelessness that occurred during the range of follow-up corresponding to each cohort. Veterans were included in a given cohort if they contributed data for the duration of the period and if their file indicated an MST screen result of “yes” or “no.” The cohort selection process is shown in the **Figure**.

Military Sexual Trauma Classification

During VHA primary care and mental health inpatient or outpatient visits, a clinical reminder appears on the electronic medical record if the veteran has not been screened for MST. The reminder prompts the clinician to administer the screen, which consists of the following questions: “While you were in the military... (a) did you receive uninvited and unwanted sexual attention, such as touching, cornering, pressure for sexual favors, or verbal remarks? (b) did someone ever use force or threat of force to have sexual contact with you against your will?”

Veterans may respond “yes,” “no,” or “decline” to either item. Exposure to MST is considered a duty-related hazard, and screening items are designed to represent a single construct. Thus, the screen is considered positive if a veteran responds in the affirmative to either item. Results are recorded as a single variable in VA administrative data, and items cannot be analyzed separately. Cases with a response

of “decline” (<0.2%) were omitted from the sample. Because MST represents a historical experience, the screen is generally administered once for each veteran. However, those who initially decline the screen are rescreened in a year. In the case of multiple screen results on file, the most recent screen result was used.

Although MST screening protocol does not include evaluation for psychological trauma, which is a component of MST as defined by VA, a positive screen is considered sufficient evidence for eligibility for MST-related services, including treatment and additional evaluation. For the purposes of the present study, a positive screen was considered a marker for history of MST.

Veteran Homelessness

Veterans were identified as having administrative evidence of postdeployment homelessness if they received an *International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM)* code of V60.0 (indicating “lack of housing”) as either their primary or other code during a VHA visit or a non-ICD VHA clinic or specialty code related to the receipt of homeless services.^{12,23} Therefore, a veteran was considered to be homeless in a given cohort if they had any administrative evidence since military separation within that period.

Among veterans with evidence of homelessness, 86% were screened for MST prior to their first evidence of homelessness. Rates of positive MST screen did not significantly differ between veterans who were screened for MST before initial evidence of homelessness (6.7%) and after initial evidence of homelessness (6.6%), indicating a lack of bias in MST disclosure in the latter group.

Mental Health Diagnoses

Mental health and substance abuse *ICD-9-CM* diagnoses were retrieved from VHA clinical data. The posttraumatic stress disorder variable was created using *ICD-9-CM* code 309.81. The remaining diagnostic variables were based on classifications of *ICD-9-CM* codes as defined by the Healthcare Utilization and Costs Project Clinical Classification Software (HCUP-CCS; Agency for Healthcare Research and Quality).²⁴ The following categories from HCUP-CCS were used: depressive disorders, alcohol-related disorders, substance-related disorders, personality disorders, bipolar disorders, and schizophrenia and other psychotic disorders. To increase diagnostic specificity, a diagnosis was marked as present if the medical record contained 2 or more *ICD-9-CM* codes in the given category. Additionally, a global variable representing the presence or absence of any mental health disorder was computed using the HCUP-CCS category of mental illness. A veteran with 2 or more diagnoses of any type within this category was considered to have a mental health disorder.

Data Analysis

Descriptive statistics were computed for all study variables for each cohort. Rates of homelessness and MST screen status were computed and stratified by sex. For each cohort, logistic regression analyses were computed in 3 steps. First, a logistic regression analysis was conducted with homelessness as the outcome variable and the following predictor variables: MST status, sex, an interaction between MST status and sex, and demographic and military service covariates (ie, age, education, marital status, race/ethnicity, branch of service, rank, and military component). Second, to determine whether the association between homelessness and MST could be explained by and vary as a function of mental health disorders, models were computed that added the global mental health disorder variable (eTable 1 in the Supplement) as well as the interaction between any mental health disorder and MST status as predictors. This interaction term was nonsignificant in models for each cohort. In the third step, in place of a global mental health disorder variable, the following specific mental health disorder variables were added simultaneously to understand their individual effects: posttraumatic stress disorder, depressive disorders, substance-related disorders, alcohol-related disorders, personality disorders, bipolar disorders, and psychotic disorders (eTable 2 in the Supplement). Comparing models for steps 2 and 3 revealed that models computed using specific mental health disorders had a collectively stronger attenuating effect on the association between MST screen status and homelessness compared with models computed using the global mental health variable. Therefore, models computed using specific mental health predictors were selected as final models. Adjusted odds ratios (AORs) and 95% CIs were calculated for all

