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Housing Instability and Homeless Program Use Among Veterans: The Intersection of Race, Sex, and Homelessness

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ABSTRACT

This study describes race/sex differences in housing instability among veterans and examines whether there are disparities in their access of Veterans Health Administration (VHA) homeless programs. The sample comprised 5,355,858 veterans who responded to VHA's universal screen for housing instability (Homelessness Screening Clinical Reminder) between October 2012 and March 2016. We compared rates of housing instability and VHA homeless program use by race/sex categories; multivariate logistic regressions modeled positive screens for housing instability and use of VHA homeless programs within 6 months. Veterans representing racial groups other than white—regardless of sex—have greater odds of reporting housing instability and using VHA homeless programs. Women veterans have lower odds of screening positive for housing instability. Findings suggest that groups of veterans with the highest rates of housing instability may experience multiple layers of disadvantage; disparities in accessing care among racial minority groups are not apparent.

Disparities in rates of homelessness and access to interventions to address homelessness are issues of wide public concern (Los Angeles Homeless Services Authority, 2018; Stergiopoulos et al., 2016). In the United States, people who identify as black/African American, Native American, or Hispanic are overrepresented within the homeless population, whereas those who identify as white or Asian are underrepresented (Moses, 2019; U.S. Census Bureau, 2019; U.S. Department of Housing and Urban Development [HUD], 2018a). Overrepresentation of certain racial and ethnic groups is also seen among veterans experiencing homelessness. The vast majority of U.S. veterans identify as white (U.S. Census Bureau, 2019); however, among those experiencing homelessness on a given day in January 2018, veterans who identified as white were underrepresented by about 44% and those who identified as black were overrepresented by about 64%. Veterans identifying as American Indian or endorsing multiple races were also overrepresented (HUD, 2018b).

A review of the literature assessing the association between race and homelessness concluded that although research on this issue is limited, existing studies have demonstrated that the *how* and *why* and rate at which people become homeless differ by race. The review also called for research exploring the relationship between homelessness and race among veterans and assessing disparities in veterans' access to services that mitigate homelessness (Jones, 2016). Identifying disparities in access to services is particularly important given the possibility of service avoidance and

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disengagement among people experiencing homelessness who perceive racial stigma from service providers (Weisz & Quinn, 2017), and a documented history of mistrust of health care institutions among racial/ethnic minority groups (Corbie-Smith, Thomas, & St. George, 2002).

Sex or gender differences in the experiences of homelessness are also notable. Among the overall homeless population in the United States, women are underrepresented; among veterans, the proportion of women and men experiencing homelessness is representative of the larger population (HUD, 2018b). However, other studies have found that, compared with men, a larger proportion of women veterans report housing instability (Montgomery, Byrne, & Dichter, 2018). Experiences of homelessness may look different for women veterans compared with men. For example, women veterans are younger and more racially and ethnically diverse than their male counterparts and have different sociodemographic characteristics—including levels of education (higher) and incomes (lower)—that may differentially contribute to housing instability (U.S. Department of Veterans Affairs [VA], 2016).

Governmental data on homelessness often report differences in the rates of homelessness by race and sex; however, they do not assess the intersection of race and sex nor do they control for sociodemographic and health-related factors that may explain race/sex differences (Fusaro, Levy, & Shaefer, 2018; HUD, 2018a, 2018b). Studies that have controlled for such confounders have identified race/sex differences in homelessness. For example, Fargo et al. (2012), using data from Homeless Management Information Systems in seven communities, assessed the prevalence and risk of homelessness among veterans. They found that, among both men and women veterans, black race was consistently associated with increased risk of homelessness. Another study using data collected through veterans' electronic health records (EHRs) found that, regardless of sex, black race was associated with increased odds of self-reporting housing instability when accessing outpatient health care (Montgomery, Dichter, Thomasson, Fu, & Roberts, 2015). Beyond rates of housing instability and homelessness, few studies have examined use of homeless services. Whereas there may be disparities in homelessness, the extent to which there are disparities in access to and utilization of services to address homelessness among those who need them is unknown.

To address the gaps in research assessing race and sex differences in experiences of homelessness and use of homeless services—and to respond to Jones's (2016) call for work specifically related to veterans—we have assembled national-level data regarding self-reported experience of housing instability and veterans' use of Veterans Health Administration (VHA) homeless programs. Specifically, the objectives of the present study are to (a) describe race and sex differences in positive screens for housing instability among veterans accessing VHA outpatient care, controlling for socio-demographic and clinical characteristics; and (b) examine whether there are disparities in access of VHA homeless programs by race and sex among veterans reporting housing instability.

