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RESEARCH ARTICLE

Administrative Military Discharge and Suicidal Ideation Among Post–9/11 Veterans

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Introduction: From 2005 to 2016, the Veteran suicide rate increased 25.9%. Reducing this rate is a top priority for the Department of Veterans Affairs. In 2017, a policy change expanded emergent mental health services to include previously ineligible Veterans discharged under other than honorable conditions. To date, research examining the relationship between military discharge type and suicide risk has been limited.

Methods: This study aimed to examine the association between discharge type (honorable versus administrative) and active suicide ideation among Veterans participating in the Survey of Experiences of Returning Veterans (N=850, data collection 2012–2015 and data analysis 2017–2018) using logistic regression. Stratified analyses explored whether gender, time since military separation, or recent mental health service use moderated this relationship.

Results: The prevalence of suicide ideation was significantly higher ($p<0.01$) among Veterans reporting administrative discharge (23.1%, 95% CI=12.8, 33.3 vs 10.6%, 95% CI=8.4, 12.8). However, after accounting for lifetime suicide attempt history, combat experiences, posttraumatic stress disorder symptoms, depression, and drug dependence, discharge was no longer associated with suicide ideation. Recent mental health service use and time since separation significantly modified this relationship. The relationship was only significant among Veterans not using mental health services (OR=4.8, 95% CI=1.3, 18.2) and among transitioning Veterans <2 years from separation (OR=3.6, 95% CI=1.4, 9.2).

Conclusions: These findings suggest that recognized risk factors for suicide, such as a history of mental health conditions, account for the increased prevalence of suicide ideation among Veterans with administrative discharges and that mental health services may have the potential to mitigate such risk in this high-risk Veteran population.

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INTRODUCTION

Veteran suicide rates are increasing, with those not using Veterans Health Administration (VHA) services at particularly high risk.[1] From 2005 to 2016, the suicide rate among U.S. Veterans increased by 25.9% (2016=30.1/100,000).[1] Rates increased most substantially (78.6%) among young Veterans (aged 18–34 years), who primarily served during Operation Enduring Freedom (OEF), Operation Iraqi Freedom (OIF), or Operation New Dawn (OND). Additionally, although an increase of 24.4% (2016=35.6/100,000) was observed among Veterans using VHA care, a 35.8% increase (2016=27.6/100,000) was observed among non-VHA

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Veterans.[1] Veterans may forgo VHA services for numerous reasons, including actual or perceived ineligibility.[2] The Department of Veterans Affairs (VA) has made suicide prevention a top priority and expanded coverage of emergent mental health services (MHSs) in 2017 to include previously ineligible Veterans with discharges under other than honorable conditions (UOTHC), with the primary goal of reducing suicides.[3] Thus, individuals with discharge UOTHC who are seeking emergency mental health care for a condition they assert is related to military service may now obtain MHSs.[4]

U.S. Service Members can separate with a discharge of (1) honorable; (2) general; (3) UOTHC; (4) bad conduct; or (5) dishonorable. Honorable discharge indicates admirable completion of duty, results in full VA benefits, and is granted to 84% of service members.[5,6] Administrative discharge includes general and UOTHC and accounts for 15% of separations.[5,6] General discharge typically indicates illness, injury, or unacceptable behavior (e.g., drug use disorder), whereas UOTHC typically follows conduct violations (e.g., security violation) or civilian crime convictions. Although general discharges are often issued under honorable conditions, Veterans may be ineligible for certain benefits (e.g., GI Bill).[7] Those who receive general discharges under honorable conditions are usually eligible for VHA benefits, but confusion may deter them from seeking services.[8] Conversely, Veterans with discharge UOTHC are not automatically eligible for any benefits; eligibility is determined on a case-by-case basis.[4] Punitive discharges (bad conduct, dishonorable; 1% of separations) are court-martialed for increasingly serious offenses.[5,6] Historically, individuals with punitive discharges have not been eligible for VA benefits, and the recent expansion of VHA services does not apply to this group.[3] Despite the recent expansion of MHSs, limited research has examined the relationship between discharge type and suicide risk among Veterans to assess whether increased VHA coverage for administrative discharges has the potential to curb rising suicide rates. Given the smaller number of Veterans with administrative discharge, as well as differences in VHA eligibility and the likelihood of seeking VHA care within this category, this relationship is challenging to study. Cohort studies not limited to the VHA patient population are essential.

Two studies have evaluated the relationship between discharge type and suicide risk. Reger et al.[9] noted that among 3,945,099 OEF/OIF Veterans, non-honorable discharge (administrative and punitive) was associated with increased suicide risk. Additionally, using VHA administrative data, Brignone and colleagues[10] reported that administrative discharge was associated with poorer mental health functioning, including suicidal ideation (SI) and behaviors among 443,360 post–9/11 Veterans. Two additional studies assessed the association between discharge type and suicide risk factors. The study by Metraux et al.[11] found that bad conduct, dishonorable, and UOTHC discharges were all associated with increased risk of homelessness, whereas Elbogen and colleagues[12] reported that other than honorable discharge was associated with sleep difficulties, depression, housing difficulties, substance use, and lack of social support.