models. All analyses were conducted using the R environment for statistical computing through the secure VA Informatics and Computing Infrastructure research workspace (US Department of Veterans Affairs).²⁵

Results

Table 1 presents a summary of all demographic and military information and MST screening results for each follow-up cohort. Table 2 presents the incidence of homelessness stratified by MST screen status and sex for each cohort. Among veterans with a positive screen for MST, incidence of homelessness was 1.6% within 30 days, 4.4% within 1 year, and 9.6% within 5 years. The trends were similar for male and female veterans with a positive MST screen but with slightly higher rates for males (30-day: 2.3%; 1-year: 6.2%; and 5-year: 11.8%) compared with females (30-day: 1.3%; 1-year: 3.9%; and 5-year: 8.9%). Rates of positive MST screens among homeless veterans were nearly double those of nonhomeless veterans (30-day: 0.7%; 1-year: 1.8%; and 5-year: 4.3%).

Table 3 presents AORs and their 95% CIs for each logistic regression analysis. In every model across all 3 follow-up cohorts, a positive screen for MST was significantly and independently associated with homelessness. In models unadjusted for mental health and substance use diagnoses, veterans with a positive MST screen had approximately double the odds for homelessness (30-day: AOR, 1.89; 95% CI, 1.58-2.24; 1-year: AOR, 2.27; 95% CI, 2.04-2.53; and 5-year: AOR, 2.63; 95% CI, 2.36-2.93) than those who screened negative (1 [Reference]). Additionally, there was a significant MST by sex interaction for the 30-day (AOR, 1.55; 95% CI, 1.19-2.02) and 1-year (AOR, 1.43; 95% CI, 1.21-1.69) cohorts, with positive screens for MST conferring greater risk for homelessness among men compared with women. Follow-up tests of simple main effects revealed that MST was significantly associated with homelessness among both men and women for each follow-up cohort but more strongly for men (Table 3).

In models adjusted for mental health and substance use diagnoses, MST screen status remained significantly associated with homelessness; veterans with a positive MST screen had approximately 1.5 times greater odds for homelessness (30-day: AOR, 1.62; 95% CI, 1.36-1.93; 1-year: AOR, 1.49; 95% CI, 1.33-1.66; and 5-year: AOR, 1.39; 95% CI, 1.24-1.55) than those who screened negative (1 [Reference]). A significant interaction between MST status and sex in the 30-day (AOR, 1.54; 95% CI, 1.18-2.02) and 1-year (AOR, 1.46; 95% CI, 1.23-1.74) cohorts again suggested a greater risk for homelessness among men with a history of MST than women. Follow-up tests of simple main effects again revealed that MST was significantly associated with homelessness among both men and women for each follow-up cohort, also stronger for men (Table 3).

Discussion

To our knowledge, this study is the first to evaluate exposure to MST, as indicated by a positive screen in VHA data, as an

Table 1. Demographic and Military Service Characteristics of OEF/OIF Veterans With Military Sexual Trauma Screen Results and VHA Service Usage (FY 2004-2013)^a