Methods

Sample

The sample to address the first study objective comprised veterans who responded to VHA's universal screen for housing instability between October 2012 and March 2016 (n = 5,355,858). Race and sex categories were based on veterans' self-report. For the second study objective, we focused on the subsample of respondents who screened positive for housing instability (n = 147,771). All data were collected from veterans' EHR stored in VA's Corporate Data Warehouse; study procedures were approved by the institutional review board at Corporal Michael J. Crescenz Veterans Affairs Medical Center.

Measures

We assessed experience of housing instability using veterans' responses to the Homelessness Screening Clinical Reminder (HSCR), VHA's universal screen for housing instability among all veteran outpatients. The HSCR collects veterans' responses to two questions: (a) In the past 2 months, have you been living in stable housing that you own, rent, or stay in as part of a household? (b) Are you worried or concerned that in the next 2 months you may not have stable housing that you own, rent, or stay in as part of a household? (Montgomery, Fargo, Byrne, Kane, & Culhane, 2013). For the purpose of this study, either a negative response to the first question or a positive response to the second indicates housing instability, conceptualized along a continuum from risk of imminent housing instability to recent or current experience of housing instability.

For veterans reporting housing instability, we created an indicator of VHA homeless program use within 6 months following their first positive screen. VHA homeless programs included Health Care for Homeless Veterans, Contracted Emergency Residential Services, Domiciliary Care for Homeless Veterans, Compensated Work Therapy/Transitional Residence, Grant and Per Diem, Low Demand Safe Haven, Supportive Services for Veteran Families, and HUD-VA Supportive Housing.

In addition to eight race/sex categories (i.e., white men, white women, black men, black women, American Indian/Alaska Native men, American Indian/Alaska Native women, Asian/Pacific Islander men, Asian/Pacific Islander women), sociodemographic variables included Hispanic ethnicity, age as a five-category variable, and marital status. VA Enrollment Priority Group indicates whether veterans receive compensation related to a service-connected disability or a VA pension and serves as a proxy for income. We assessed three variables related to veterans' military service: service in Operations Enduring Freedom/Iraqi Freedom/New Dawn (OEF/OIF/OND), exposure to combat, and experience of military sexual trauma (MST). We assessed the presence of mental health conditions, substance use disorders, and chronic medical conditions based on diagnostic codes in veterans' EHRs and classified according to the algorithm developed by Elixhauser, Steiner, Harris, and Coffey (1998).

Analysis

We conducted two multivariable logistic regressions: the first assessed the odds of veterans screening positive for housing instability with race/sex categories entered as main effects, controlling for each of the variables described above. The second multivariable logistic regression assessed the odds of veterans using a VHA homeless program within 6 months of screening positive for housing instability, including race/sex categories as main effects and controlling for the variables described above.

When comparing descriptive statistics for veterans by race/sex categories we did not assess statistical significance given the very large sample size (high power) and potential number of statistical tests (inflated type I error). Rather, we focused on effect size measures (i.e., differences in percentages).

Results

Overall Proportion of Housing Instability and Use of VHA Homeless Programs by Race and Sex

More than 5.3 million veterans responded to the HSCR between October 2012 and March 2016. As shown in Table 1, the vast majority of respondents were white men (76.1%), followed by black men (14.7%), white women (4.6%), black women (2.2%), Asian/Pacific Islander men (1.6%), American Indian/Alaska Native men (0.6%), Asian/Pacific Islander women (0.2%), and American Indian/Alaska Native women (0.1%).

Among those screening positive for housing instability (n = 147,771), white men were underrepresented by 29.0%; all other race/sex categories were overrepresented, ranging from an overrepresentation of 15.6% among Asian/Pacific Islander men to 56.3% among American Indian/Alaska Native women.

Table 1. Proportion of veterans with a positive screen for housing instability and use of VHA homeless programs, by race and sex ($n = 5,355,858$).

	White		Black		American Indian/Alaska Native		Asian/Pacific Islander		Total/
	Men	Women	Men	Women	Men	Women	Men	Women	denominator
Sample	4,073,316	247,754	785,304	117,601	34,171	4,053	84,438	9,221	5,355,858
Proportion of sample	76.1%	4.6%	14.7%	2.2%	0.6%	0.1%	1.6%	0.2%	
No. with positive screen for housing instability	87,118	8,662	40,750	6,100	1,757	256	2,759	369	147,771
Proportion with positive screen for housing instability	59.0%	5.9%	27.6%	4.1%	1.2%	0.2%	1.9%	0.3%	
Disproportionality	− 29.0%	21.1%	46.8%	46.8%	46.3%	56.3%	15.6%	31.1%	
No. used VHA homeless program	27,910	2,855	17,371	2,501	657	110	788	118	52,310
Proportion using VHA homeless program	53.4%	5.5%	33.2%	4.8%	1.3%	0.2%	1.5%	0.2%	
Disproportionality	− 10.5%	− 7.4%	17.0%	13.7%	5.3%	17.6%	− 23.9%	− 10.7%	

Note. VHA = Veterans Health Administration.

