Psychological Services
2015, Vol. 12, No. 4, 394–401

1541-1559/15/$12.00 http://dx.doi.org/10.1037/ser0000054

Sexual Trauma in the Military: Exploring PTSD and Mental Health Care Utilization in Female Veterans

Sara Kintzle, Ashley C. Schuyler, Diana Ray-Letourneau, Sara M. Ozuna, Christopher Munch, Elizabeth Xintarianos, Anthony M. Hasson, and Carl A. Castro
University of Southern California

Sexual trauma remains a pervasive problem in the military. The deleterious mental health outcomes related to incidents of sexual assault have been well-documented in the literature, with particular attention given to the development of posttraumatic stress disorder (PTSD) and utilization of mental health services. Much effort has focused on addressing issues of sexual trauma in the military. The purpose of this study was to examine the incidences of sexual assault in female veterans, the relationship to PTSD and mental health care utilization. The research explored differences in pre- and post-9/11 veterans. Data were collected using a 6-prong recruitment strategy to reach veterans living in Southern California. A total of 2,583 veterans completed online and in-person surveys, of which 325 female veterans were identified for inclusion in the analysis. Forty percent of the sample reported experiencing sexual assault during their military service. A history of military sexual trauma was found to be a substantial contributor to symptoms of PTSD. A majority of female veterans who indicated being sexually assaulted during their military service met the cutoff for a diagnosis of PTSD. Although only a minority of participants who indicated being a victim of sexual assault reported receiving immediate care after the incident, most had received mental health counseling within the past 12 months. Findings point to the need for additional prevention programs within the military and opportunities for care for victims of military sexual assault.

Keywords: military sexual trauma, PTSD, mental health care utilization, female veterans

Sexual assault has long been a pervasive issue among women and men in the U.S. military, as well as society. However, prior to the last several decades, its presence was often ignored, resulting in sexual trauma being overshadowed by other military stressors and traumas such as exposure to combat, witnessing death or injury, and extended separation from loved ones. Some literature suggests that the integration of women into the military has been met with opposition, and this reluctance has "translated into an extreme avoidance of any problems women might be experiencing, due to what might be perceived by some as women's insistence in being included in the male-dominated military in the first place" (Groves, 2013, p. 748). Generally, the majority of sexual assault cases among both men and women in the military go unreported, as military personnel fear social and professional retaliation (U.S. Government Accountability Office, 2008). This can result in victims receiving little, inadequate, or delayed care for the resulting psychological and physical injuries (Kimerling et al., 2010). Although sexual assault in the military is a problem faced by both men and women, this study aims to highlight the experiences of sexual assault in the military among female veterans across various eras of military service, as well as the impact on their psychological health and utilization of care.

Reports of sexual assault in the military have risen by approximately 88% between 2007 (2,688 reports) and 2013 (5,061 reports; Department of Defense, 2011, 2014). However, the Department of Defense (DOD) has also acknowledged that less than 15% of military sexual assault victims report the matter to a military authority (Department of Defense, 2013). Therefore, peer-reviewed research may provide more reliable estimates of the incidence of sexual assault. A recent review of research on military sexual trauma (MST) indicated that between 9.5% and 33% of women report experiencing an attempted or completed rape during military service. When examining MST, including all forms of assault and harassment, between 22% and 84% of women report having these experiences during service (Turchik & Wilson, 2010). For example, in FY 2012, the army had the highest rate of sexual assault reports (2.3 per 1,000 service members), while the marine corps had the lowest (1.7 per 1,000; Department of Defense, 2013). Incidence of sexual assault can also vary across studies due to assessment and methodological differences (Bell, Turchik, & Karpenko, 2014). Moreover, measuring these issues is often a challenge due to their sensitive nature, especially within military contexts (Groves, 2013).

Editor's Note. This is one of thirteen articles in a special issue on Military Sexual Trauma.

Sara Kintzle, Ashley C. Schuyler, Diana Ray-Letourneau, Sara M. Ozuna, Christopher Munch, Elizabeth Xintarianos, Anthony M. Hasson, and Carl A. Castro, School of Social Work, University of Southern California.

Anthony M. Hasson is now at Cohen Veterans Network in Stamford, Connecticut.

Correspondence concerning this article should be addressed to Sara Kintzle, Center for Innovation and Research on Veterans and Military Families, University of Southern California, School of Social Work, 1150 South Olive Street, Suite 1400, Los Angeles, CA 90015. E-mail: kintzle@usc.edu

As females are serving in the military in "unprecedented" numbers, and as increasing numbers of service members from Operations Iraqi Freedom and Enduring Freedom (OIF/OEF) are transitioning out of the military, the female veteran population is expected to grow rapidly, composing nearly 15% of the nation's total living veterans by 2035 (Conard, Young, Hogan, & Armstrong, 2014, p. 280). Therefore, it is increasingly important for veteran-serving providers and care systems to be able to identify and address gender-specific challenges to successful transitions, including those related to military sexual assault.

Sexual Trauma in the Military and PTSD

The effects of being exposed to trauma are varied and can negatively impact both mental and physical health (Smith et al., 2011). This is particularly important when considering women in the military, who are often susceptible to multiple types of trauma. During OIF/OEF, more women were placed in roles on the front lines, putting them in direct exchange with combat violence (Kelly, Skelton, Patel, & Bradley, 2011). Women who enlist in the military also have higher rates of childhood sexual trauma than nonmilitary women (Himmelfarb, Yaeger, & Mintz, 2006). These various types of trauma, compounded by experiences of sexual assault, can place female veterans at an increased risk for posttraumatic stress disorder (PTSD) both during and after their military service (Surís, Lind, Kashner, & Borman, 2007).