Although these studies have begun to inform the relationship between discharge type and suicide risk, no research has assessed suicide risk by discharge type after accounting for prominent demographic and psychiatric suicide risk factors known to be associated with discharge (e.g., sleep problems, substance use disorder). This knowledge gap limits the extent to which prior research can inform policies and interventions, as the degree to which suicide risk can be mitigated in this population of Veterans by targeting high-risk subgroups and addressing underlying mental health concerns is unclear.

Furthermore, no study has assessed for sex or gender differences in the relationship between discharge type and suicide. Suicide trends among male and female Veterans have considerably diverged in recent years, with concern regarding high and increasing suicide rates among female Veterans. Limited research has begun to identify risk and protective factors for female Veterans (e.g., military sexual trauma, substance use disorder(s), social connectedness), but additional research is needed.[13] This is particularly true for female Veterans not receiving VHA services, which may be influenced by discharge type, as suicide rates in this population increased by 30.5% from 2005 to 2016.[1] Examining whether there are sex or gender differences in the relationship between discharge type and suicidality is essential for understanding the degree to which expanding MHSs may reduce suicide risk for female Veterans.

Finally, no research has directly assessed whether time since separation or use of MHSs, within or outside VHA, mitigates suicide risk for Veterans with administrative or punitive discharges. Given rapidly increasing suicide rates among young, transitioning Veterans, and those not using VHA services, as well as the ability for MHSs to address potential drivers of suicide risk (e.g., psychiatric diagnoses),[14] it is important to better understand if use of MHSs has a protective role. Because discharge may impact use of VHA MHSs, even if eligible to receive such care (i.e., administrative discharge), further examination is warranted to elucidate if these Veterans are using MHSs within or outside the VHA. Additionally, the period surrounding transition may be a particularly vulnerable time for Veterans with administrative or punitive discharges, as they typically are not eligible for

benefits put in place specifically to promote a successful transition (e.g., GI Bill).

The present analyses provide a deeper understanding of the association between discharge type and SI. Results expand on current knowledge by informing potential risk among female Veterans, as well by examining the role of MHSs. Given increasing rates of suicide among younger Veterans serving in the most recent conflicts,[1] this analysis aims to examine the association between military discharge and active SI among OEF/OIF/OND Veterans participating in the Survey of Experiences of Returning Veterans (SERV). It is hypothesized that administrative and punitive discharge are associated with increased prevalence of active SI, relative to honorable discharge. Secondary analyses explored whether sex, time since separation, and use of MHSs moderate this association.

METHODS

Study Population

SERV is a longitudinal cohort study of OEF/OIF/OND Veterans aiming to examine post-deployment experiences and coping mechanisms in Veterans who are and are not accessing VHA services.[15] Data collection occurred between 2012 and 2015; data analysis was completed in 2017–2018. Multiple recruitment methods were used, including social media promotion, VA listservs and advertising (e.g., VA facility TVs), and word of mouth. Recruitment efforts targeted Veterans separating in the past 5 years; 80% of the sample had separated within 5 years, and 40% within 2 years (range, 0–12). Trained interviewers completed structured telephone interviews. SERV oversampled females to enable sex comparisons through targeted advertising in VA women's health clinics and women Veterans' social groups. Findings presented here are from a cross-sectional analysis of SERV baseline interviews(N=850). Complete data were available for 811 participants on all variables of interest; listwise deletion removed 39 observations for missing data. SERV was approved by the West Haven VA IRB; all participants provided informed consent. This secondary analysis was approved by the Colorado Multiple IRB.

Measures

Discharge was assessed by asking, *What type of discharge did you last receive?* Response options included the five standard categories. Discharge was categorized intohonorable, administrative, andpunitive. However, only two participants reported punitive discharge, specifically bad conduct, and were removed from analyses (analytic n=809, 42.0% female). Active SI was assessed with a single Columbia Suicide Severity Rating Scale item asking participants if they had experienced "active thoughts of killing themselves" in the past 3 months.[16,17]

Self-reported demographics and military characteristics included sex; age (<30, 30–39, 40–49, ≥50 years); race (white, black, other); education (high school or less, some college/associates degree, bachelor's degree or higher); marital status (married/living with partner, divorced/separated/widowed, never married); time since separation (<2, ≥2 years); service branch; and Reserve/Guard status. Current mental health symptoms included posttraumatic stress disorder (PTSD) symptom severity (DSM-IV PTSD Checklist)[18]; probable depression (modified Patient Health Questionnaire Depression Scale–8)[19]; past 12 month alcohol dependence (Alcohol Use Disorder and Associated Disabilities Interview Schedule–IV [AUDADIS-IV])[20,21]; past 12–month drug dependence (AUDADIS-IV); and probable traumatic brain injury (TBI; Brief TBI Screen).[22] Lifetime suicide attempt (SA) history (Columbia Suicide Severity Rating Scale)[16,17] and combat experiences (Deployment Risk and Resilience Inventory Combat Experiences Scale)[23] were also assessed. Stratified analyses used information on self-reported use of MHSs (any and VHA-specific) in the past 3 months.