Among veterans reporting housing instability and using VHA homeless programs within 6 months (*n* = 52,310), white men and women and Asian/Pacific Islander men and women were underrepresented, ranging from 7.4% among white women to 23.9% among Asian/Pacific Islander men. Veterans in the remaining race/sex categories were overrepresented among those using VHA homeless programs, ranging from 5.3% among American Indian/Alaska Native men to 17.6% among American/Indian/Alaska Native women.

Rates of Housing Instability by Race and Sex

Table 2 displays the proportion of veterans in each of the race/sex categories—as well as those with particular sociodemographic and diagnostic characteristics—that screened positive for housing instability. Overall, white men had the lowest rate of positive screens at 2.1%; American Indian/ Alaska Native women had the highest rate at 6.3%. Regardless of sex, white veterans had the lowest rates of housing instability. Compared with men, women in each racial category had higher rates of housing instability.

Generally, the lowest rates of housing instability were among veterans aged 65 years and older, regardless of race/sex category. Among black and American Indian/Alaska Native women, rates of housing instability were lowest among those who were married. The highest rates of housing instability were among veterans with an indication of suicide ideation or attempt (white men, white women, black men, American Indian/Alaska Native men) or drug abuse (black women, American Indian/Alaska Native women, and Asian/Pacific Islander men and women) in their EHR.

The lowest rate of housing instability was among white men 65 years old or older (0.7%), and the highest rate of housing instability was among black men with an indicator of suicide ideation or attempt (18.2%). With a few exceptions (specifically, among American Indian/Alaska Native women and Asian/Pacific Islander men), rates of housing instability among veterans in racial/ethnic minority groups with an indicator of depression, psychosis, posttraumatic stress disorder (PTSD), suicide ideation or attempt, alcohol abuse, or drug abuse were higher than among their white counterparts.

Correlates of Housing Instability

Table 3 displays the results of a logistic regression examining the association between race/sex categories and screening positive for housing instability. Based on white men as the reference category, both white women (adjusted odds ratio [aOR] 0.71, 95% confidence interval [CI] 0.69, 0.73) and Asian/Pacific Islander women (aOR 0.88, 95% CI 0.79, 0.98) had decreased odds of screening positive for housing instability. American Indian/Alaska Native men (aOR 1.88, 95% CI 1.79, 1.98) and black men (aOR 1.68, 95% CI 1.66, 1.71) had the greatest odds. In general, women had lower odds than their male counterparts of screening positive for housing instability, and veterans identifying as a race other than white had higher odds. Hispanic ethnicity was also associated with increased odds of housing instability (aOR 1.28, 95% CI 1.25, 1.30).

Other characteristics significantly associated with housing instability include younger age, being unmarried, experience of MST, and having a mental health diagnosis. Alternatively, not receiving a VA pension (and receiving compensation related to a service-connected disability) and having an indicator of a chronic medical condition were protective.

VHA Homeless Program Use Among Veterans, by Race and Sex

Table 4 displays the proportion of veterans in each of the race/sex categories—as well as those with particular sociodemographic and diagnostic characteristics—who used a VHA homeless program within 6 months of screening positive for housing instability. Overall, Asian/Pacific Islander men had the lowest rate of VHA homeless program use at 28.6%; American Indian/Alaska native women had the highest rate (43.0%), followed closely by black men (42.6%).

Table 2. Rates of housing instability by race, sex, and sociodemographic factors (n = 5,355,858).