Women who experience a sexual trauma in the military are 4–9 times more likely to suffer from PTSD compared with female veterans with no sexual-assault histories (Himmelfarb et al., 2006; Maguen et al., 2012; Turchik & Wilson, 2010). Research suggests that some of the contributing factors include military culture and the nature in which the trauma is addressed. For example, military culture teaches soldiers to suppress individual pain and emotions so that their attention can better be focused on high-stakes tasks (Bell & Reardon, 2011). Unit cohesion is also strongly enforced—a critical element in creating bonds that will allow a unit to effectively protect for and care for one another. However, when a sexual trauma in the military occurs, especially in cases where the perpetrator is in the same unit as the victim, unit cohesion disintegrates and trust is broken (Surís et al., 2007). This makes it difficult for the victim to find the needed support within their unit, leaving them feeling isolated and without the proper resources to deal with the emotional aftermath of trauma (Scott et al., 2014).

The effects of sexual trauma and resulting posttraumatic stress on women are wide-ranging, and can include physical effects (e.g., chronic pain, pelvic pain, menstrual problems, chronic fatigue, headaches, and gastrointestinal symptoms) and psychological effects (e.g., eating disorders, depression, dissociative disorder, personality disorder, substance abuse, panic disorder; Bell & Reardon, 2011; Surís et al., 2007). These effects can lead to higher rates of comorbidity, where a person is suffering from multiple mental health and/or physical health issues—research among veterans of OIF/OEF has found that those with MST are more likely than those without MST to have at least three comorbid mental health diagnoses (Maguen et al., 2012). Furthermore, psychological and emotional problems can affect one's ability to perform physically, to maintain full employment, and overall can reduce quality of life (Surís et al., 2007; Turchik & Wilson, 2010). Thus, it is crucial to acknowledge the psychological impact of sexual assault on women in the military, in an effort to link victims with timely and appropriate care and support.

Health Care Utilization

A history of sexual assault is associated with increased use of both mental health services and other kinds of health services among both civilians (Golding, Stein, Siegel, Burnam, & Sorenson, 1988; Koss, Koss, & Woodruff, 1991; New & Berliner, 2000) and veterans (Kimerling, Street, Gima, & Smith, 2008; Sadler, Booth, Mengeling, & Doebbeling, 2004; Surís, Lind, Kashner, Borman, & Petty, 2004; Valdez et al., 2011; Zinzow, Grubaugh, Frueh, & Magruder, 2008). However, few studies have focused on access to and utilization of sexual assault-related treatment specific to military populations (Street, Kimerling, Bell, & Pavao, 2011; Turchik, Bucossi, & Kimerling, 2014), and those that do exist tend to report inconsistent results, often related to sampling strategies. For example, one study which examined utilization of Veterans Administration (VA) health care services among veterans of OIF/OEF who reported an experience of MST found that three quarters reported at least one MST-related visit to the VA, with over half having at least one MST-related mental health care visit (Turchik, Pavao, Hyun, Mark, & Kimerling, 2012). However, the sample of veterans in this study was derived from veterans who both reported MST and were accessing care at the VA, and thus may not represent those MST victims who do not report and/or seek health care. Another study among a broader sample of female military personnel found that approximately one third of those who experienced sexual assault in the military sought care following the incident, with approximately 25% reporting mental health care and 16% reporting medical care. In general, women veterans who experience military sexual assault have reported less or delayed use of health care services and have a lower average annual cost of health care than those who experience civilian sexual assault, despite a higher likelihood of having PTSD (Surís et al., 2004; Washington, Bean-Mayberry, Riopelle, & Yano, 2011). However, since the Veteran's Health Administration made all MST-related care free in 1995 and mandated universal screening in 2000 (Turchik et al., 2012), we now have a better sense of utilization of MST-related care among veterans. MST programs are now available in 92% of VA health centers (Watkins et al., 2011), and nearly 590,000 health care outpatient visits were designated as MST-related in 2009 (Military Sexual Trauma Support Team, 2010).

Despite increased attention paid to treatment of sexual trauma experienced during military service, a number of barriers continue to impede service utilization. In general, female veterans' use of VA health care services has been linked to their perceived concerns about the quality and availability of gender-sensitive care within a primarily male-dominated environment (Washington, Kleimann, Michelini, Kleimann, & Canning, 2007)—this may be especially true for victims of MST, who have previously reported dissatisfaction with various facets of MST-related care within the VA (Kimerling et al., 2011). Anecdotal reports from victims indicate that they may be reluctant to seek treatment at VA health centers, due to factors such as their relationship with a military system they believe has failed them, and a perception that VA providers rely heavily on prescription medication for symptom reduction rather than fully examining the impact of the trauma in a more holistic fashion (Brown, 2013; Cruz & Anchan, 2013).

Other barriers may include psychological avoidance, stigma, lack of knowledge, and gender-related concerns such as perceived lack of support from a male-dominated environment and discomfort with male service providers (Turchik et al., 2014). In addition, institutional factors—such as the lower disability claim approval rate given to PTSD claims related to MST compared with all other PTSD claims (32% and 53%, respectively; American Civil Liberties Union, 2013)—may further contribute to negative perceptions of the VA and thus impact care-seeking behavior among victims, despite the availability of free MST-related health care at VA health centers (U.S. Department of Veterans Affairs, 2013).

Much remains unknown about the long-term mental and physical health needs and service utilization of veterans who experienced sexual trauma in the military (Turchik et al., 2012). The current study assesses sexual assault in the military among a sample of female veterans from both pre-9/11 and post-9/11 service eras, as well as symptoms of PTSD and mental health care utilization associated with experiences of sexual trauma in the military.

