CARIBBEAN HOMELESS WOMEN VETERANS: MILITARY AND PSYCHOSOCIAL CHARACTERISTICS AND THE ASSOCIATION OF SERVICE-CONNECTED DISABILITIES*

MUJERES VETERANAS CARIBEÑAS SIN HOGAR: CARACTERÍSTICAS MILITARES Y PSICOSOCIALES Y LA ASOCIACIÓN DE DISCAPACIDADES RELACIONADAS CON SU SERVICIO MILITAR

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ABSTRACT

Women Veterans are one of the fastest growing groups among homeless people. Previous studies on race, ethnicity and homelessness have emphasized the important differences on predictors, health risks, behaviors, and service outcomes between different groups. These differences are crucial to inform policy makers and program developers in order to solve this social issue. This research assesses sociodemographic, psychosocial and military characteristics and their role in service-connected disabilities to provide a profile of the Caribbean Homeless Women Veteran of the U.S. military. We evaluated 46 healthcare records of women Veterans who requested services at the Homeless Program of the VA Caribbean Healthcare System (VACHS) from 2005 to 2014. Statistical analyses consisted of Chi square, Fisher's exact test, Wilcoxon-Rank Sum tests, and Logistic Regression. Extreme poverty, unemployment, unaffordable housing, psychological disorders and low social support were the most prevalent characteristics. Women with psychological disorders had eight times higher the odds of having a service-connected disability than women without psychological conditions. Implications of study results are discussed for VACHS and future research with this population.

KEYWORDS: Homelessness, psychosocial care, women homeless veterans

RESUMEN

Las mujeres Veteranas son uno de los grupos de mayor crecimiento entre las personas sin hogar. Estudios previos sobre raza, etnia y falta de vivienda han enfatizado en las diferencias en torno a los predictores, los riesgos de salud, los comportamientos y la utilización de servicios entre los diferentes grupos. Estas diferencias son cruciales para la creación de políticas publicas y programas que ayuden a resolver este problema social. Esta investigación evalúa las características sociodemográficas, psicosociales y militares y su papel en las discapacidades relacionadas al servicio militar para proporcionar un perfil de las mujeres caribeñas Veteranas sin hogar de las fuerzas armadas de los EE. UU. Evaluamos 46 registros de salud de mujeres Veteranas que solicitaron servicios en el Programa para Veteranos sin Hogar del Sistema de Salud de Veteranos del Caribe (VACHS por sus siglas en inglés) desde 2005 hasta 2014. Los análisis estadísticos incluyeron Chi cuadrado, prueba exacta de Fisher, pruebas de suma de rango de Wilcoxon y regresión logística. La pobreza extrema, el desempleo, la vivienda inasequible, los trastornos psicológicos y el poco apoyo social fueron las características más prevalentes. Las mujeres con trastornos psicológicos tenían ocho veces más probabilidades de tener una discapacidad relacionada con el servicio militar que las mujeres sin condiciones psicológicas. Se discuten implicaciones de los resultados del estudio tanto para VACHS como para futuras investigaciones con esta población.

PALABRAS CLAVE: Cuidado psicosocial, falta de vivienda, veteranas sin hogar

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Women have served in a range of combat support operations in every conflict in the history of the United States. Their numbers have progressively grown from around 400 in the Civil War to being 10% of all the troops deployed to Operations Iraqi and Enduring Freedom (Murdoch et al., 2006). Formally, women became part of the military with the Army Nurse Corps in 1901. Then, in 1948 the Women's Armed Services Integration Act made official the permanent status of women in the military and their entitlement for Veteran benefits (Boyd et al., 2013). According to the Women Veterans Report (National Center for Veterans Analysis and Statistics, 2017), there are approximately 2 million women serving in the military, of which 9.1 percent are Hispanics. The latest Annual Homeless Assessment Report (AHAR) to Congress reported that women comprised 10% of the Veteran homeless population (Henry et al., 2020), and they are expected to increase by 17% during the next two decades (Montgomery & Byrne, 2014).