| | White | | | | Black | | | | American Indian/Alaska Native | | | | Asian/Pacific Islander | | | |
| | Men n = 4,073,316 | | Women n = 247,754 | | Men n = 785,304 | | Women n = 117,601 | | Men n = 34,171 | | Women n = 4,053 | | Men n = 84,438 | | Women n = 9,221 | |
Variable	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Overall	87,118	2.1	8,662	3.5	40,750	5.2	6,100	5.2	1,757	5.1	256	6.3	2,759	3.3	369	4.0
Ethnicity																
Hispanic	7,837	3.4	747	3.9	566	4.4	100	5.3	242	6.1	35	7.5	278	4.2	40	4.9
Non-Hispanic	79,281	2.1	7,915	3.5	40,184	5.2	6,000	5.2	1,515	5.0	221	6.2	2,481	3.2	329	3.9
Age																
18–34	13,988	4.0	2,078	3.3	4,715	7.8	1,538	5.6	281	6.8	64	5.4	605	4.2	123	3.5
35–44	9,828	4.1	1,619	3.9	4,597	6.0	1,309	4.9	241	7.3	63	7.4	441	4.7	99	4.7
45–54	18,669	5.0	2,486	4.6	11,744	7.1	1,980	5.5	400	8.6	71	7.5	577	4.7	76	4.3
55–64	28,403	3.1	2,042	3.8	15,231	6.1	1,145	5.1	563	5.8	48	6.2	743	4.0	60	4.6
65+	16,230	0.7	437	1.2	4,463	1.9	128	2.9	272	2.2	10	3.4	393	1.3	11	2.0
Marital status																
Married	24,532	1.0	1,697	1.8	9,052	2.5	945	2.7	518	2.8	47	3.3	1,109	2.1	94	2.5
Unmarried	62,586	3.9	6,965	4.5	31,698	7.5	5,155	6.2	1,239	7.8	209	8.0	1,650	5.2	275	5.0
VA enrollment priority group																
SC > 50%	24,397	2.2	3,239	3.6	11,187	3.9	2,583	4.6	584	4.4	105	6.4	1,215	3.3	172	4.2
SC < 50%	18,943	2.1	1,991	3.3	9,496	5.4	1,411	4.9	391	5.2	58	6.0	566	2.7	90	3.5
No SC, VA pension	4,801	6.7	194	6.6	2,593	8.9	111	12.1	88	9.4	a	14.3	81	8.7	a	19.1
No SC	38,977	2.0	3,238	3.4	17,474	5.9	1,995	6.3	694	5.5	87	6.3	897	3.5	98	3.9
OEF/OIF/OND	14,471	3.6	1,417	3.1	4,948	5.7	1,173	4.7	320	6.1	68	6.4	751	4.1	100	3.4
Combat exposure	7,338	1.8	472	3.2	3,328	3.8	497	4.6	154	3.8	15	4.5	427	3.5	35	3.4
Military sexual trauma	3,681	6.3	3,990	5.8	1,620	11.7	2,331	8.1	88	10.9	146	10.0	97	7.2	158	7.3
Depression	16,035	5.0	2,020	5.7	6,795	9.1	1,102	7.3	291	8.7	43	7.9	367	6.7	64	7.2
Psychosis	16,081	5.2	2,155	5.9	6,484	8.5	1,235	8.0	287	9.5	41	8.2	424	6.7	70	7.5
PTSD	12,183	3.7	1,684	6.2	4,823	5.8	947	7.6	337	7.2	57	9.8	373	4.7	65	7.8
Suicide	3,767	13.0	349	10.9	1,747	18.2	144	11.7	71	17.7	a	9.2	68	12.8	11	14.9
Alcohol abuse	11,614	8.0	655	9.5	6,230	12.3	368	12.3	266	13.1	20	12.6	239	10.5	22	15.1
Drug abuse	9,335	11.7	605	10.6	6,677	14.4	397	14.0	164	14.9	a	8.5	174	13.6	17	17.0
TBI	382	5.2	21	5.5	113	8.4	a	7.4	11	9.2	a	10.0	a	3.8	a	5.9
Chronic medical condition	33,780	2.0	2,708	3.7	17,026	4.5	2,082	5.4%	608	4.6	58	5.6	874	3.0	93	4.8

Note. [a] cell sizes less than 10. SC = service-connected; VA = U.S. Department of Veterans Affairs; OEF/OIF/OND = Operations Enduring Freedom/Iraqi Freedom/New Dawn; PTSD = Post-traumatic stress disorder; TBI = Traumatic brain injury.

Table 3. Logistic regression predicting housing instability (n = 5,355,858).