Method

Sample data was obtained from a survey of 2,583 veterans living in Southern California, in both the Los Angeles and Orange counties. A six-pronged directed recruitment strategy was used to achieve maximum variability and representativeness for potential participants from a nonprobability sample. The first strategy enlisted a state agency that provided access to contact information of veterans who reported transitioning to the area after discharging from the military. Those veterans identified in each of the two counties were contacted by the state agency through e-mail, and were invited to participate in the study utilizing an online survey link.

The second strategy utilized the community call centers within each county to identify potential participants by assessing the information provided during the initial screening process. If the caller self-identified as a veteran, they were asked permission to be contacted for participation in studies involving veterans. If the caller agreed, they were added to a list that was provided to the researchers on a weekly basis. Upon receiving the list, researchers contacted participants by phone to enlist their participation in the survey. If the participant agreed to partake in the survey, they were provided the option of either receiving the survey through e-mail or of being mailed a hard copy with a stamped return envelope for their convenience.

The third sampling strategy utilized a national veteran organization that identified potential participants through county zip codes. Individuals identified as living within the target zip codes of the two counties were then e-mailed by the organization and invited to participate in the study using an online link to the survey.

The fourth sampling method involved collaboration with agencies that provide services to veterans. Collaborating agencies offered a multitude of services such as behavioral health, employment, legal, and housing services. The identified agencies used two methods of communication to enlist participants for the survey. The first method for the agencies was to send an e-mail to the veterans within their database inviting them to participate in the survey utilizing the online link. The second method used an on-ground survey approach where the host agency worked in collaboration with the researchers to hold data collection events on-site, to recruit participants to complete hard copy surveys. Research staff attended and conducted all data collection events.

Similar to the fourth sampling strategy, the fifth sampling approach targeted college veteran agencies and organizations, utilizing both e-mail and data collection events to enlist participants. The final sampling approach used TV and printed advertisements, public service announcements, and social media platforms to build a presence within the Los Angeles County community. Avenues such as Twitter, Facebook, Linked In, mass e-mail, and a dedicated website for the survey, endorsed the opportunity for involvement to potential participants. All participants received a $15 gift card for completing the survey, which took approximately 60–90 min per contributor. The Institutional Review Board at the University of Southern California approved all data collection methods and procedures.

Study Variables and Measures

Demographic variables. Demographic variables on the survey to be reported here include age, race, gender, and level of educational attainment. Military background variables of service branch and service era were also included.

PTSD checklist. The PTSD Checklist (PCL; Weathers, Litz, Herman, Huska, & Keane, 1993) is a brief, self-report inventory for assessing the 17 symptoms of PTSD outlined in the fourth edition of the *Diagnostic and Statistical Manual of Mental Disorders* (*DSM–IV*; American Psychiatric Association, 2000). The measure asks participants how they have been impacted by exposure to stressful life experiences, rating each item on a 5-point Likert scale ranging from 1 (*not at all*) to 5 (*extremely*), based on how much they have been bothered by the problem in the last 30 days. Scores on the PCL range from 17 to 85. A score of 50 or above has been demonstrated as an indication of clinically significant PTSD (Hoge et al., 2004; Weathers et al., 1993). The measure has demonstrated strong internal consistency and test–retest reliability ($\alpha = .96$; $r = .96$; Weathers et al., 1993). The internal consistency in this study was excellent ($\alpha = .97$).

Sexual trauma in the military. The two-item VA screen examines instances of sexual harassment and sexual assault (Kroenke, Spitzer, & Williams, 2002). The second item, which asks "During your military service, did someone ever use force or threat of force to have sexual contact with you against your will?," measures instances of sexual assault during military service. Respondents were provided three answer choices: no, yes, or unsure. Only those participants who answered yes were considered as endorsing the question.

Utilization of mental health services. Two questions were used to examine utilization of services. Immediately following the MST questions, participants were asked to indicate whether they received help following instances of sexual assault (yes/no). Participants were also asked to indicate whether they have received mental health counseling within the past 12 months (yes/no).

Results

Of the original sample, 327 veterans were identified as female for inclusion in the analysis. The sample population was divided into participants that served before and after 9/11 in order to more

closely examine the difference in period of service. Pre-9/11 veterans consisted of 46% of the sample with 55% serving post-9/11. The majority of pre-9/11 veterans identified as White (48%) or African American (30%), whereas the majority of post-9/11 identified as Hispanic or Latino (40%) or White (31%). About 44% of pre-9/11 veterans sampled were between the ages of 51 and 60, while 43% of the post-9/11 veterans were between the ages of 21 and 30. Approximately 40% of both pre- and post-9/11 veterans reported obtaining a bachelor's degree or higher. Over a quarter of pre-9/11 veterans (27%) indicated being married at the time of the survey while 40% of post-9/11 veterans reported being married. Over half of post-9/11 veterans (52%) had separated from the military within the last 6 years. Table 1 displays the sample characteristics.

Sexual Trauma in the Military and PTSD

About 40% of the sample of female veterans reported experiencing sexual assault during their military service. Scores on the PCL, measuring PTSD, ranged from 17–85 with a mean score of 42 (*SD* = 20.37). About 35% of the sample met the clinically significant cutoff score of 50 on the PCL, indicating a probable diagnosis of PTSD. Of the 35% with probable PTSD, 76% reported experiencing sexual assault during their military service.

