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Association Between Registered Sex Offender Status and Risk of Housing Instability and Homelessness among Veterans*

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Abstract

Research is limited about whether and to what extent registered sex offenders (RSOs) face an increased risk of housing instability. The

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intersection of RSO and housing instability is particularly salient for veterans as there are disproportionately higher rates of veterans among both RSOs and homeless populations. This study assessed the relationship between RSO status and risk of housing instability and homelessness among military veterans. We matched a list of 373,774 RSOs obtained from publicly available sex offender registries in 19 states with a cohort of 5.9 million veterans who responded to a brief screening for housing instability administered throughout the Veterans Health Administration between 2012 and 2016. Logistic regression estimated adjusted odds of any housing instability and homelessness among veterans identified as RSOs. Veterans identified as RSOs had 1.81 (95% confidence interval [CI] 1.46–2.25) and 2.97 (95% CI 1.67–5.17) times greater odds of reporting any housing instability and homelessness, respectively, than non-RSOs. Findings represent some of the strongest evidence to date for the high risk of housing instability and homelessness among RSOs, suggesting a clear gap in policy and programmatic responses to their unique housing needs. Evidence-based alternative approaches to residence restriction laws may reduce recidivism and protect public safety.

Keywords
registered sex offender, veteran, homelessness, administrative data, registry

As a result of federal legislation passed in recent decades, all 50 states of the United States have sex offender registration and notification policies that require individuals convicted of certain sexual crimes to register with authorities; this information is made publicly available via the internet (Harris & Lobanov-Rostovsky, 2010). In 2017, there were an estimated 861,837 individuals listed in these publicly available sex offender registries across the United States (National Center for Missing and Exploited Children, 2017). Registered sex offenders (RSOs) face challenges to accessing and maintaining stable housing in part because the majority of states and many municipalities restrict where sex offenders may live (Levenson, 2008), leading to frequent moves (Rydberg et al., 2014) and difficulty finding housing (Levenson, 2008). The impact of these residence restriction laws on housing outcomes likely varies across localities, depending on their specific provisions, and their impact is compounded by high levels of stigma and other legal, social, and economic barriers to housing that affect

persons with a history of involvement with the criminal justice system (Levenson, 2018).

Housing instability is a risk factor for criminal recidivism (Steiner et al., 2015) and parole absconsion (Williams et al., 2000), raising concerns that the lack of stable housing among RSOs poses a threat to public safety (Levenson, 2018). A sizeable body of prior research on the housing challenges of RSOs suggests that they face increased risk of housing instability; only one study has examined this issue directly, finding higher rates of homelessness among sex offenders relative to the general population (Levenson et al., 2015). However, that study was based on data from a single state (Florida), relied on aggregate counts of homelessness in the general population, and did not control for individual-level confounders. Consequently, whether and to what extent RSOs have higher rates of housing instability compared to non-RSOs remains a crucial—but to date, inadequately addressed—question.

To address this gap, we linked publicly available data from sex offender registries from 19 states with data from the Veterans Health Administration (VHA) to examine the relationship between RSO status and risk of housing instability among military veterans. This intersection is particular salient—and, to our knowledge, understudied—for veterans; among the prison-incarcerated population, veterans have higher odds of being incarcerated for sexual offenses relative to nonveterans and face increased risk of homelessness compared to nonveterans (Fargo et al., 2012).

Methods

Data and Participants

We used web scraping (Landers et al., 2016) to obtain a list of 373,774 RSOs—accounting for 43% of all RSOs in the United States—from publicly available, online sex offender registries in the 19 most populous states during the first six months of 2018; this process required writing separate web scraping programs for each state and so resource constraints precluded us from obtaining the data for all 50 states. Each registry included first name, last name, date of birth, and address. We linked the sex offender registry data with a cohort of 5,894,138 veterans who responded to the VHA's Homelessness Screening Clinical Reminder (HSCR) between October 1, 2012 and September 30, 2016. The HSCR, administered at least annually to all veterans who access VHA outpatient care, comprises two questions: (a) In the past two months, have you been living in stable housing that you own, rent, or stay in as part of a household? and (b) Are you worried or concerned that in

the next two months you may not have stable housing that you own, rent, or stay in as part of a household? (Montgomery et al., 2013). Veterans who report housing instability provide their current living situation, including staying in an emergency shelter or an unsheltered location so that VA clinical staff can link veterans to appropriate housing-related supports.

Procedures

Lacking a common unique identifier in the sex offender registry and HSCR data, we used deterministic matching based on an exact match of first name, last name, date of birth, street number of address, and ZIP code. In large administrative data sets, matching on this combination, in conjunction with gender, has virtually the same accuracy as matching based on Social Security number (Ansolabehere & Hersh, 2017). We excluded gender when matching because 98% of individuals in the sex offender registry data with nonmissing gender were male. Given that sex offender registries can list "homeless" as an address, this conservative matching approach likely leads to a high false negative rate, biased toward the under-identification of RSOs who are homeless. We also tested a less conservative matching approach based on an exact match of first name, last name, and date of birth; results for both approaches were similar and we only present the results from the more conservative approach.