Statistical Analysis

SI prevalence was compared for honorable versus administrative discharges. Within the administrative category, sample size was insufficient to examine general and UOTHC separately, though limited findings on SI prevalence are presented. Bivariate associations between discharge type and SI with all covariates of interest were assessed using chi-square, Fisher's exact, independent sample t, and Mann–Whitney U tests, as appropriate.

Covariates significantly associated (p<0.05) with both discharge type and SI were considered potential confounders and included in multivariable logistic regression models. Stratified analyses were conducted to examine whether the unadjusted association between discharge type and SI differed by sex, time since separation, and use of MHSs. Finally, in a sensitivity analysis of the administrative discharge subgroup, the association between all mental health symptoms and SI was assessed using unadjusted logistic regression to explore potential MHS targets for this population. Analyses were conducted with SAS, version 9.3.

RESULTS

Approximately half the sample was male (58.0%). The majority were aged <50 years (91.7%); white (73.3%);and served in the Army (62%), and 40% had been separated for <2 years (Table 1). The majority (n=744, 92%) reported honorable discharge. Of 65 (8.2%) reporting administrative discharge, 59 (90.8%) reported general discharge. Mental health conditions were common, particularly among those with administrative discharges (Table 1). For example, probable depression was identified in 33.1% with honorable discharge vs 61.5% with administrative discharge. Overall, 11.6% (95% CI=9.4%,13.8%) reported active SI; prevalence did not differ by sex (Table 2).

The prevalence of SI was higher (p<0.01) among Veterans with administrative discharges (23.1%, 95% CI=12.8, 33.3) than those with honorable discharges (10.6%, 95% CI=8.4, 12.8; Table 2). Administrative discharges were 2.5 times more likely to report SI (95% CI=1.36, 4.71; Table 3). SI prevalence was even higher in the UOTHC-specific category (33.3%), but precision was extremely low (95% CI=0.0, 71.1).

After accounting for potential confounders (SA, combat, PTSD, depression, drug dependence; Table 2),

Table 1. Distribution of Sample Characteristics and Associations With Discharge and Active SI

Variable	Total, *n* (%) (N=809)	Discharge type			Active SI		
		Honorable, *n* (%) (*n*=744)	Administrative, *n* (%) (*n*=65)	*p*-value[a]	No, *n* (%) (*n*=715)	Yes, *n* (%) (*n*=94)	*p*-value[a]
Demographics							
Gender							
Male	469 (58.0)	427 (57.4)	42 (64.6)		415 (58.0)	54 (57.5)	
Female	340 (42.0)	317 (42.6)	23 (35.4)	0.26	300 (42.0)	40 (42.6)	0.91
Age, years							
<30	284 (35.1)	258 (34.7)	26 (40.0)		263 (36.8)	21 (22.3)	
30–39	291 (36.0)	266 (35.7)	25 (38.5)		255 (35.7)	36 (38.3)	
40–49	167 (20.6)	157 (21.1)	10 (15.4)		137 (19.2)	30 (31.9)	
≥50	67 (8.3)	63 (8.5)	4 (6.1)	0.59	60 (8.4)	7 (7.5)	**<0.01**
Race							
White	593 (73.3)	547 (73.5)	46 (70.8)		537 (75.1)	56 (59.6)	
Black	106 (13.1)	94 (12.6)	12 (18.4)		82 (11.5)	24 (25.5)	
Other	110 (13.6)	103 (13.9)	7 (10.8)	0.36	96 (13.4)	14 (14.9)	**<0.01**
Highest education level							
≤High school degree	92 (11.4)	74 (9.9)	18 (27.7)		78 (10.9)	14 (14.9)	
Some college or Associate's degree	387 (47.8)	354 (47.6)	33 (50.8)		339 (47.7)	48 (51.1)	
Bachelor's degree or higher	330 (40.8)	316 (42.5)	14 (21.5)	**<0.01**	298 (41.7)	32 (34.0)	0.27
Current marital status							
Married or living with partner	414 (51.2)	380 (51.0)	34 (52.3)		367 (51.3)	47 (50.0)	
Divorced/separated or widowed	171 (21.1)	156 (21.0)	15 (23.1)		142 (19.9)	29 (30.9)	
Never married	224 (27.7)	208 (28.0)	16 (24.6)	0.83	206 (28.8)	18 (19.2)	**0.02**
Military characteristics							
Time since separation							
<2 years	324 (40.1)	298 (40.1)	26 (40.0)		289 (40.4)	35 (37.2)	
≥2 years	485 (59.9)	446 (59.9)	39 (60.0)	0.99	426 (59.6)	59 (62.8)	0.55
Branch							
Army	500 (61.8)	453 (60.9)	47 (72.3)		441 (61.7)	59 (62.8)	
Air Force	113 (14.0)	106 (14.3)	7 (10.8)		101 (14.1)	12 (12.8)	
Marine Corps	102 (12.6)	97 (13.0)	5 (7.7)		94 (13.1)	8 (8.5)	
Navy	94 (11.6)	88 (11.8)	6 (9.2)		79 (11.1)	15 (15.9)	
Coast Guard	0 (0.0)	0 (0.0)	0 (0.0)	0.32	0 (0.0)	0 (0.0)	0.35
Reservist	219 (27.1)	211 (28.4)	8 (12.3)	**<0.01**	199 (27.8)	20 (21.3)	0.18
National Guard	174 (21.5)	159 (21.4)	15 (23.1)	0.75	157 (22.0)	17 (18.1)	0.39
Combat experiences,[b] *n* (mean/SD)	809 (35.8/16.1)	744 (35.4/16.1)	65 (40.2/15.5)	**0.02**	715 (35.3/16.2)	94 (39.5/15.3)	**0.02**

