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Letters

RESEARCH LETTER

Military Misconduct and Homelessness Among US Veterans Separated From Active Duty, 2001-2012

Misconduct-related separations from the military are associated with subsequent adverse civilian outcomes that are of substantial public health concern.¹ We investigated the association between misconduct-related separations and homelessness among recently returned active-duty military service members.

Methods | We analyzed Veterans Health Administration (VHA) data from US active-duty military service members who were (1) separated (end date of last deployment) from the military between October 1, 2001, and December 31, 2011, (2) deployed in Afghanistan or Iraq, and (3) eligible for and subsequently used VHA services. Homelessness was determined by an assignment of “lack of housing” using the *International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM)* code V60.0 during a VHA encounter, by participation in a VHA homelessness program, or both.² The US Department of Defense assigns an interservice separation code upon separation from military service.^{3,4} These codes were categorized into misconduct (drugs, alcoholism, offenses, infractions, other), disability, early release, disqualified, normal, and other or unknown.

To assess the immediate and long-term associations between military misconduct and postdeployment homelessness, and address individual variation during follow-up, 3 cohorts were constructed to determine the incidence of homelessness: (1) on the day of the first VHA encounter after separation (October 1, 2001-April 30, 2012), (2) within 1 year of first VHA encounter (October 1, 2001-April 30, 2011), and (3) within 5 years of first VHA encounter (October 1, 2001-April 30, 2007). All patients were followed up through April 30, 2012, and were included in a given cohort only if they contributed data for the duration of the period.

Using R version 3.2 (R Foundation for Statistical Computing), risk for homelessness as a function of separation category was estimated using logistic regression (2-tailed $\alpha \leq .05$), adjusting for demographic and military service covariates. The University of Utah institutional review board and the Research and Development committee at the VA Salt Lake City Health Care System approved this study with waiver of consent.

Results | Of the 448 290 active-duty service members separated during this period, 63.2% were 18-29 years of age, 87.8% were male, and 39.8% were white (Table 1). Homelessness was determined by *ICD-9-CM* code (43.1%), participation in a homelessness program (35.2%), or both (27.1%). With 1 744 725 person-years of observation, the overall incidence of homelessness was 0.3% at time of first VHA encounter (n = 1259),

1.0% within 1 year (n = 4067), and 2.1% within 5 years (n = 3441); the 5-year incidence was significantly higher than at the first encounter or 1 year ($P < .001$).

Although only 5.6% (n = 24 992) separated for misconduct, they represented 25.6% of homeless veterans at first VHA encounter (n = 322), 28.1% within 1 year (n = 1141), and 20.6% within 5 years (n = 709). Incidence of homelessness was significantly greater for misconduct vs normal separations at first VHA encounter (1.3% vs 0.2%; adjusted odds ratio [AOR], 4.7 [95% CI, 4.1-5.5]), within 1 year (5.4% vs 0.6%; AOR, 6.9 [95% CI, 6.4-7.5]), and 5 years (9.8% vs 1.4%; AOR, 6.3 [95% CI, 5.7-6.9]) of first VHA encounter (Table 1 and Table 2).

Discussion | To our knowledge, this is the first study to establish an association between a history of military misconduct and subsequent homelessness among active-duty US military veterans who returned from Afghanistan and Iraq and were eligible for VHA benefits. Homelessness increased with time since separation. This finding supports reports of recently returned veterans with records of misconduct having difficulties reentering civilian life.¹ This association takes on added significance because the incidence of misconduct-related separations is increasing⁵ at a time when ending homelessness among veterans is a federal government priority.²

Military misconduct may be a proxy indicator for a variety of risk factors associated with homelessness among veterans,⁶ including premilitary history of criminality, adverse deployment experiences, mental health issues, alcohol and substance abuse, postdeployment financial instability, and unemployment.

Veterans who dishonorably separate from the military were not included in this study because those individuals are not eligible for VHA services and are not in VHA databases. Other limitations include a lack of detail on the nature of misconduct and its consequences during military service, possible underspecification of veteran homelessness in VHA administrative data, and inability to determine a causal link between misconduct and homelessness.

Identification of those with misconduct-related separations and provision of case management and rehabilitative services at separation by the Department of Defense and the VHA should be investigated as methods to prevent homelessness.