Table 1
Sample Characteristics

	Pre-9/11 *N* (%)	Post-9/11 *N* (%)
Race/Ethnicity		
Asian	2 (1.3%)	12 (6.7%)
Black/African American	45 (30.2%)	34 (19.0%)
Hispanic/Latino	22 (14.8%)	72 (40.4%)
White (not Hispanic)	71 (47.7%)	55 (30.8%)
Other	9 (6.0%)	5 (2.8%)
Education		
GED/High school diploma	9 (6.3%)	7 (4.1%)
Some college	74 (52.1%)	93 (54.7%)
Bachelors degree or higher	54 (38.0%)	68 (40.0%)
Other	5 (3.5%)	2 (1.2%)
Marital status		
Married	38 (27.1%)	69 (40.6%)
Separated, divorced, widowed	59 (42.1%)	33 (19.4%)
Single	43 (30.7%)	68 (40.0%)
Age (years)		
21–25	0 (0%)	18 (10.6%)
26–30	0 (0%)	55 (32.4%)
31–40	16 (11.3%)	67 (39.4%)
41–50	34 (23.9%)	15 (8.8%)
51–60	63 (44.4%)	14 (8.2%)
Over 61	28 (19.7)	1 (.6%)
Branch of service		
Air Force	22 (15.5%)	26 (15.3%)
Army	67 (47.2%)	72 (42.4%)
Coast Guard	1 (.7%)	4 (2.4%)
Marines	15 (10.6%)	28 (16.5%)
Navy	37 (26.1%)	40 (23.5%)
Years since service		
0–2 years	0 (0%)	38 (22.4%)
3–5 years	0 (0%)	51 (30.0%)
6–9 years	0 (0%)	50 (29.4%)
10+ years	142 (100%)	31 (18.2%)

Pre-9/11 versus post-9/11 female veterans. When examining sexual assault, almost half of pre-9/11 veterans (48%) and 30% of post-9/11 veterans reported sexual contact against their will during their military service. Of the pre-9/11 female veterans who reported sexual assault, 53% met the cutoff score on the PCL indicating a probable diagnosis of PTSD. Only 10% of pre-9/11 veterans who did not report experiencing sexual assault during military service met the diagnostic cutoff for PTSD. About 65% of post-9/11 female veterans who indicated being sexual assaulted during their military service met the cutoff score indicating a probable diagnosis of PTSD. About 24% of those female post-9/11 veterans who were not sexually assaulted during their military service met the diagnostic criteria for PTSD.

Service Utilization

The majority of both pre- and post-9/11 female veterans reported not seeking help after being sexually assaulted during military service. Only 10% of pre-9/11 and 18% of post-9/11 veterans indicated receiving help after their sexual assault. However, more pre-9/11 and post-9/11 female veterans who were sexually assaulted during their military service reported receiving mental health counseling within the past year, 81% and 76%, respectfully. For those pre- and post-9/11 veterans who did not report experiencing sexual assault during their military service, 27% and 32%, respectively, reported receiving mental health counseling within the past year. Table 2 represents the sample reports of sexual assault and harassment in the military, PTSD, and service utilization.

Discussion

This study adds to the growing body of literature describing the pervasive nature of sexual assault in the U.S. military. To our knowledge, this is the first study examining differences related to military sexual assault and mental health care, between pre- and post-9/11 female veterans. The incidence of sexual assault reported in this study is generally consistent with what has been previously reported among female veteran samples—with approximately 20% to 43% reporting experiencing sexual assault while in the military (Surís & Lind, 2008). Although this is higher than what is found in the military's anonymous Workplace Gender Relations Survey of Active Duty members (Defense Manpower Data Center, 2013) where reported rates of sexual assault in the military have remained between 4% and 7% since 2004, data collected from veteran samples often describes higher incidence than those found in active duty samples.

The prevalence of sexual assault during military service in pre-9/11 female veterans was particularly high with almost half reporting being the victim of sexual assault during their military service. Although this is consistent with similar studies (Fontana & Rosenheck, 1998; Sadler, Booth, Cook, Torner, & Doebbeling, 2001), incidences reported in our study were higher than most of what has been reported in previous research on female veterans serving before 9/11; several studies have reported a prevalence of sexual assault in the military of approximately 23%–33% (Butterfield, McIntyre, Stechuchak, Nanda, & Bastian, 1998; Coyle, Wolan, & Van Horn, 1996; Frayne et al., 1999; Hankin et al., 1999; Sadler et al., 2004; Sadler, Booth, Nielson, & Doebbeling,

Table 2
Military Sexual Assault, PTSD, and Service Utilization in Female Veterans

		Experienced MSA	Probable PTSD	Received immediate treatment	Received MH care within the past year
Pre-9/11 (n = 149)	Yes	48%	53%	10%	81%
	No	52%	10%	N/A	27%
Post-9/11 (n = 178)	Yes	30%	65%	18%	76%
	No	70%	24%	N/A	32%

Note. MSA = military sexual assault; PTSD = posttraumatic stress disorder; MH = mental health.

2000; Skinner et al., 2000; Surís et al., 2004). Among our sample of post-9/11 veterans, incidents of sexual assault were consistent with those found in research focused on females who served post-9/11 (Katz, Bloor, Cojucar, & Draper, 2007). Variation in reported sexual assaults in the military often reflects inconsistencies across studies in research methodology, sample selection, and measurement of sexual assault (Turchik & Wilson, 2010). This highlights the need for a more comprehensive and consistent method of assessing and understanding sexual assaults that occur during military service.

Among women in our study, sexual assault during military service may have likely contributed to a majority of clinically significant PTSD symptoms. About one third of women in our study reported clinically significant PTSD symptoms. This is similar to what has been found in previous research. Dobie et al. (2004) reported a 36% prevalence of PTSD in a sample of female veterans as measured by the PCL. Benda and House (2003) found 40% of female veterans in their sample scored in the PTSD range on the Clinician-Administered PTSD Scale. Many of the women in our study who had experienced sexual assault in the military indicated a probable diagnosis of PTSD, including over half of pre-9/11 veterans and two thirds of post-9/11 veterans. The high likelihood of PTSD associated with sexual assault during military service is also consistent with what has been found in previous research demonstrating a significantly increased risk of developing PTSD for those with a history of MST (Maguen et al., 2012; Surís et al., 2007). The complete picture of sexual assault in the military and its relationship to PTSD represented in this sample may demonstrate the potentially enduring and long-term impact of MST on well-being.