(*continued on next page*)

Table 1. Distribution of Sample Characteristics and Associations With Discharge and Active SI (*continued*)

Variable	Total, *n* (%) (N=809)	Discharge type			Active SI		
		Honorable, *n* (%) (*n*=744)	Administrative, *n* (%) (*n*=65)	*p*-value[a]	No, *n* (%) (*n*=715)	Yes, *n* (%) (*n*=94)	*p*-value[a]
Recent mental health							
PTSD symptom severity,[c] *n* (mean/SD)	809 (47.4/18.0)	744 (46.4/18.0)	65 (58.9/14.8)	**<0.01**	715 (45.2/17.3)	91 (64.6/13.8)	**<0.01**
Probable depression[d]	286 (35.4)	246 (33.1)	40 (61.5)	**<0.01**	215 (30.1)	71 (75.5)	**<0.01**
Alcohol dependence (past 12 months)[e]	150 (18.5)	137 (18.4)	13 (20.0)	0.75	116 (16.2)	34 (36.2)	**<0.01**
Drug dependence (past 12 months)[e]	35 (4.3)	23 (3.1)	12 (18.5)	**<0.01**	26 (3.6)	9 (9.6)	**<0.01**
Probable TBI[f]	231 (28.6)	206 (27.7)	25 (38.5)	0.07	182 (25.5)	49 (52.1)	**<0.01**
Mental health service use (past 3 months)[g]							
Any	361 (44.8)	315 (42.5)	46(70.8)	**<0.01**	286(40.2)	75(79.8)	**<0.01**
VHA specific	271(33.6)	233(31.4)	38(58.5)	**<0.01**	213(29.9)	58(61.7)	**<0.01**

[a]*P*-values are for χ^2 test of association or Fisher's exact tests (as appropriate) for categorical variables and are for *t*-tests and Mann-Whitney *U* tests (as appropriate) for continuous variables. Boldface indicates statistical significance ($p<0.05$).
[b]Combat experiences were measured with the DRRI-2 Combat Experiences scale.
[c]PTSD symptom severity was measured with the DSM-IV PTSD Checklist.
[d]Probable depression was assessed with a modified PHQ-8 screener.
[e]Alcohol and drug dependence were assessed with the AUDADIS-IV.
[f]TBI was assessed with the Brief Traumatic Brain Injury screen.
[g]Data on mental health service use in the past 3 months were missing for three observations. As these variables were not used in logistic regression modeling, the observations were retained.
AUDADIS-IV, Alcohol Use Disorder and Associated Disabilities Interview Schedule—IV; DRRI-2, Deployment Risk and Resilience Inventory—2; PHQ-8, Patient Health Questionnaire Depression Scale—8; PTSD, posttraumatic stress disorder; SI, suicide ideation; VHA, Veterans Health Administration.

Table 2. Prevalence of Active SI and Lifetime SA History by Gender and Discharge Category

		Current[a] SI[b]		Lifetime SA[b]	
Discharge category	**N**	***n***	**% (95% CI)**	***n***	**% (95% CI)**
All	809	94	11.6 (9.4, 13.8)	121	15.0 (12.5, 17.4)
Males	469	54	11.5 (8.6, 14.4)	62	13.2 (10.2, 16.3)
Females	340	40	11.8 (8.3, 15.2)	59	17.4 (13.3, 21.4)
Honorable	744	79	10.6 (8.4, 12.8)	100	13.4 (11.0, 15.9)
Administrative					
Combined	65	15	23.1 (12.8, 33.3)	21	32.3 (20.9, 43.7)
General	59	13	22.03 (11.5, 32.6)	18	30.5 (18.8, 42.3)
UOTHC	6	2	33.3 (0.0, 71.1)	3	50.0 (10.0, 90.0)

[a]Active SI was measured in the last 3 months.
[b]The prevalence of suicide ideation and suicide attempt was significantly higher among participants with an administrative discharge, compared to those with an honorable discharge ($p<0.05$).
SA, suicide attempt; SI, suicide ideation; UOTHC, under other than honorable conditions.