Characteristic	No. (%)		
	30-d (n = 601 892)	1-y (n = 590 989)	5-y (n = 262 589)
Demographic characteristics			
Sex			
Male	527 874 (87.7)	432 868 (87.7)	228 656 (87.1)
Female	74 018 (12.3)	61 954 (12.3)	33 933 (12.9)
Age, mean (SD), y	38.9 (9.4)	38.9 (9.4)	40.7 (9.5)
Education			
High school or equivalent	482 243 (80.1)	474 104 (80.2)	211 248 (80.5)
Higher than high school	119 649 (19.9)	116 885 (19.8)	51 341 (19.6)
Marital status			
Never married	315 584 (52.4)	310 081 (53.5)	133 738 (51.0)
Married	257 270 (42.7)	252 476 (42.7)	115 543 (44.0)
Divorced	27 770 (4.6)	27 185 (4.6)	12 733 (4.9)
Other	1265 (0.2)	1247 (0.2)	575 (0.2)
Race/ethnicity			
White	310 854 (51.6)	304 653 (51.6)	115 756 (44.1)
Black	68 865 (11.4)	67 338 (11.4)	28 351 (10.8)
Hispanic	65 121 (10.8)	63 961 (10.8)	29 255 (11.1)
Other	28 037 (4.7)	27 518 (4.7)	12 753 (4.8)
Unknown	129 015 (21.4)	127 519 (21.6)	76 474 (29.1)
Homeless within follow-up			
No	597 565 (99.3)	579 856 (98.1)	250 896 (95.5)
Yes	4327 (0.7)	11 113 (1.9)	11 693 (4.5)
Military service characteristics			
Rank			
Enlisted	561 831 (93.3)	551 982 (93.4)	246 773 (94.0)
Officer	34 817 (5.8)	33 871 (5.7)	13 592 (5.2)
Warrant	5244 (0.9)	5136 (0.9)	2224 (0.9)
Component			
Active duty	341 024 (56.7)	337 496 (57.1)	151 026 (57.5)
Reserve	93 692 (15.7)	90 829 (15.3)	42 072 (16.0)
Guard	167 176 (27.8)	162 664 (27.5)	69 491 (26.3)
Branch of service			
Army	382 361 (63.5)	374 727 (63.4)	168 472 (64.2)
Navy/Coast Guard	75 073 (12.5)	73 954 (12.5)	31 130 (11.9)
Air Force	59 777 (9.9)	58 619 (9.9)	25 040 (9.6)
Marines	84 681 (14.1)	83 689 (14.1)	37 947 (14.5)
Military sexual trauma screen status			
Negative	583 310 (96.9)	572 672 (96.9)	254 019 (96.7)
Positive	18 582 (3.1)	18 317 (3.1)	8570 (3.3)

Abbreviations: FY, fiscal years; OEF/OIF, Operation Enduring Freedom and Operation Iraqi Freedom; VHA, Veterans Health Administration.

^a The 30-day, 1-year, and 5-year cohorts were based on the first VHA encounter after the last date of military deployment recorded in the OEF/OIF roster file. The change in numbers across the 3 study cohorts is due to a decreasing number of veterans who contributed data to the longer 1- and 5-year observation periods.

independent risk factor for postdeployment homelessness among a large national sample of US veterans and the first to examine the differential risk for homelessness due to MST exposure by sex. These results indicate that positive MST screen status is independently associated with homelessness above and beyond demographic and military service characteristics as well as related cooccurring mental illnesses and substance abuse. Additionally, risk for homelessness varies differentially for males and females depending on MST screen status, with a positive screen for MST conferring greater risk for homelessness among male veterans. Positive MST screen status was

associated with homelessness as early as 30 days after the first VHA encounter and continued to be associated with homelessness through the end of follow-up at 5 years, indicating that MST affects both immediate and long-term reintegration outcomes.