Variable	Reference	aOR	95% CI	p
Race and sex	White men			
White women		0.71	(0.69, 0.73)	<.001
Black men		1.68	(1.66, 1.71)	<.001
Black women		1.02	(0.99, 1.05)	.119
American Indian/Alaska Native men		1.88	(1.79, 1.98)	<.001
American Indian/Alaska Native women		1.18	(1.04, 1.35)	.011
Asian/Pacific Islander men		1.37	(1.32, 1.43)	<.001
Asian/Pacific Islander women		0.88	(0.79, 0.98)	.017
Hispanic ethnicity		1.28	(1.25, 1.30)	<.001
Age	65+			
18–34		4.06	(3.96, 4.15)	<.001
35–44		4.15	(4.06, 4.24)	<.001
45–54		4.48	(4.40, 4.56)	<.001
55–64		3.16	(3.10, 3.21)	<.001
Marital status: Unmarried		2.69	(2.65, 2.72)	<.001
VA enrollment priority group	No SC, VA pension			
SC > 50%		0.43	(0.42, 0.44)	<.001
SC < 50%		0.50	(0.49, 0.52)	<.001
No SC		0.57	(0.55, 0.58)	<.001
OEF/OIF/OND		0.91	(0.90, 0.93)	<.001
Combat exposure		0.87	(0.86, 0.89)	<.001
Military sexual trauma		1.84	(1.80, 1.88)	<.001
Depression		1.48	(1.46, 1.51)	<.001
Psychosis		1.34	(1.32, 1.37)	<.001
PTSD		1.13	(1.11, 1.15)	<.001
Suicide		1.34	(1.30, 1.38)	<.001
Alcohol abuse		1.42	(1.39, 1.44)	<.001
Drug abuse		1.67	(1.63, 1.71)	<.001
TBI		1.21	(1.10, 1.32)	<.001
Chronic medical condition		0.83	(0.82, 0.84)	<.001

Notes. aOR = adjusted odds ratio; CI = confidence intervals; SC = service-connected; OEF/OIF/OND = Operations Enduring Freedom/Iraqi Freedom/New Dawn; PTSD = Post-traumatic stress disorder; TBI = Traumatic brain injury.

The lowest rates of VHA homeless program use were among veterans aged 65 years and older, regardless of their race/sex category; however, among black and Asian/Pacific Islander women, rates of VHA homeless program use were lowest among those who were married. The highest rates of VHA homeless program use were among veterans with an indication of suicide ideation or attempt (white men, white women, black men, Asian/Pacific Islander men), receipt of VA pension (black women), drug abuse (American Indian/Alaska Native men), serving in OEF/OIF/OND (American Indian/Alaska Native women), or being of Hispanic ethnicity (Asian/Pacific Islander women).

The lowest rate of VHA homeless program use was among Asian/Pacific Islander men age 65 years or older (19.1%), and the highest rate of VHA homeless program use was among black men with an indicator of suicide ideation or attempt (65.9%). Generally speaking, a greater proportion of black men and women and American Indian/Alaska Native men with an indicator of depression, psychosis, PTSD, suicide ideation or attempt, alcohol abuse, or drug abuse accessed VHA homeless programs compared with white men and women. However, the opposite was the case for American Indian/ Alaska Native women and Asian/Pacific Islander men and women; these veterans had lower rates of VHA homeless program use compared with their white counterparts.

Correlates of VHA Homeless Program Use

Table 5 displays the results of a logistic regression examining the association between race/sex category and using VHA homeless programs within 6 months of screening positive for housing instability. Based on white men as the reference category, white women (aOR 0.89, 95% CI 0.85, 0.94) had lower odds of accessing VHA homeless programs. Black men had the greatest odds of accessing

Table 4. Rates of Veterans Health Administration homeless program use by race, sex, and sociodemographic factors (*n* = 147,771).