Table 3. Modeling the Likelihood of Active SI

Variable	**Unadjusted logistic models, OR (95% CI) (Full sample, N=809)**	**Adjusted logistic models[a], OR (95% CI) (Full sample, N=809)**	**Sensitivity analysis[b], OR (95% CI) (Full sample, N=809)**	**Unadjusted logistic models, OR (95% CI) (Administrative discharge subsample, *n*=65)**
Administrative discharge	**2.53 (1.36, 4.71)***	1.07 (0.53, 2.20)	1.29 (0.65, 2.57)	—
Combat experiences	**1.02 (1.00, 1.03)***	1.00 (0.98, 1.01)	1.00 (0.98, 1.01)	—
PTSD symptom severity	**1.08 (1.06, 1.10)***	**1.06 (1.03, 1.08)***	**1.06 (1.04, 1.08)***	**1.07 (1.01, 1.13)****
Probable depression	**7.18 (4.37, 11.80)***	**2.31 (1.29, 4.14)***	**2.42 (1.36, 4.30)***	1.33 (0.40, 4.49)
Drug dependence	**2.81 (1.27, 6.19)***	1.85 (0.74, 4.67)	1.65 (0.67, 4.02)	1.91 (0.48, 7.53)
Lifetime SA history	**6.14 (3.84, 9.82)***	**3.43 (2.04, 5.76)***	—	**7.09 (2.00, 25.12)***
Alcohol dependence	**2.93 (1.83, 4.66)***	—	—	1.66 (0.43, 6.41)
Probable TBI	**3.19 (2.06, 4.94)***	—	—	3.19 (0.97, 10.50)

Note: Boldface indicates statistical significance (*$p<0.01$; **$p<0.05$).
[a]Alcohol dependence and TBI were not included in the adjusted model as they were not significantly associated with both discharge type and active SI in bivariate analyses (Table 1). They are presented here to compare the crude OR between the full and administrative samples.
[b]The sensitivity analysis is the fully adjusted model removing lifetime suicide attempt history.
PTSD, posttraumatic stress disorder; SA, suicide attempt; SI, suicide ideation; TBI, traumatic brain injury.

discharge type was no longer associated with SI (OR=1.07, 95% CI=0.53, 2.20; Table 3). SA history, PTSD, and probable depression were the strongest correlates of SI and remained significantly associated in the adjusted models (Table 3). Removing SA history, which often accounts for substantial variability in SI,[19] did not change these findings.

When evaluating the association between mental health symptoms and SI specifically among participants with administrative discharges, associations for PTSD symptoms, SA, drug dependence, and TBI did not differ meaningfully from the full sample (Table 3). Associations between probable depression and alcohol dependence with SI were lower in the administrative discharge subsample, but precision was low.

Sex differences in the relationship between discharge type and SI were not observed (data not shown). Discharge type was associated with a 2- to 3-fold increase in SI for males (OR=2.32, 95% CI=1.04, 5.15, $p=0.04$) and females (OR=2.94, 95% CI=1.09, 7.96, $p=0.03$). As in the full sample, adjusted associations were not significant (males: OR=0.95, 95% CI=0.37, 2.40, females: OR=1.33, 95% CI=0.42, 4.20).

Veterans with administrative discharges were significantly more likely to report recent use of MHSs, compared withhonorably discharged Veterans (Table 1). More than half with administrative discharges reported using VHA MHSs in the past 3 months. Use of any or VHA-specific MHSs significantly modified the unadjusted relationship between discharge type and SI (Figure 1). Among Veterans reporting use of recent MHSs, discharge type was not significantly related to SI. By contrast, among Veterans reporting no recent use of MHSs, administrative discharge was associated with a 3.5- (VHA MHS) to nearly 5-fold (any MHS) increase in SI ($p<0.05$). Similarly, time since separation modified