In addition to the independent association of MST screen status with homelessness, results from this study indicate that MST status provides clinically important information as an early indicator for adverse postdeployment outcomes. Of particular note is the association between positive MST screen and mental health and substance abuse diagnoses. The negative

Table 2. Incidence of Homelessness by MST Screen Status and Sex for Cohorts of OEF/OIF Veterans With Screen Status Results and VHA Service Use (FY 2004-2013)^a

Follow-up Period	MST Screen, No. (%)					
	Positive			Negative		
	Male	Female	Overall	Male	Female	Overall
30-d	103 (2.3)	186 (1.3)	289 (1.6)	3617 (0.7)	421 (0.7)	4038 (0.7)
1-y	275 (6.2)	536 (3.9)	811 (4.4)	9306 (1.8)	1016 (1.7)	10 322 (1.8)
5-y	243 (11.8)	579 (8.9)	822 (9.6)	9862 (4.4)	1009 (3.7)	10 871 (4.3)

Abbreviations: FY, fiscal years; MST, military sexual trauma; OEF/OIF, Operation Enduring Freedom and Operation Iraqi Freedom; VHA, Veterans Health Administration.

^a The 30-day, 1-year, and 5-year cohorts were based on the first VHA encounter after the last military deployment recorded in the OEF/OIF roster file.

Table 3. Abbreviated Results of Logistic Regression Analyses Predicting Homelessness Among OEF/OIF Veterans as a Function of MST Screen Status and Sex (FY 2004-2013)^a

Outcome	Odds Ratio (95% CI)					
	30-d (n = 601 892)		1-y (n = 590 989)		5-y (n = 262 589)	
	Adjusted ^b	Adjusted ^c	Adjusted ^b	Adjusted ^c	Adjusted ^b	Adjusted ^c
MST status						
No	1 [Reference]					
Yes	1.89 (1.58-2.24) ^d	1.62 (1.36-1.93) ^d	2.27 (2.04-2.53) ^d	1.49 (1.33-1.66) ^d	2.63 (2.36-2.93) ^d	1.39 (1.24-1.55) ^d
Sex						
Female	1 [Reference]					
Male	1.23 (1.10-1.36) ^d	1.12 (1.01-1.25) ^d	1.26 (1.17-1.34) ^d	1.04 (0.97-1.12)	1.37 (1.28-1.46) ^d	1.02 (0.95-1.09)
MST by sex	1.55 (1.19-2.02) ^d	1.54 (1.18-2.02) ^d	1.43 (1.21-1.69) ^d	1.46 (1.23-1.74) ^d	1.09 (0.92-1.30)	1.17 (0.96-1.41) ^d
Simple main effects of MST by sex						
Female	1.89 (1.59-2.23) ^d	1.62 (1.36-1.92) ^d	2.27 (2.05-2.51) ^d	1.49 (1.33-1.66) ^d	2.63 (2.38-2.91) ^d	1.39 (1.24-1.55) ^d
Male	2.93 (2.41-3.55) ^d	2.49 (2.04-3.04) ^d	3.25 (2.89-3.67) ^d	2.17 (1.91-2.48) ^d	2.87 (2.52-3.27)	1.61 (1.38-1.89) ^d

Abbreviations: FY, fiscal years; MST, military sexual trauma; OEF/OIF, Operation Enduring Freedom and Operation Iraqi Freedom; VHA, Veterans Health Administration.

^a The 30-day, 1-year, and 5-year cohorts were based on the first VHA encounter after the last military deployment recorded in the OEF/OIF roster file. The change in numbers across the 3 study cohorts is due to a decreasing number of veterans who contributed data to the longer 1- and 5-year observation periods.

^b Adjusted for age, education (high school or posthigh school), marital status (married, never married, divorced, or other), race/ethnicity (white, black, Hispanic, other, or unknown), rank (enlisted, officer, or warrant), component

(Active Duty, Reserve, or Guard), and branch of service (Army, Navy/Coast Guard, Marines, or Air Force). Full model results are presented as supplementary material (eTable 1 in the Supplement).

^c Adjusted for age, education (high school or posthigh school), marital status (married, never married, divorced, or other), race/ethnicity (white, black, Hispanic, other, or unknown), rank (enlisted, officer, or warrant), component (Active Duty, Reserve, or Guard), branch of service (Army, Navy/Coast Guard, Marines, or Air Force), posttraumatic stress disorder, depressive disorders, substance use disorders, alcohol use disorders, personality disorders, psychotic disorders, and bipolar disorders.