| | White | | | | Black | | | | American Indian/ Alaska Native | | | | Asian/Pacific Islander | | | |
| | Men *n* = 87,118 | | Women *n* = 8,662 | | Men *n* = 40,750 | | Women *n* = 6,100 | | Men *n* = 1,757 | | Women *n* = 256 | | Men *n* = 2,759 | | Women *n* = 369 | |
Variable	*n*	%	*n*	%	*n*	%	*n*	%	*n*	%	*n*	%	*n*	%	*n*	%
Overall	27,910	32.0	2,855	33.0	17,371	42.6	2,501	41.0	657	37.4	110	43.0	788	28.6	118	32.0
Ethnicity																
Hispanic	2,417	30.8	283	37.9	193	34.1	45	45.0	86	35.5	16	45.7	95	34.2	17	42.5
Non-Hispanic	25,493	32.2	2,572	32.5	17,178	42.7	2,456	40.9	571	37.7	94	42.5	693	27.9	101	30.7
Age																
18–34	4,792	34.3	741	35.7	2,024	42.9	729	47.4	104	37.0	28	43.8	187	30.9	39	31.7
35–44	3,415	34.7	532	32.9	1,898	41.3	548	41.9	103	42.7	28	44.4	134	30.4	31	31.3
45–54	6,896	36.9	860	34.6	5,283	45.0	759	38.3	163	40.8	34	47.9	170	29.5	27	35.5
55–64	9,281	32.7	610	29.9	6,703	44.0	422	36.9	211	37.5	18	37.5	222	29.9	20	33.3
65+	3,526	21.7	112	25.6	1,463	32.8	43	33.6	76	27.9	[a]	20.0	75	19.1	[a]	9.1
Marital status																
Married	5,571	22.7	443	26.1	2,907	32.1	320	33.9	149	28.8	20	42.6	227	20.5	19	20.2
Unmarried	22,339	35.7	2,412	34.6	14,464	45.6	2,181	42.3	508	41.0	90	43.1	561	34.0	99	36.0
VA enrollment priority group																
SC >50%	6,925	28.4	1,018	31.4	4,200	37.5	1,040	40.3	189	32.4	39	37.1	278	22.9	57	33.1
SC <50%	6,131	32.4	673	33.8	4,098	43.2	559	39.6	148	37.9	28	48.3	159	28.1	23	25.6
No SC, VA pension	2,078	43.3	88	45.4	1,350	52.1	62	55.9	36	40.9	[a]	33.3	41	50.6	[a]	22.2
No SC	12,776	32.8	1,076	33.2	7,723	44.2	840	42.1	284	40.9	41	47.1	310	34.6	36	36.7
OEF/OIF/OND	4,648	32.1	475	33.5	1,951	39.4	493	42.0	115	35.9	34	50.0	207	27.6	30	30.0
Combat exposure	1,977	26.9	133	28.2	1,178	35.4	184	37.0	47	30.5	[a]	53.3	85	19.9	11	31.4
Military sexual trauma	1,489	40.5	1,386	34.7	807	49.8	1,036	44.4	34	38.6	62	42.5	35	36.1	60	38.0
Depression	6,012	37.5	699	34.6	3,248	47.8	490	44.5	118	40.5	12	27.9	117	31.9	20	31.3
Psychosis	6,186	38.5	750	34.8	3,119	48.1	533	43.2	115	40.1	13	31.7	140	33.0	24	34.3
PTSD	4,130	33.9	600	35.6	2,093	43.4	423	44.7	132	39.2	17	29.8	109	29.2	21	32.3
Suicide	2,046	54.3	183	52.4	1,152	65.9	76	52.8	35	49.3	[a]	50.0	36	52.9	[a]	63.6
Alcohol abuse	5,404	46.5	311	47.5	3,402	54.6	188	51.1	140	52.6	[a]	35.0	112	46.9	[a]	36.4
Drug abuse	4,726	50.6	301	49.8	3,862	57.8	212	53.4	94	57.3	[a]	33.3	86	49.4	[a]	41.2
TBI	157	41.1	[a]	38.1	39	34.5	[a]	62.5	[a]	36.4			[a]	42.9		
Chronic medical condition	10,372	30.7	881	32.5	6,935	40.7	782	37.6	217	35.7	13	22.4	231	26.4	27	29.0

Note. [a]cell sizes less than 10. VA = U.S. Department of Veterans Affairs; SC = service-connected; OEF/OIF/OND = Operations Enduring Freedom/Iraqi Freedom/New Dawn; PTSD = Post-traumatic stress disorder; TBI = Traumatic brain injury.

VHA homeless programs (aOR 1.48, 95% CI 1.44, 1.51). Results for Asian/Pacific Islander men and women and those with Hispanic ethnicity were not significant.

Aside from race, being younger than 65, being unmarried, experiencing MST, and having an indicator of the mental/behavioral health conditions studied here (with the exception of psychosis and PTSD) were associated with increased odds of accessing VHA homeless programs. Alternatively, not receiving a VA pension (and receiving compensation related to a service-connected disability) and having an indicator of a chronic medical condition were associated with decreased odds of accessing VHA homeless programs.

Discussion

Using both descriptive and multivariate methods, the present study uncovered several important findings regarding the relationship between veterans' race/sex and their experience of housing instability and use of VHA homeless programs.

Table 5. Logistic regression predicting Veterans Health Administration (VHA) homeless program use among veterans reporting housing instability (n = 147,771).