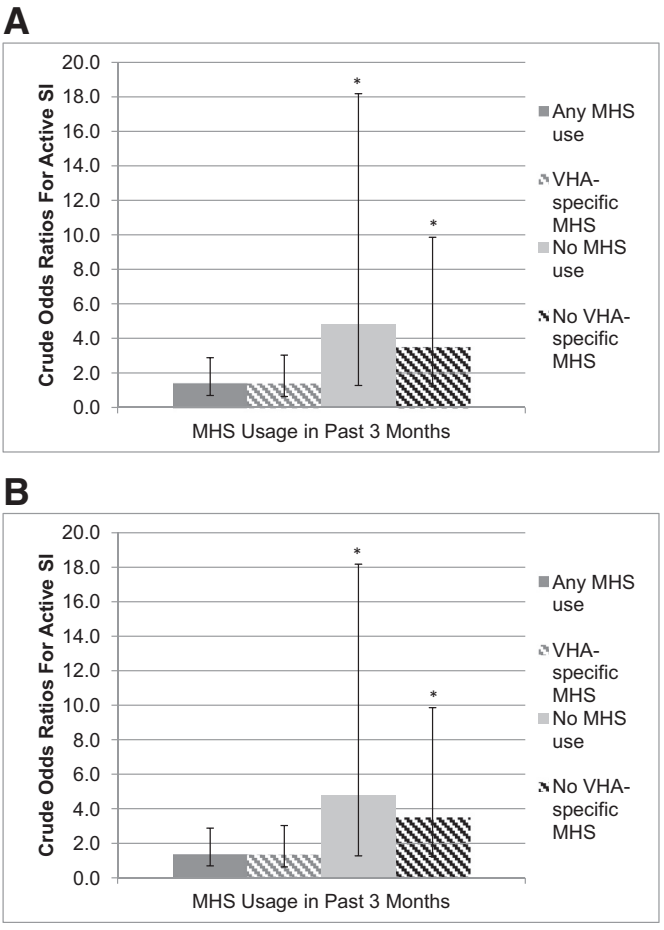

Figure 1. Association between military discharge and SI by mental health service use and time since separation. (A) MHS use in the past 3months. (B) Years since military separation.
Note: Active SI was measured in the past 3 months. *Indicates a statistically significant OR ($p<0.05$).
MHS, mental health service; SI, suicide ideation; VHA, Veterans Health Administration.

the relationship between discharge type and SI (Figure 1). Administrative discharge was significantly associated with increased odds of SI only among Veterans separating in the past 2 years.

DISCUSSION

SERV offers a valuable opportunity to assess the relationship between military discharge type and SI in OEF/OIF/OND Veterans, regardless of eligibility for, or use of, VHA services. Active SI was more common among Veterans reporting administrative discharges. Nevertheless, recognized risk factors for suicide[24] accounted for this. This finding may be partially explained by administrative discharge resulting from or potentially triggering mental health problems (e.g., depression) or both. These Veterans may, in turn, be more likely to report use of MHSs. Furthermore, for Veterans who reported using any recent or VHA-specific MHSs, discharge type was not associated with SI. By contrast, for Veterans who had not used MHSs in the past 3 months, administrative discharge was associated with elevated odds of SI. Together, these findings suggest that MHSs have the potential to mitigate suicide risk among Veterans with administrative discharge. However, it is important to note that although use of MHSs was relatively common among administratively discharged Veterans in the sample, this may not be true of the broader population of administratively discharged Veterans. In fact, this group of Veterans may be more reluctant to seek care for various reasons, such as stigma and institutional betrayal, and thus this is an important question to address in future research.

Prior research has found that Veterans who experienced less than honorable discharges have poorer mental health functioning, higher risk for substance use and depression, less social support, and are more likely to be homeless.[10–12] Receiving MHSs may be integral to

targeting drivers of SI among this population. Further, it may be particularly important to engage these Veterans in interventions (e.g., evidence-based psychotherapy), in conjunction with services that target and address psychosocial stressors (e.g., unemployment, housing instability).

Intensive suicide prevention and management efforts have been widely implemented within VHA. For example, Veterans who received recent MHSs within VHA likely would have been screened for SI and received a suicide risk assessment. VA/Department of Defense Clinical Practice Guidelines mandate that individuals deemed to be at elevated suicide risk receive appropriate treatment and referral (e.g., Safety Plans, lethal means counseling, evidence-based psychotherapy).[25] The combination of these—access to treatment and standardized risk assessment and management—may explain the finding that discharge type was not associated with SI among Veterans who received VHA MHSs. Importantly, findings also suggest that MHSs received outside of VHA may also mitigate risk. Veterans can receive quality MHSs and suicide prevention programming outside VHA, though policies and practices are not as standardized. Further, some Veterans prefer to obtain care outside VHA; thus, it is imperative that future research identify specific interventions most effective for reducing suicide risk among Veterans both within and outside VHA. Such research will be instrumental to informing strategies in line with the National Strategy for Veteran Suicide Prevention, which emphasizes integrating communities and community providers into suicide prevention efforts.[26]

Study findings of elevated odds of SI among recently separated Veterans with administrative discharges or who had not recently used MHSs align with national VA findings that underscore a critical need to focus suicide prevention efforts on these populations.[1] Determining effective ways of engaging non-VHA and transitioning Veterans in care, while also supporting community providers, is essential. Such efforts may entail implementing more community-based suicide prevention programs, as well as training non-VHA providers on evidence-based suicide risk assessment and management strategies effective for Veterans. Although Veterans with less than honorable discharge can also apply for adjudication to correct errors or remove an injustice, thereby making them eligible for VHA services, this process is complex and not the most viable avenue for improving access to quality care on a population level. Overall, additional research is warranted to better understand the experiences of Veterans with administrative and punitive discharges in terms of their patterns of interacting with healthcare systems, as well as to identify specific drivers of suicide risk in these populations. Given a paucity of research addressing the impact of adjudication of discharge status on these experiences, research is warranted on this topic as well as to evaluate if undiagnosed mental illness, which can result in less than honorable discharge,[27] impacts the relationship between discharge type and SI.