We identified 4,917 veteran respondents to the HSCR who were also included on a state sex offender registry. We selected a 3:1 comparison group ($N = 4{,}751$) at random from the HSCR respondents who were not identified as RSOs and who responded to the HSCR at a VHA facility in one of the 19 states for which we had sex offender registry data, resulting in a final analytic sample of 19,668 veterans. We categorized veterans who responded either negatively to the first question of the HSCR or positively to the second as experiencing any housing instability. The subgroup of these veterans who also reported a living situation consistent with the official federal definition of homelessness (i.e., staying in an emergency shelter or an unsheltered location) were further categorized as homeless.

Analysis

The analysis assessed whether, and to what extent, RSOs experienced elevated rates of housing instability and homelessness compared to non-RSOs. First, we conducted bivariate comparisons of the outcome measures (any housing instability and homelessness) between HSCR respondents identified as RSOs and the comparison groups. Second, we conducted adjusted

comparisons using multiple logistic regression models, controlling for the following covariates obtained from veterans' electronic medical records: sociodemographic characteristics; presence of chronic health, mental health, and substance use diagnoses; history of using VHA Homeless Programs in the 18 months prior to completing the HSCR; inpatient admissions and outpatient services use in the 18 months prior to completing the HSCR; region of the United States; response to the HSCR at a VA facility located in a rural area; and year and month of response to the HSCR. The models also included an indicator for whether veterans accessed a VHA Justice Program (i.e., Health Care for Re-entry Veterans and Veterans Justice Outreach) between October 1, 2012 and September 30, 2016.

This study was granted a waiver of informed consent and approved by the Institutional Review Board at the Corporal Michael J. Crescenz VA Medical Center.

Results

Among the veterans in the RSO group, 4.9% reported any housing instability and 1.0% reported homelessness compared to 1.7% and 0.2% of veterans in the non-RSO group, respectively (both $p < .0001$). There were statistically significant differences between RSOs and non-RSOs with respect to almost all of the covariates we considered; the most salient differences were that RSOs were more likely to have a record of prior use of a VHA Justice Program, were more heavily concentrated in the 40–64 year age group, were less likely to be married, and were more likely to have a recent history of VHA Homeless Program use (Supplemental Table 1 presents full sample descriptives and bivariate comparisons).

In our fully adjusted logistic regression models, RSOs had 1.81 (95% confidence interval [CI] 1.46–2.23, $p < .001$) and 2.94 (95% CI 1.67–5.17, $p < .001$) times greater odds of reporting any housing instability and homelessness, respectively, than non-RSOs. (see Table 1.) In addition to RSO status, a number of other covariates were significantly associated with both housing instability and homelessness, including prior use of VHA Homeless Programs, which was associated with a more than two-fold increase in the odds of housing instability and a more than four-fold increase in the odds of homelessness. In addition, married veterans were far less likely to report housing instability or homelessness and those responding to the HSCR in regions other than the West had higher odds of both outcomes. The pattern of associations between physical and behavioral health diagnoses as well as prior use of VHA inpatient and outpatient services were not consistent across the two outcome measures.

Table 1. Models Predicting Any Housing Instability and Homelessness among Veterans (N = 19,688).

	Model 1: Any Housing Instability			Model 2: Homelessness		
	AOR	95% CI	*p*-value	AOR	95% CI	*p*-value
Registered sex offender	1.81	1.46–2.23	<.001	2.94	1.67–5.17	< .001
Use of VHA Justice Programs	1.10	0.66–1.86	.709	0.84	0.28–2.49	.747
Male	1.41	0.90–2.19	.131	2.96	0.40–22.18	.291
Age group						
18–39 (reference)						
40–64	1.08	0.79–1.49	.628	3.36	1.11–10.14	.032
65+	0.31	0.20–0.47	< .001	0.72	0.18–2.85	.638
Ethnicity						
Hispanic/Latino (reference)						
Not Hispanic/Latino	1.11	0.75–1.64	.593	1.95	0.59–6.44	.276
Unknown	0.60	0.31–1.19	.142	1.38	0.21–9.06	.737
Race						
Black (Reference)						
White	0.54	0.43–0.67	< .001	0.59	0.15–2.31	.451
Other	0.68	0.44–1.04	.075	1.81	0.49–6.70	.371
Unknown/missing	0.60	0.31–1.15	.124	1.01	0.56–1.83	.965
Service in OEF/OIF/OND	1.03	0.72–1.47	.880	1.03	0.34–3.17	.959
Marital status						
Married (reference)						

(continued)