Encouraging, was the finding that reported sexual assaults during military service among post-9/11 female veterans were lower than those among pre-9/11 female veterans. Several important factors may influence this difference. For one, the establishment of the Sexual Assault Prevention and Response (SAPR) program in 2004 and the availability of services for the last decade may have contributed to fewer incidents of sexual assault. The existence of this program represents an increased institutional focus on the problem of sexual trauma in the military and its impact on the military environment, and attitudes of service members may have contributed to the lower incidence among post-9/11 veterans in our sample. In addition, increased visibility and awareness of MST in the media may have had a similar impact on the military environment. Finally, the integration of women into more military combat roles may also have an effect on sexual assault in the military. The conflicts in Iraq and Afghanistan represented the first opportunity for women to deploy regularly and engage in combat with men. Although not all positions are currently open to women, their increased presence in the military may result in perceptions of a more gender-balanced environment, and positively impact attitudes toward female comrades and women in general. Thus, as men become more accustomed to working with female service members and within a more gender-balanced environment, they may be less likely to commit sexual assault or harassment.

Despite the efforts to address sexual trauma in the military, of the women from both pre- and post-9/11 eras who experienced sexual assault during military service, very few reported seeking help after the incident. Although almost twice as common among post-9/11 veterans than pre-9/11 veterans, the reported use of acute sexual trauma-related services remained below 20%. Women with a history of sexual abuse tend to be high utilizers of health care (Campbell, Greeson, Bybee, & Raja, 2008; Hulme, 2000), but women in the military face various barriers to disclosure of the incident and seeking related care. While serving on active duty, immediate help for sexual trauma-related problems may require filing a restricted or unrestricted report, therefore linking receiving help to reporting. Dissatisfaction with aspects of SAPR services may also impact utilization of care services (Defense Manpower Data Center, 2013). Regardless of the specific barrier, it is apparent much work is needed in providing access to immediate care for victims of sexual assault who are serving in the military.

Higher reports of recent mental health care utilization among women in our study may also represent the extended psychological burden of sexual assault during military service among victims. In our study, the majority of both pre- and post-9/11 female veterans with a history of military sexual assault reported seeking mental health services at the VA within the previous year. Barriers to care within both the military and VA health care systems may prolong the time an individual takes to seek treatment for MST-related health problems. Recent research has also indicated that perceived barriers to help-seeking following military sexual assault, particularly those related to logistical factors (e.g., difficulty getting time off work) and stigma (e.g., being perceived as weak), may contribute to the risk of experiencing depressive or PTSD symptoms (Holland, Rabelo, & Cortina, 2015). In addition, it may take years for one to recognize an incident as sexual trauma, and in some cases, a fragmented memory of the event may delay acknowledgment even more (Himmelfarb et al., 2006). The high utilization of VA mental health services in the last year among female veterans in our sample, especially those from the pre-9/11 era, could represent the long-term psychological impact of military sexual assault and continued need for comprehensive mental health services among victims.

Although the demographics of the sample were generally representative of the make-up of female veterans, the geographic location from which the sample was obtained, as well as the cross-sectional design of the study, may limit the generalizability of these findings. Additionally, due to the descriptive nature of the statistics provided, a causal relationship between sexual trauma in the military and PTSD cannot be determined.

Findings of this study demonstrate that there still is much to be done in addressing sexual assault in the military. Although fewer post-9/11 female veterans indicated experiencing sexual assault during their military service, still a significant portion of the sample reported experiencing MST. Based on the information obtained from this study, continued programs should work to target the prevention of sexual assault in the military and take into account the multifaceted causes and contributors. Programs should also be continuously evaluated for effectiveness and improved based on those findings.

This study also provides significant contribution in considering the needs of female veterans who have experienced sexual assault. Efforts should be made in increasing accessibility and acceptability of immediate care for victims of sexual trauma in the military. The ability to and likelihood of seeking mental health care while in the military are dependent on a range of individual and environmental characteristics, but previously noted barriers have largely related to stigma surrounding mental health, concerns about the impact on one's military career, and tenets of military culture which encourage "toughness" and stoicism (Eckart & Dufrene, 2015; Greene-Shortridge, Britt, & Castro, 2007; Holland et al., 2015; Mengeling, Booth, Torner, & Sadler, 2015). For military victims of sexual trauma, these barriers may be compounded by the need to report the trauma in order to receive treatment, as well as concerns about confidentiality and retaliation (Burns, Grindlay, Holt, Manski, & Grossman, 2014). Future research is needed to investigate alternative pathways to receiving care for victims of sexual trauma in the military, as well as strategies for reducing stigma and discrimination associated with mental health and sexual trauma in the military.

Results from this sample demonstrate the enduring impact sexual trauma can have on mental health. Future research should explore how targeted intervention directly after the trauma may assist in reducing the long-term effects of MST over the lifetime. Such interventions should be implemented in a manner that is nonjudgmental and supportive, and address concerns about privacy and confidentiality, while providing appropriate and gender-sensitive care to victims (Turchik et al., 2013, 2014). It is critically important that treatment providers have a clear understanding of military culture and its influence on the impact of sexual trauma among military victims, as well as strategies for mitigating stigma and career concerns associated with seeking mental health care. By doing so, treatment providers have the opportunity to provide a level of positive social support to the victim, which can have a protective effect against the development of mental health problems among those who experience sexual trauma (Ullman, 1999). By encouraging the utilization of mental health services following sexual trauma, such interventions can help to normalize mental health care treatment among military personnel, and thus buffer against long-term deleterious consequences of sexual trauma that may develop if left unaddressed. Additionally, future research and programming should explore the use of technology to encourage utilization of mental health care services among military personnel and veterans, as Internet-based technologies may provide an effective tool for reaching and treating those with a history of sexual trauma (Nichols, 2015).