Variable	Reference	aOR	95% CI	p
Race and sex	White men			
White women		0.89	(0.85, 0.94)	<.001
Black men		1.48	(1.44, 1.51)	<.001
Black women		1.30	(1.23, 1.37)	<.001
American Indian/Alaska Native men		1.28	(1.16, 1.42)	<.001
American Indian/Alaska Native women		1.36	(1.06, 1.76)	.016
Asian/Pacific Islander men		0.95	(0.88, 1.04)	.276
Asian/Pacific Islander women		0.90	(0.72, 1.12)	.339
Ethnicity: Hispanic		0.99	(0.95, 1.04)	.717
Age	65+			
18, 34		1.84	(1.75, 1.94)	<.001
35, 44		1.72	(1.64, 1.81)	<.001
45, 54		1.69	(1.62, 1.76)	<.001
55, 64		1.45	(1.40, 1.51)	<.001
Marital status: Unmarried		1.60	(1.56, 1.64)	<.001
VA enrollment priority group	No SC, VA pension			
SC > 50%		0.54	(0.51, 0.57)	<.001
SC < 50%		0.65	(0.62, 0.69)	<.001
No SC		0.68	(0.65, 0.72)	<.001
OEF/OIF/OND		0.93	(0.89, 0.97)	<.001
Combat exposure		0.83	(0.79, 0.87)	<.001
Military sexual trauma		1.23	(1.18, 1.28)	<.001
Depression		1.06	(1.03, 1.09)	<.001
Psychosis		1.03	(0.99, 1.06)	.104
PTSD		0.97	(0.93, 1.00)	.066
Suicide		1.63	(1.54, 1.73)	<.001
Alcohol abuse		1.33	(1.28, 1.39)	<.001
Drug abuse		1.64	(1.57, 1.71)	<.001
TBI		1.19	(0.99, 1.42)	.063
Chronic medical condition		0.80	(0.78, 0.82)	<.001

Note. VHA homeless programs use in 6 months following first positive HSCR. aOR = adjusted odds ratio; CI = confidence intervals; SC = service-connected; OEF/OIF/OND = Operations Enduring Freedom/Iraqi Freedom/New Dawn; PTSD = Post-traumatic stress disorder; TBI = Traumatic brain injury; HSCR = Homelessness Screening Clinical Reminder.

Differences in Rates of Housing Instability and VHA Homeless Program Use

Descriptive analyses found that veterans who represent racial groups other than white—regardless of sex—(a) are disproportionately represented among veterans who screen positive for housing instability; (b) have higher rates of positive screens for housing instability; and (c) have higher rates of VHA homeless program utilization. These findings echo results reported in previous studies (Fargo et al., 2012; Montgomery et al., 2015). These findings are also largely consistent with data reported in the *Annual Homeless Assessment Report to Congress*, which has found higher rates of unsheltered homelessness among people who identify as white. Alternatively, people who identify as black have higher rates of shelter use (HUD, 2018a, 2018b).

Whereas there was clearly a disproportionality in the experience of housing instability by race/sex, this disproportionality did not extend to veterans' access to VHA homeless programs, suggesting that VHA homeless programs reach out to and engage with diverse groups of veterans. There do not appear to be disparities in accessing care that disadvantage racial and ethnic minority groups; an important caveat is that we only examined program utilization and did not examine the quality of care received or outcomes. However, this finding is consistent with the larger body of literature that has found no clear evidence of racial or ethnic disparities in utilization of a range of VHA health care services (Kondo et al., 2017).

There are likely many factors that contribute to race/sex differences in homelessness, including differences in known risk factors for homelessness such as income, mental illness, substance abuse,

social support, and adverse childhood experiences. The overrepresentation of black and Native American/Alaskan Natives among homeless persons is also observed in examinations of poverty, crime and incarceration, family dissolution, physical health, and other social issues (Barnes, Adams, & Powell-Griner, 2010; Hamilton & Hummer, 2011; Sarche & Spicer, 2008). In this study, rates of housing instability are much higher among racial/ethnic minority veterans who have an indication of mental health conditions or substance use disorders, particularly when compared with white men. This suggests that the groups of veterans experiencing the highest rates of housing instability are exposed to cumulative disadvantage—that is, they are confronted with not only poverty or other structural risk factors for homelessness, but also "correlated and compounded adversity" related to their mental health or substance use (Desmond, 2015, p. 3).

Sex and Housing Instability

A significant contribution of the present study is that it assesses race/sex differences in experience of housing instability and use of related interventions while also controlling for other sociodemographic factors, rather than as a unidimensional construct. Whereas women veterans had higher rates of housing instability than their male counterparts, multivariable analyses indicate that they have lower odds of experiencing housing instability. Prior research has identified a variety of factors that may increase risk of housing instability among women veterans and the role of trauma in women veterans becoming homeless (Montgomery, Byrne, & Dichter, 2018); these analyses support that.