This study has notable strengths. It is the first addressing the association between discharge type and SI to account for numerous demographic and mental health confounders, demonstrating that the relationship between discharge type and SI is not significant after doing so. Furthermore, this analysis was not limited to VHA patients and evaluated key variables that appear to act as moderators of the association between discharge type and SI (i.e., time since separation, use of MHSs). Although this study did not observe sex differences, continued sex-stratification in future work on this topic is warranted given established differences in suicide trends between male and female Veterans.[1]

Limitations

Limitations of this analysis include the cross-sectional design and inability to examine differences based on specific discharge types because of sample size constraints. The overall sample predominantly included Veterans reporting honorable discharge, with the proportion of Veterans reporting other discharges (8%) lower than that observed for the Veteran population (16%); replication in a larger, more equally distributed sample is warranted. Future research to evaluate risk among Veterans with punitive discharges would also provide valuable insight to inform policy and practice for community providers working with Veterans. Additionally, using listwise deletion, 39 observations were removed, 6 (15%) of which had data missing on discharge type; participants with less than honorable discharge may be more likely to withhold such information. Finally, SERV relied upon self-report of discharge type and use of MHSs, and information obtained on type and frequency of MHSs was limited; future research augmenting with objective data (e.g., medical records) to capture more nuanced information on types of care would be valuable.

CONCLUSIONS

This study highlights the importance of helping Veterans with administrative discharge obtain quality MHSs within or outside VHA. Although the recent policy change regarding emergent MHSs eligibility may help accomplish this, research is still needed to directly assess its impact in terms of utilization and mitigating risk. Notably, the new policy does not expand coverage to punitive discharges; thus, further research evaluating risk within this population and to identify effective

means for connecting those Veterans with community MHSs is warranted.