References

American Civil Liberties Union. (2013). *Battle for benefits: VA discrimination against survivors of military sexual trauma*. New Haven, CT: Author.

American Psychiatric Association. (2000). *Diagnostic and statistical manual of mental disorders* (4th ed.). Washington, DC: Author.

Bell, M. E., & Reardon, A. (2011). Experiences of sexual harassment and sexual assault in the military among OEF/OIF veterans: Implications for health care providers. *Social Work in Health Care, 50,* 34–50. http://dx.doi.org/10.1080/00981389.2010.513917

Bell, M. E., Turchik, J. A., & Karpenko, J. A. (2014). Impact of gender on reactions to military sexual assault and harassment. *Health & Social Work, 39,* 25–33. http://dx.doi.org/10.1093/hsw/hlu004

Benda, B., & House, H. (2003). Does PTSD differ according to gender among military veterans? *Journal of Family Social Work, 7,* 15–34. http://dx.doi.org/10.1300/J039v07n01_02

Brown, P. L. (2013). Trauma sets female veterans adrift back home. *The New York Times*. Retrieved from http://www.nytimes.com/2013/02/28/us/female-veterans-face-limbo-in-lives-on-the-street.html?pagewanted=all

Burns, B., Grindlay, K., Holt, K., Manski, R., & Grossman, D. (2014). Military sexual trauma among US servicewomen during deployment: A qualitative study. *American Journal of Public Health, 104,* 345–349. http://dx.doi.org/10.2105/AJPH.2013.301576

Butterfield, M., McIntyre, L., Stechuchak, K., Nanda, K., & Bastian, L. (1998). Mental disorder symptoms in veteran women: Impact of physical and sexual assault. *Journal of the American Medical Women's Association, 53,* 198–200.

Campbell, R., Greeson, M. R., Bybee, D., & Raja, S. (2008). The co-occurrence of childhood sexual abuse, adult sexual assault, intimate partner violence, and sexual harassment: A mediational model of posttraumatic stress disorder and physical health outcomes. *Journal of Consulting and Clinical Psychology, 76,* 194–207. http://dx.doi.org/10.1037/0022-006X.76.2.194

Conard, P. L., Young, C., Hogan, L., & Armstrong, M. L. (2014). Encountering women veterans with military sexual trauma. *Perspectives in Psychiatric Care, 50,* 280–286. http://dx.doi.org/10.1111/ppc.12055

Coyle, B. S., Wolan, D. L., & Van Horn, A. S. (1996). The prevalence of physical and sexual abuse in women veterans seeking care at a Veterans Affairs Medical Center. *Military Medicine, 161,* 588–593.

Cruz, C., & Anchan, A. (2013). After sexual trauma, soldiers search for better care, peace. *Kaiser Health News*. Retrieved from http://khn.org/news/news21-military-sexual-trauma-inadequate-treatment/

Defense Manpower Data Center. (2013). *2012 Workplace and gender relations survey of active duty members*. Washington, DC: Author. Retrieved from http://www.sapr.mil/index.php/research

Department of Defense. (2011). *Department of Defense annual report on sexual assault in the military, fiscal year 2010*. Washington, DC: U.S. Government Printing Office.

Department of Defense. (2013). *Department of Defense annual report on sexual assault in the military, fiscal year 2012*. Washington, DC: U.S. Government Printing Office.

Department of Defense. (2014). *Department of Defense annual report of sexual assault in the military, fiscal year 2013*. Washington, DC: U.S. Government Printing Office.

Dobie, D. J., Kivlahan, D. R., Maynard, C., Bush, K. R., Davis, T. M., & Bradley, K. A. (2004). Posttraumatic stress disorder in female veterans: Association with self-reported health problems and functional impair-

ment. *Archives of Internal Medicine, 164,* 394–400. http://dx.doi.org/10.1001/archinte.164.4.394

Eckart, E., & Dufrene, R. L. (2015). Barriers to mental health treatment in the military. *Journal of Military and Government Counseling, 3,* 40–55.

Fontana, A., & Rosenheck, R. (1998). Duty-related and sexual stress in the etiology of PTSD among women veterans who seek treatment. *Psychiatric Services, 49,* 658–662. http://dx.doi.org/10.1176/ps.49.5.658

Frayne, S. M., Skinner, K. M., Sullivan, L. M., Tripp, T. J., Hankin, C. S., Kressin, N. R., & Miller, D. R. (1999). Medical profile of women Veterans Administration outpatients who report a history of sexual assault occurring while in the military. *Journal of Women's Health & Gender-Based Medicine, 8,* 835–845. http://dx.doi.org/10.1089/152460999319156

Golding, J. M., Stein, J. A., Siegel, J. M., Burnam, M. A., & Sorenson, S. B. (1988). Sexual assault history and use of health and mental health services. *American Journal of Community Psychology, 16,* 625–644. http://dx.doi.org/10.1007/BF00930018

Greene-Shortridge, T. M., Britt, T. W., & Castro, C. A. (2007). The stigma of mental health problems in the military. *Military Medicine, 172,* 157–161. http://dx.doi.org/10.7205/MILMED.172.2.157

Groves, C. (2013). Military sexual assault: An ongoing and prevalent problem. *Journal of Human Behavior in the Social Environment, 23,* 747–752. http://dx.doi.org/10.1080/10911359.2013.795064