Table 1. continued

	Model 1: Any Housing Instability			Model 2: Homelessness		
	AOR	95% CI	*p*-value	AOR	95% CI	*p*-value
Not married/unknown	2.61	2.08–3.28	< .001	3.27	1.66–6.44	.001
VHA eligibility category						
No service connected disability (reference)						
No service connected disability/VA Pension	1.48	0.96–2.28	.076	1.78	0.71–4.47	.222
Service connected disability < 50%	1.59	0.71–3.56	.263	0.77	0.41–1.45	.427
Service connected disability > 50%	1.03	0.81–1.31	.810	0.68	0.33–1.39	.287
Other	0.98	0.76–1.25	.852	0.00	0.00– > 999	.991
Rural screening location	0.86	0.64–1.16	.325	0.28	0.09–0.92	.035
Region						
West (Reference)						
Midwest	0.56	0.43–0.73	< .001	0.38	0.20–0.71	.002
South	0.62	0.47–0.81	.001	0.44	0.22–0.87	.018
Northeast	0.57	0.39–0.84	.005	0.61	0.23–1.67	.339
VHA Homeless Program Use 18 months pre-HSCR	2.56	1.56–4.22	< .001	4.39	1.65–11.69	.003
VHA Homeless Program Assessment 18 months pre-HSCR	1.60	0.69–3.67	.271	0.62	0.10–3.82	.606
Diagnoses						
PTSD	0.66	0.45–0.96	.031	0.88	0.31–2.51	.811
Psychoses	1.34	0.95–1.87	.091	0.68	0.25–1.85	.451

(continued)

Table 1. continued

	Model 1: Any Housing Instability			Model 2: Homelessness		
	AOR	95% CI	*p*-value	AOR	95% CI	*p*-value
Major depression	1.76	1.32–2.36	< .001	2.00	0.91–4.38	.084
Schizophrenia	0.90	0.55–1.46	.664	0.50	0.11–2.33	.375
Suicide attempt/self-inflicted injury	2.30	1.30–4.09	.004	3.25	0.87–12.19	.081
Alcohol use disorder	1.25	0.82–1.90	.296	1.31	0.45–3.86	.619
Drug use disorder	1.46	0.93–2.29	.104	1.81	0.58–5.66	.305
Chronic medical condition	0.65	0.51–0.82	< .001	0.32	0.16–0.64	.001
Total inpatient hospitalization days 18 months pre-HSCR	1.01	1.00–1.02	.090	1.01	0.99–1.03	.260
Total outpatient visits 18 months pre-HSCR	1.00	0.99–1.00	.040	1.00	0.99–1.01	.867
N	19,668			19,668		
Nagelkerke Pseudo-R2	.15			.26		

Note. AOR = Adjusted odds ratio; CI = Confidence interval; Each model included fixed effects for year and month in which HSCR was completed but covariate estimates are not shown.

Discussion

Amid concerns that residence restriction laws result in RSOs being "legislated into homelessness" (Levenson, 2018) and evidence that RSOs face stigma and other barriers to housing (Tewksbury, 2005), this study provides the most rigorous evidence to date of the increased risk of housing instability and homelessness among RSOs compared to non-RSOs. These risks were large in substantive terms and existed even when adjusting for a wide array of covariates, representing the diversity of the study sample. Our findings are consistent with the hypothesized link between sex offender residency restriction laws and increased risk of homelessness among RSOs, but do not, unfortunately, provide any direct confirmatory evidence of this link or about other specific mechanisms that may drive increased rates of housing instability and homelessness among RSOs. Future research is needed to explore the mechanisms behind these relationships and whether the magnitude varies with residency restriction laws across jurisdictions.

Our findings lend support to calls to reform sex offender management policies through adopting an evidence-based alternative approach to residence restrictions, such as individualized case management plans and more targeted residence restrictions particular to each RSO's unique circumstances (Levenson, 2018). There is a pressing need for such alternatives specifically among veterans given their greater likelihood of incarceration for sexual offenses than nonveterans (Finlay et al., 2018) and because providers of services to homeless veterans rank housing for RSOs as their number one unmet need (U.S. Department of Veterans Affairs, 2018). As the VA has made substantial progress in reducing homelessness among veterans, those remaining homeless will present more challenging situations, and require more attention and resources to house. Veteran RSOs are a clear example of this.

This study has several limitations that must be considered. First, the VHA data used to construct housing instability measures temporally precede the time period when we obtained sex offender registry data. Some RSOs may have been identified as unstably housed prior to being added to a sex offender registry. Second, we had complete sex offender registry data from only 19 states, which, to the extent that the lack of data from all 50 states led to more false negatives (i.e., incorrectly identifying RSOs as non-RSO) than false positives (i.e., incorrectly identifying non-RSOs as RSOs) likely biased downwards our risk estimates of housing instability and homelessness among RSOs. We believe this is likely the case given our conservative matching approach and thus, the findings presented here are likely conservative estimates of this increased risk. Further, our analytic sample was large, increasing our chance of detecting a statistically significant difference between RSOs and non-RSOs; however, the difference in rates and odds of housing

instability and homelessness between these two groups were large in substantive terms. Finally, the results presented here are not necessarily generalizable to a nonveteran sample and experiences of other populations may vary.

The results presented here represent some of the strongest evidence to date for the high risk of housing instability and homelessness among RSOs. Without changes in policies and more responsive programs, a considerable number of RSOs will likely continue to cycle in and out of incarceration and homelessness, to the detriment of these individuals and the general public.

Declaration of Conflicting Interests

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Supplemental material

Supplemental material is available for this article online.

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