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Table 1. Characteristics of US Active-Duty Military Personnel Expressed as No. (%) by Time From First VHA Encounter and by Homelessness Status, 2001-2012^a

	First Encounter (n = 448 290)		Within 1 y After (n = 403 047)		Within 5 y After (n = 161 955)	
	Homeless (n = 1259)	Not Homeless (n = 447 031)	Homeless (n = 4067)	Not Homeless (n = 398 980)	Homeless (n = 3441)	Not Homeless (n = 158 514)
Military Separation Category (percentages calculated by row within 2-column grouping for each encounter)						
Normal	667 (0.2)	321 361 (99.8)	1865 (0.6)	288 431 (99.4)	1691 (1.4)	117 441 (98.6)
Misconduct	322 (1.3)	24 670 (98.7)	1141 (5.4)	20 157 (94.6)	709 (9.8)	6518 (90.2)
Disqualified	114 (0.7)	17 283 (99.3)	362 (2.3)	15 104 (97.7)	339 (5.2)	6142 (94.8)
Early release	82 (0.3)	32 142 (99.7)	235 (0.9)	27 307 (99.1)	155 (1.6)	9718 (98.4)
Disability	43 (0.1)	44 287 (99.9)	395 (0.9)	41 730 (99.1)	505 (3.0)	16 534 (97.0)
Other or unknown	31 (0.4)	7288 (99.6)	69 (1.1)	6251 (98.9)	42 (1.9)	2161 (98.1)
Demographics and Military Characteristics^b						
Age group, y						
18-29	909 (72.2)	282 668 (63.2)	2998 (73.7)	255 490 (64.0)	2741 (79.7)	106 514 (67.2)
30-44	327 (26.0)	130 225 (29.1)	1007 (24.8)	115 043 (28.8)	672 (19.5)	42 373 (26.7)
45-59	23 (1.8)	30 559 (6.8)	60 (1.5)	26 938 (6.8)	24 (0.7)	8577 (5.4)
≥60	0	330 (0.1)	1 (<0.1)	262 (0.1)	0	61 (<0.1)
Sex						
Male	1075 (85.4)	392 460 (87.8)	3529 (86.8)	349 884 (87.7)	2980 (86.6)	137 715 (86.9)
Female	184 (14.6)	54 491 (12.2)	538 (13.2)	49 024 (12.3)	461 (13.4)	20 773 (13.1)
Race/ethnicity						
White	336 (26.7)	177 936 (39.8)	1340 (32.9)	153 474 (38.5)	805 (23.4)	40 580 (25.6)
Black	258 (20.5)	38 381 (8.6)	748 (18.4)	32 720 (8.2)	388 (11.3)	9736 (6.1)
Hispanic	195 (15.5)	48 315 (10.8)	502 (12.3)	43 154 (10.8)	387 (11.2)	17 844 (11.3)
Other	54 (4.3)	25 976 (5.8)	185 (4.5)	23 545 (5.9)	117 (3.4)	10 576 (6.7)
Marital status						
Never married	880 (69.9)	248 117 (55.5)	2709 (66.6)	220 639 (55.3)	2358 (68.5)	86 539 (54.6)
Married	361 (28.7)	185 243 (41.4)	1289 (31.7)	165 999 (41.6)	1026 (29.8)	66 520 (42.0)
Divorced, separated, or widowed	17 (1.4)	13 314 (3.0)	67 (1.6)	12 020 (3.0)	56 (1.6)	5313 (3.4)
Education level						
<High school	27 (2.1)	3194 (0.7)	54 (1.3)	2864 (0.7)	44 (1.3)	1256 (0.8)
High school	1140 (90.5)	367 472 (82.2)	3657 (89.9)	327 263 (82.0)	3127 (90.9)	130 062 (82.1)
>High school	67 (5.3)	69 686 (15.6)	294 (7.2)	62 780 (15.7)	218 (6.3)	24 940 (15.7)
Service-related disability						
<50%	207 (16.4)	130 503 (29.2)	773 (19.0)	120 056 (30.1)	722 (21.0)	50 787 (32.0)
50%-100%	401 (31.9)	192 449 (43.1)	2062 (50.7)	174 180 (43.7)	2146 (62.4)	67 688 (42.7)
Not related	606 (48.1)	100 488 (22.5)	1132 (27.8)	84 286 (21.1)	510 (14.8)	31 440 (19.8)
Other	45 (3.6)	23 586 (5.3)	100 (2.5)	20 453 (5.1)	63 (1.8)	8597 (5.4)
Branch						
Army	590 (46.9)	205 557 (46.0)	2303 (56.6)	183 598 (46.0)	2021 (58.7)	74 271 (46.9)
Navy	401 (31.9)	86 797 (19.4)	879 (21.6)	77 032 (19.3)	653 (19.0)	29 144 (18.4)
Marines	184 (14.6)	87 140 (19.5)	615 (15.1)	77 481 (19.4)	576 (16.7)	29 765 (18.8)
Air Force	82 (6.5)	67 004 (15.0)	267 (6.6)	60 394 (15.1)	190 (5.5)	25 129 (15.9)
Coast Guard	2 (0.2)	533 (0.1)	3 (0.1)	475 (0.1)	1 (<0.1)	205 (0.1)
Rank						
Enlisted	1251 (99.4)	412 916 (92.4)	4038 (99.3)	368 389 (92.3)	3420 (99.4)	147 141 (92.8)
Officer	8 (0.6)	34 115 (7.6)	29 (0.7)	30 591 (7.7)	21(0.6)	11 373 (7.2)
Combat exposure	820 (65.1)	226 449 (50.7)	2717 (66.8)	197 097 (49.4)	1890 (54.9)	68 066 (42.9)