Hankin, C. S., Skinner, K. M., Sullivan, L. M., Miller, D. R., Frayne, S., & Tripp, T. J. (1999). Prevalence of depressive and alcohol abuse symptoms among women VA outpatients who report experiencing sexual assault while in the military. *Journal of Traumatic Stress, 12,* 601–612. http://dx.doi.org/10.1023/A:1024760900213

Himmelfarb, N., Yaeger, D., & Mintz, J. (2006). Posttraumatic stress disorder in female veterans with military and civilian sexual trauma. *Journal of Traumatic Stress, 19,* 837–846. http://dx.doi.org/10.1002/jts.20163

Hoge, C. W., Castro, C. A., Messer, S. C., McGurk, D., Cotting, D. I., & Koffman, R. L. (2004). Combat duty in Iraq and Afghanistan, mental health problems, and barriers to care. *The New England Journal of Medicine, 351,* 13–22. http://dx.doi.org/10.1056/NEJMoa040603

Holland, K. J., Rabelo, V. C., & Cortina, L. M. (2015). Collateral damage: Military sexual trauma and help-seeking barriers. *Psychology of Violence*. Advance online publication. http://dx.doi.org/10.1037/a0039467

Hulme, P. A. (2000). Symptomatology and health care utilization of women primary care patients who experienced childhood sexual abuse. *Child Abuse & Neglect, 24,* 1471–1484. http://dx.doi.org/10.1016/S0145-2134(00)00200-3

Katz, L. S., Bloor, L. E., Cojucar, G., & Draper, T. (2007). Women who served in Iraq seeking mental health services: Relationships between military sexual trauma, symptoms, and readjustment. *Psychological Services, 4,* 239–249. http://dx.doi.org/10.1037/1541-1559.4.4.239

Kelly, U. A., Skelton, K., Patel, M., & Bradley, B. (2011). More than military sexual trauma: Interpersonal violence, PTSD, and mental health in women veterans. *Research in Nursing & Health, 34,* 457–467. http://dx.doi.org/10.1002/nur.20453

Kimerling, R., Pavao, J., Valdez, C., Mark, H., Hyun, J. K., & Saweikis, M. (2011). Military sexual trauma and patient perceptions of Veteran Health Administration health care quality. *Women's Health Issues, 21,* S145–S151. http://dx.doi.org/10.1016/j.whi.2011.04.007

Kimerling, R., Street, A. E., Gima, K., & Smith, M. W. (2008). Evaluation of universal screening for military-related sexual trauma. *Psychiatric Services, 59,* 635–640. http://dx.doi.org/10.1176/ps.2008.59.6.635

Kimerling, R., Street, A. E., Pavao, J., Smith, M. W., Cronkite, R. C., Holmes, T. H., & Frayne, S. M. (2010). Military-related sexual trauma among Veterans Health Administration patients returning from Afghanistan and Iraq. *American Journal of Public Health, 100,* 1409–1412. http://dx.doi.org/10.2105/AJPH.2009.171793

Koss, M. P., Koss, P. G., & Woodruff, W. J. (1991). Deleterious effects of criminal victimization on women's health and medical utilization. *Archives of Internal Medicine, 151,* 342–347. http://dx.doi.org/10.1001/archinte.1991.00400020092019

Kroenke, K., Spitzer, R. L., & Williams, J. B. (2002). The PHQ-15: Validity of a new measure for evaluating the severity of somatic symptoms. *Psychosomatic Medicine, 64,* 258–266.

Maguen, S., Cohen, B., Ren, L., Bosch, J., Kimerling, R., & Seal, K. (2012). Gender differences in military sexual trauma and mental health diagnoses among Iraq and Afghanistan veterans with posttraumatic stress disorder. *Women's Health Issues, 22,* e61–e66. http://dx.doi.org/10.1016/j.whi.2011.07.010

Mengeling, M. A., Booth, B. M., Torner, J. C., & Sadler, A. G. (2015). Post-sexual assault health care utilization among OEF/OIF servicewomen. *Medical Care, 53,* S136–S142. http://dx.doi.org/10.1097/MLR.0000000000000267

Military Sexual Trauma Support Team. (2010). *Military sexual trauma (MST) screening report, fiscal year 2009*. Washington, DC: Department of Veterans Affairs, Office of Mental Health Services.

New, M., & Berliner, L. (2000). Mental health service utilization by victims of crime. *Journal of Traumatic Stress, 13,* 693–707. http://dx.doi.org/10.1023/A:1007818402277

Nichols, J. L. (2015). Reaching those who are difficult to reach: Exploring online interventions for survivors of military sexual trauma. *Journal of Military and Government Counseling, 3,* 2–24.

Sadler, A. G., Booth, B. M., Cook, B. L., Torner, J. C., & Doebbeling, B. N. (2001). The military environment: Risk factors for women's non-fatal assaults. *Journal of Occupational and Environmental Medicine, 43,* 325–334. http://dx.doi.org/10.1097/00043764-200104000-00007

Sadler, A. G., Booth, B. M., Mengeling, M. A., & Doebbeling, B. N. (2004). Life span and repeated violence against women during military service: Effects on health status and outpatient utilization. *Journal of Women's Health, 13,* 799–811.