^d Indicates statistical significance ($P < .05$).

effects of MST and associated mental health diagnoses on post-deployment reintegration are far-reaching. Psychosocial sequelae include a tendency toward poorer interpersonal relationships, lower levels of social support, medical problems, postmilitary adversity, revictimization, and criminal justice involvement,^{4,9,26} all of which may confer risk for financial and housing instability. Given these linkages, positive MST status may represent a single data point that serves as an important marker for potential challenges to successful community reintegration, with postdeployment homelessness as an extreme case of poor reintegration.

The results of this study extend previous research⁸⁻¹² in several ways. First, the samples used in this study included veterans with and without a history of homelessness, allowing for direct comparisons between these groups. Second, the data used in this study were comprehensive, using a national data set including male veterans and covering multiple years of ob-

servation. Last, evaluating the association between MST and homelessness with and without adjusting for related mental health and substance use diagnoses allowed for the examination of MST both as a marker for homelessness in the absence of further diagnostic information and as a significant association above and beyond known correlates of MST and homelessness.

The stronger risk conferred by MST for postdeployment homelessness among men suggests that men with a positive MST screen are a particularly vulnerable group. This finding provides additional evidence for certain disproportionately negative effects of sexual abuse and harassment among men. Several studies have identified adverse outcomes associated with sexual abuse and harassment for which men are at greater conditional risk compared with women, including psychiatric symptoms, reported distress, and alcohol abuse in civilian populations,²⁰⁻²² and bipolar disorder, psychosis,

and schizophrenia in military populations.² In addition to the burden of issues regarding masculinity, sexuality, and self-concept among males who have experienced sexual trauma,²⁷ sex differences in risk for homelessness conferred by MST status may relate to differences in treatment-seeking behaviors following a positive screen. Specifically, among veterans not using mental health services prior to MST screening, women were more likely to access mental health treatment following a positive screen than were men,²⁸ potentially leaving men with unmet mental health needs and vulnerable to adverse outcomes, including the progression of psychiatric symptoms and homelessness.

We acknowledge several limitations in this study. A positive screen for MST is a self-reported marker of having experienced MST and not a diagnosis. Because a positive screen for MST is associated with increased service use, there may be more opportunities to detect homelessness among veterans with a positive screen. However, the differentially lower MST-related risk for homelessness among women despite their higher rates of MST-related treatment-seeking suggests that increased use does not account for greater detection of homelessness. Additionally, the exclusive use of administrative data to determine housing status may result in an underestimation of homelessness rates, and the use of a sample limited to veterans seeking care at VHA facilities may limit generalizability. This study relies on self-reported MST status, and veterans may choose not to disclose MST for a variety of reasons. Under current screening protocol, a positive screen for MST may indicate a broad range of experiences from verbal harassment to physical assault. Thus, there may be an unseen “dose

response” relating to severity or chronicity of trauma and associated outcomes. Finally, these data do not provide information regarding adverse premilitary circumstances or other traumatic stressors, which may be an important factor given the increased likelihood for interpersonal violence among those with prior trauma.^{6,9,29}

Although this study is limited to veterans of the US military, sexual abuse and harassment of military personnel is not unique to the United States; international research literature indicates that sexual harassment and assault are prevalent.³⁰⁻³³ Sexual abuse and harassment are also prevalent in civilian populations, and similar difficulties may exist among survivors in these populations.

Conclusions

Results from this study inform our understanding of veteran homelessness, demonstrating the role of sexual abuse and harassment as an important factor in the complex causal pathways to homelessness. Additionally, these results underscore the relevance of the MST screen as a marker of clinical and prognostic significance regarding reintegration outcomes and emphasize the importance of trauma-informed care and trauma-specific interventions for veterans with a positive screen for MST.^{34,35} Future research focusing on the temporal associations among sexual trauma, mental health diagnoses, and treatment use could yield important information on effective prevention and intervention of postdeployment homelessness.

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