It is important to note that, generally, women veterans are younger than their male counterparts. The multivariable results consistently show that younger age groups are at higher risk of housing instability compared with those who are 65 years or older; however, controlling for that, women veterans have decreased odds of housing instability. The younger age of women veterans may be a strength in that their more recent discharge from military service and lack of extensive histories of homelessness, incarceration, or substance abuse may place them at an advantage for accessing housing and employment (Tsai, Rosenheck, & Kane, 2014). To continue to support their housing stability, younger women veterans may need assistance with childcare (Blackstock, Haskell, Brandt, & Desai, 2012; Tsai, Kasprow, Kane, & Rosenheck, 2014) and reintegration following military service.

Race and Housing Instability

Whereas the rates of housing instability and use of VHA homeless programs can vary widely based on veterans' various characteristics, the multivariable analyses found that, regardless of sex, veterans who identify as racial/ethnic minorities have increased odds of housing instability and increased odds of accessing VHA homeless programs. Previous research has identified both internal (e.g., mental health or substance abuse problems) and external (e.g., economic problems, racism) factors in pathways into homelessness that may be related to racial identity (Jones, 2016; Tsai & Gu, 2019). Given these differences, Jones argues that "programs and policies to address homelessness need to consider race as one of many socially shaped axes of difference that can influence their ability to effectively serve their target populations" (Jones, 2016, p. 149). Interventions to address homelessness must provide coordinated and integrated approaches that cover the range of veterans' needs resulting from intersecting and cumulative experiences.

For instance, the group with the largest proportion of veterans reporting housing instability is black men with a history of suicide attempt or self-harm; this population could benefit from services to address the comorbid conditions of housing instability *and* serious mental health issues or other stressors that may influence suicide risk. Note that the present analyses did not assess the direction of the relationship between housing instability and other issues such as substance use or mental health. Per a social selection model, substance use may be a factor that leads to homelessness through pathways involving breaking with the labor market or sources of

social support and acquiring new social networks. The social adaptation model posits that substance abuse or other issues may develop within the context of homelessness (Johnson & Chamberlain, 2008).

Both the National Alliance to End Homelessness (NAEH) and HUD have developed tools and strategies to assess whether racial disparities exist in homelessness as well as the homeless assistance system. The HUD tool allows communities to use their local data to discover potential racial disparities in homelessness and discuss strategies to address it (HUD, 2018c). The tool developed by NAEH enables communities to evaluate whether there are disparities in housing outcomes, such as access to permanent supportive housing and returns to homelessness (NAEH, 2019). In addition to learning more about the composition of the homeless population within a community and assessing how well the service system responds, the Los Angeles Homeless Services Authority (2018) has developed an extensive list of recommendations to address racial disparities in homelessness, with a focus on income and employment as well as services systems that may disproportionately impact people identifying as racial minorities (e.g., justice system, foster care).

Limitations

Some limitations must be considered when interpreting the results of this study and applying them to the larger population. First, the study sample comprised veterans who accessed VHA outpatient care; therefore, the results may not be generalizable to the larger veteran population. Second, experiences of housing instability and use of VHA homeless program services may vary by geographic region or specific medical facility; although the multivariable analysis controlled for clustering of patients at facilities, it did not seek to identify geographic or facility-level variation in homelessness and VHA homeless program use. Third, we did not have data for a number of variables that impact health and homelessness, including childhood factors, social support, immigrant status, and socioeconomic status (Tsai & Gu, 2019). Our data regarding income were limited to a proxy measure of veterans' receipt of compensation for a service-connected disability; other measures of socioeconomic status might have improved the models.

Fourth, we applied a limited criterion for experience of housing instability (i.e., positive response to VA's HSCR). This may represent not only an underestimate of housing instability because of temporal issues (i.e., a veteran may not have become unstably housed until after responding to the HSCR) but also a lack of specificity regarding whether the veteran was literally homeless or at risk, given that we conceptualized housing instability along a continuum from risk of imminent housing instability to current experience of housing instability. In addition, veterans may have received homelessness assistance at community-based organizations, which would not have been captured in the veterans' EHRs. Regardless, this study provides a national-level assessment of self-reported housing instability and use of related services with a focus on the intersection of race and sex, which has not been previously reported.

Conclusion

Housing instability is an important public health issue, and individuals who identify as a racial or ethnic minority in the United States—particularly those who experience a comorbid mental health condition or substance use disorder—are disproportionately impacted. In the case of veterans who access VHA services, there appear to be high rates of access to responsive interventions. There is a need to address cumulative disadvantage and prevent homelessness among veterans identifying as part of a racial/ethnic minority group and experiencing other vulnerabilities.

Disclosure Statement

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Notes on Contributors

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