Sadler, A. G., Booth, B. M., Nielson, D., & Doebbeling, B. N. (2000). Health-related consequences of physical and sexual violence: Women in the military. *Obstetrics and Gynecology, 96,* 473–480. http://dx.doi.org/10.1016/S0029-7844(00)00919-4

Scott, J. C., Pietrzak, R. H., Southwick, S. M., Jordan, J., Silliker, N., Brandt, C. A., & Haskell, S. G. (2014). Military sexual trauma interacts with combat exposure to increase risk for posttraumatic stress symptomatology in female Iraq and Afghanistan veterans. *Journal of Clinical Psychiatry, 75,* 637–643. http://dx.doi.org/10.4088/JCP.13m08808

Skinner, K., Kressin, N., Frayne, S., Tripp, T., Hankin, C., Miller, D., & Sullivan, L. M. (2000). The prevalence of military sexual assault among female Veterans' Administration outpatients. *Journal of Interpersonal Violence, 15,* 291–310. http://dx.doi.org/10.1177/088626000015003005

Smith, B. N., Shipherd, J. C., Schuster, J. L., Vogt, D. S., King, L. A., & King, D. W. (2011). Posttraumatic stress symptomatology as a mediator of the association between military sexual trauma and post-deployment physical health in women. *Journal of Trauma & Dissociation, 12,* 275–289. http://dx.doi.org/10.1080/15299732.2011.551508

Street, A. E., Kimerling, R., Bell, M. E., & Pavao, J. (2011). Sexual harassment and sexual assault during military service. In J. I. Ruzek, P. P. Schnurr, J. J. Vasterling, & M. J. Friedman (Eds.), *Caring for veterans with deployment-related stress disorders* (pp. 131–150). Washington, DC: American Psychological Association. http://dx.doi.org/10.1037/12323-006

Surís, A., & Lind, L. (2008). Military sexual trauma: A review of prevalence and associated health consequences in veterans. *Trauma, Violence, & Abuse, 9,* 250–269. http://dx.doi.org/10.1177/1524838008324419

Surís, A., Lind, L., Kashner, T. M., & Borman, P. D. (2007). Mental health, quality of life, and health functioning in women veterans: Differential outcomes associated with military and civilian sexual assault. *Journal of*

Interpersonal Violence, 22, 179–197. http://dx.doi.org/10.1177/0886260506295347

Surís, A., Lind, L., Kashner, T. M., Borman, P. D., & Petty, F. (2004). Sexual assault in women veterans: An examination of PTSD risk, health care utilization, and cost of care. *Psychosomatic Medicine, 66,* 749–756. http://dx.doi.org/10.1097/01.psy.0000138117.58559.7b

Turchik, J. A., Bucossi, M. M., & Kimerling, R. (2014). Perceived barriers to care and gender preferences among veteran women who experienced military sexual trauma: A qualitative analysis. *Military Behavioral Health, 2,* 180–188. http://dx.doi.org/10.1080/21635781.2014.892410

Turchik, J. A., McLean, C., Rafie, S., Hoyt, T., Rosen, C. S., & Kimerling, R. (2013). Perceived barriers to care and provider gender preferences among veteran men who have experienced military sexual trauma: A qualitative analysis. *Psychological Services, 10,* 213–222. http://dx.doi.org/10.1037/a0029959

Turchik, J. A., Pavao, J., Hyun, J., Mark, H., & Kimerling, R. (2012). Utilization and intensity of outpatient care related to military sexual trauma for veterans from Afghanistan and Iraq. *The Journal of Behavioral Health Services & Research, 39,* 220–233. http://dx.doi.org/10.1007/s11414-012-9272-4

Turchik, J. A., & Wilson, S. M. (2010). Sexual assault in the U.S. military: A review of the literature and recommendations for the future. *Aggression and Violent Behavior, 15,* 267–277. http://dx.doi.org/10.1016/j.avb.2010.01.005

Ullman, S. E. (1999). Social support and recovery from sexual assault. *Aggression and Violent Behavior, 4,* 343–358. http://dx.doi.org/10.1016/S1359-1789(98)00006-8

U.S. Department of Veterans Affairs. (2013). *Quick facts about VA's health care services for military sexual trauma (MST)*. Washington, DC: Author. Retrieved from http://www.mentalhealth.va.gov/docs/VAHCS_MST_November2013.pdf

U.S. Government Accountability Office. (2008). *Military personnel: DOD's and the Coast Guard's Sexual Assault Prevention and Response Programs face implementation and oversight challenges. Report to Congressional Requestors* (GAO-08–924). Washington, DC: Author.

Valdez, C., Kimerling, R., Hyun, J. K., Mark, H. F., Saweikis, M., & Pavao, J. (2011). Veterans Health Administration mental health treatment settings of patients who report military sexual trauma. *Journal of Trauma & Dissociation, 12,* 232–243. http://dx.doi.org/10.1080/15299732.2011.551510

Washington, D. L., Bean-Mayberry, B., Riopelle, D., & Yano, E. M. (2011). Access to care for women veterans: Delayed healthcare and unmet need. *Journal of General Internal Medicine, 26,* 655–661. http://dx.doi.org/10.1007/s11606-011-1772-z

Washington, D. L., Kleimann, S., Michelini, A. N., Kleimann, K. M., & Canning, M. (2007). Women veterans' perceptions and decision-making about Veterans Affairs health care. *Military Medicine, 172,* 812–817. http://dx.doi.org/10.7205/MILMED.172.8.812

Watkins, K. E., Pincus, H. A., Smith, B., Paddock, S. M., Mannle, T. E., Jr., Woodroffe, A., . . . Call, C. (2011). *Veterans Health Administration mental health program evaluation*. Santa Monica, CA: RAND Corporation.

Weathers, F. W., Litz, B. T., Herman, D. S., Huska, J. A., & Keane, T. M. (1993). *The PTSD checklist: Reliability, validity, and diagnostic utility*. Paper presented at the annual meeting of the International Society for Traumatic Stress Studies, San Antonio, TX.

Zinzow, H. M., Grubaugh, A. L., Frueh, B. C., & Magruder, K. M. (2008). Sexual assault, mental health, and service use among male and female veterans seen in Veterans Affairs primary care clinics: A multi-site study. *Psychiatry Research, 159,* 226–236. http://dx.doi.org/10.1016/j.psychres.2007.04.008

Received October 31, 2014
Revision received July 29, 2015
Accepted July 30, 2015 ■