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REFERENCES

1. Department of Veterans Affairs. VA National Suicide Data Report 2005–2016. www.mentalhealth.va.gov/docs/data-sheets/OMHSP_National_Suicide_Data_Report_2005-2016_508.pdf. Published 2018. Accessed January 7, 2019.
2. Washington DL, Yano EM, Simon B, Sun S. To use or not to use: what influences why women Veterans choose VA health care. *J Gen Intern Med.* 2006;21(suppl 3):S11–S18. doi.org/10.1111/j.1525-1497.2006.00369.x.
3. Department of Veterans Affairs. Access to mental health services for other than honorable discharged service members. https://www.va.gov/vhapublications/ViewPublication.asp?pub_ID=5350. Published 2017. Accessed April 2018.
4. Department of Veterans Affairs. Other than honorable discharges: impact on eligibility for VA health care benefits. www.va.gov/healthbenefits/resources/publications/IB10-448_other_than_honorable_discharges5_17.pdf. Published 2017. Accessed November 2018.
5. Holliday SB, Pedersen ER. The association between discharge status, mental health, and substance misuse among young adult Veterans. *Psych Research.* 2017;256:428–434. https://doi.org/10.1016/j.psychres.2017.07.011.
6. Veterans Legal Clinic. Underserved: how the VA wrongfully excludes Veterans with bad paper. San Francisco, CA; 2016.
7. Department of Veterans Affairs. Claims for VA benefits and character of discharge, general information. www.benefits.va.gov/BENEFITS/docs/COD_Factsheet.pdf. Published 2014. Accessed April 2018.
8. Tayyeb AR, Greenburg J. "Bad Papers": the invisible and increasing costs of war for excluded Veterans. Watson Institute of International and Public Affairs, Brown University. http://watson.brown.edu/costsofwar/files/cow/imce/papers/2017/Tayyeb%20Greenburg_Bad%>20Papers%20.pdf. Published 2017. Accessed April 2018.
9. Reger MA, Smolenski DJ, Skopp NA, et al. Risk of suicide among U.S. military service members following Operation Enduring Freedom or Operation Iraqi Freedom deployment and separation from the U.S. military. *JAMA Psychiatry.* 2015;72(6):561–569. https://doi.org/10.1001/jamapsychiatry.2014.3195.
10. Brignone E, Fargo JD, Blais RK, Carter ME, Samore MH, Gundlapalli AV. Non-routine discharge from military service: mental illness, substance use disorders, and suicidality. *Am J Prev Med.* 2017;52(5):557–565. https://doi.org/10.1016/j.amepre.2016.11.015.
11. Metraux S, Clegg LX, Daigh JD, Culhane DP, Kane V. Risk factors for becoming homeless among a cohort of Veterans who serviced in the era of the Iraq and Afghanistan conflicts. *Am J Public Health.* 2013;103(suppl 2):S255–S261. https://doi.org/10.2105/AJPH.2013.301432.
12. Elbogen EB, Wagner HR, Brancu M, et al. Psychosocial risk factors and other than honorable military discharge: providing healthcare to previously ineligible Veterans. *Mil Med.* 2018;183(9–10):e532–e538. https://doi.org/10.1093/milmed/usx128.
13. Hoffmire CA, Denneson LM. Concerning trends in suicide among women Veterans point to need for more research on tailored interventions. *VA FORUM.* www.hsrd.research.va.gov/publications/forum/spring18/default.cfm?ForumMenu=Spring18-5. Published Spring 2018.
14. Ilgen MA, Bohnert ASB, Ignacio RV, et al. Psychiatric diagnoses and risk of suicide in Veterans. *Arch Gen Psychiatry.* 2010;67(11):1152–1158. https://doi.org/10.1001/archgenpsychiatry.2010.129.
15. Laws H, Mazure CM, McKee SA, Park CL, Hoff R. Within-unit relationship quality mediates the association between military sexual trauma and posttraumatic stress symptoms in veterans separating from military service. *Psychol Trauma.* 2016;8(5):649–656. https://doi.org/10.1037/tra0000118.
16. Posner K, Brown GK, Stanley B, et al. The Columbia-Suicide Severity Rating Scale: initial validity and internal consistency findings from three multisite studies with adolescents and adults. *Am J Psychiatry.* 2011;168(12):1266–1277. https://doi.org/10.1176/appi.ajp.2011.10111704.
17. Nilsson ME, Suryawanshi S, Gassmann-Mayer C, Dubrava S, Mcsorely P, Jiang K. Columbia-Suicide Severity Rating Scale scoring and data analysis guide. https://cssrs.columbia.edu/wp-content/uploads/ScoringandDataAnalysisGuide-for-Clinical-Trials-1.pdf. Published 2013. Accessed April 2018.
18. Weathers F, Litz BT, Herman D, et al. The PTSD Checklist: reliability, validity, and diagnostic utility. In: Paper presented at the Annual Meeting of the International Society for Traumatic Stress Studies, 2013; San Antonio, TX.
19. Kroenke K, Spitzer RL. The PHQ-9: a new depression diagnostic and severity measure. *Psychiatr Ann.* 2002;32(9):509–515. https://doi.org/10.3928/0048-5713-20020901-06.
20. Grant BF, Dawson DA. *The Alcohol Use Disorder and Associated Disabilities Interview Schedule-IV (AUDADIS-IV).* Rockville, MD: National Institute on Alcohol Abuse and Alcoholism; 2002.
21. Grant BF, Dawson DA, Stinson FS, Chou PS, Kay W, Pickering R. The Alcohol Use Disorder and Associated Disabilities Interview Schedule-IV (AUDADIS-IV): reliability of alcohol consumption, tobacco use, family history of depression and psychiatric diagnostic modules in a general population sample. *Drug Alcohol Depend.* 2003;71(1):7–16. https://doi.org/10.1016/S0376-8716(03)00070-X.
22. Schwab KA, Baker G, Ivins B, Sluss-Tiller M, Lux W, Warden D. The Brief Traumatic Brain Injury Screen (BTBIS): investigating the validity of a self-report instrument for detecting traumatic brain injury (TBI) in troops returning from deployment in Afghanistan and Iraq. *Neurology.* 2006;66(5):A235.
23. Vogt DS, Smith BN, King LA, King DW, Knight J, Vasterling JJ. Deployment Risk and Resilience Inventory-2 (DRRI-2): an updated tool for assessing psychosocial risk and resilience factors among service members and Veterans. *J Trauma Stress.* 2013;26(6):710–717. https://doi.org/10.1002/jts.21868.
24. Franklin JC, Ribeiro JD, Fox KR, et al. Risk factors for suicidal thoughts and behaviors: a meta-analysis of 50 years of research. *Psychol Bull.* 2017;143(2):187–232. https://doi.org/10.1037/bul0000084.
25. Department of Veterans Affairs. VA/DoD Clinical Practice Guidelines: assessment and management of patients at risk for suicide. www.healthquality.va.gov/guidelines/mh/srb/. Published 2013. Accessed April 2018.
26. Department of Veterans Affairs. National Strategy for Preventing Veteran Suicide 2018–2028. www.mentalhealth.va.gov/suicide_prevention/docs/Office-of-Mental-Health-and-Suicide-Prevention-National-Strategy-for-Preventing-Veterans-Suicide.pdf. Published 2018.
27. Booth-Kewley S, Highfill-McRoy RM, Larson GE, Garland CF. Psychosocial predictors of military misconduct. *J Nerv Ment Dis.* 2010;198(2):91–98. https://doi.org/10.1097/NMD.0b013e3181cc45e9.