^a Military separation categories, service characteristics, and demographics were obtained from Defense Manpower Data Corporation and Veterans Health Administration (VHA) sources. The change in numbers across the 3 study cohorts is due to a decreasing number of veterans who contribute data to the longer 1- and 5-year observation periods.

^b The amount of missing data was less than 2% except for race/ethnicity, where it ranged from 32% to 51%.

Table 2. Military Separation Category and Risk of Homelessness Ascertained Using Veterans Health Administration (VHA) Data Among US Active-Duty Military Personnel at 3 Time Points Postseparation, 2001-2012

Military Separation Category	Odds Ratio (95% CI)					
	First VHA Encounter (n = 448 290)		Within 1 y After Encounter (n = 403 047)		Within 5 y After Encounter (n = 161 955)	
	Unadjusted	Adjusted ^a	Unadjusted	Adjusted ^a	Unadjusted	Adjusted ^a
Normal	1 [Reference]	1 [Reference]	1 [Reference]	1 [Reference]	1 [Reference]	1 [Reference]
Misconduct	6.3 (5.5-7.2) ^b	4.7 (4.1-5.5) ^b	8.8 (8.1-9.4) ^b	6.9 (6.4-7.5) ^b	7.6 (6.9-8.3) ^b	6.3 (5.7-6.9) ^b
Disqualified	3.2 (2.6-3.9) ^b	2.6 (2.1-3.2) ^b	3.7 (3.3-4.2) ^b	3.1 (2.8-3.5) ^b	3.8 (3.4-4.3) ^b	3.0 (2.7-3.4) ^b
Early release	1.2 (1.0-1.5)	1.3 (1.0-1.6) ^b	1.3 (1.2-1.5) ^b	1.5 (1.3-1.7) ^b	1.1 (0.9-1.3)	1.2 (1.0-1.4)
Disability	0.5 (0.3-0.6) ^b	0.6 (0.4-0.8) ^b	1.5 (1.3-1.6) ^b	1.3 (1.1-1.4) ^b	2.1 (1.9-2.3) ^b	1.6 (1.4-1.7) ^b
Other or unknown	2.1 (1.4-2.9) ^b	1.8 (1.2-2.6) ^b	1.7 (1.3-2.2) ^b	1.9 (1.5-2.4) ^b	1.4 (1.0-1.8)	1.9 (1.3-2.5) ^b

^a Adjusted for level of VHA service-related disability (not service related, <50% service related, 50%-100% service related, other), age, race/ethnicity, sex, marital status (married, never married, divorced or separated), education level (high school, >high school), rank (enlisted, officer), combat exposure (yes, no), and branch of military (Army, Navy, Marines, Air Force, other).

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

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COMMENT & RESPONSE

Opioid Dependence Treatment in the Emergency Department

To the Editor In the article about emergency department (ED)-initiated buprenorphine/naloxone treatment for opioid dependence, Dr D'Onofrio and colleagues¹ omitted important information and then focused on the most optimistic outcomes to infer a benefit.

First, drug trials should monitor and report harms of treatment. Yet the authors made no mention of harms. Was there any mortality? Were there any overdoses or adverse drug reactions?

Second, the ClinicalTrials.gov entry specifies that all of the secondary outcomes were assessed at "30 days, 2, 6, and 12 months post intake," but the authors reported only the 30-day results. The 2-, 6-, and 12-month outcomes should be reported or their absence explained.

Third, the authors chose the surrogate outcome of "engagement in treatment" as the primary outcome, citing observational evidence indicating that treatment is associated with improved urine toxicology test results and decreases in