Homelessness risk factors for women Veterans include sexual assault and/or substance abuse during military service, intimate partner violence, childhood adversity, unemployment, disability, worse overall health, and screening positive for an anxiety disorder or post-traumatic stress disorder (PTSD) (Hamilton et al., 2011; Washington et al., 2010). In a study made by Tessler et al. identified (2001).women eviction. interpersonal conflict, and someone no longer able or willing to help as some of the reasons why they became homeless. After homelessness onset, factors as post-military adversity and mental health and substance abuse problems serve to maintain cycles of chronic homelessness (Hamilton et al., 2011).

Homeless female Veterans are younger, have shorter homeless and incarceration experiences, are less likely to have substance use disorders and report combat exposure than male homeless Veterans (Goldzweig et al., 2006; Tsai et al., 2014). They are more likely to be diagnosed with an affective disorder, military sexual trauma (MST), and

PTSD and have dependent children with them while homeless (Goldzweig et al., 2006; Pavao et al., 2013; Tsai et al., 2014). Moreover, they contemplate and attempt suicide more than their male counterparts (Benda, 2005). Variables involved in suicidal behavior are gender diverse. Homeless female Veteran's behaviors are more influenced by self-esteem, social support, interpersonal problems, depression, and fearfulness (Benda, 2005). While homeless male Veteran's suicidal behaviors are more influenced by alcohol and drug abuse, aggression, and cognitive disorders (Benda, 2005).

Homeless women Veterans are more educated. have more stable family backgrounds, and lower rates childhood disorders than non-Veteran homeless women (Gamache et al., 2003). Hamilton et al. (2013) conceptualized that some women Veterans have accumulated adverse seem to experiences related to gender over time that makes them vulnerable to homelessness. Military service experiences make them stand out from their civilian counterparts in their pathways to homelessness.

Homeless women Veterans have expressed several barriers to receive care, including lack of information, limited access to services, and lack of coordination across services (Hamilton et al., 2012). This is particularly important because, Montgomery & Byrne (2014) found, homeless women Veterans use more outpatient and their medical treatment than male counterparts. Also, they are less likely to receive a VA pension (usually provided to Veterans of low income) but are more likely to receive compensation for military-related disabilities (Chen et al., 2007; Montgomery & Byrne, 2014). Service-connected disabilities have been previously considered a protective factor for becoming homeless (Edens et al., 2011; Montgomery et al., 2015; Tsai & Rosenheck, 2015). However, if the serviceconnected disability is due to a severe mental illness like schizophrenia and bipolar disorder, it becomes a risk factor (Edens et al., 2011).

In this study, we used data from patient records of homeless Veterans enrolled at the VA Caribbean Healthcare System (VACHS) Homeless Program to evaluate the presence interaction of sociodemographic, psychosocial and military characteristics. Based on ethnic, social, cultural, and language differences from homeless women Veterans depicted in the literature, the first objective of the study is to provide a profile including sociodemographic, psychosocial and military characteristics of Caribbean Homeless Women Veterans. Based on the likeness of women Veterans to receive a service-connected disability, the second objective is to identify which sociodemographic, psychosocial and military characteristics are involved in the serviceconnected disabilities of these women.

METHOD

Participants

This study used purposive sampling methodology with a maximum variation sampling technique to select women homeless Veterans (Etikan, 2016). This technique allowed us to use a small sample size ensuring diversity and feasibility. After both Institutional Review Board and the Research & Development Committee of VACHS approvals; a retrospective record review utilizing the VA Computerized Patient Record System (CPRS) was done to 620 medical records. Of them, only 46 records were identified as Caribbean homeless women Veterans who were enrolled in VACHS Homeless Program between 2005 to 2014. The mean age of this sample was 42.91 (SD: 12.10) years.

Procedure

Medical records of Caribbean homeless women Veteranswere assessed to: (1) provide a profile of sociodemographic, psychosocial, and military characteristics of Caribbean homeless Veterans; and (2) to identify if any of these characteristics are involved in service-connected disabilities of

this population. Within CPRS, the Social Work Psychosocial Outpatient Assessment, Social Work Behavioral Health Psychosocial Assessment, Social Worker Notes and Homeless Services Assessment forms were reviewed to explore our variables of interest. These documents are standard forms used for both homeless and non-homeless Veterans in the VA and their purpose is to gather vital information to better allocate services. Information about legal problems history (e.g., incarceration), employability status at the time Homeless Program services, evidence of social isolation, house affordability, military service history, childhood foster care experiences, and a social support system were gathered on the previously mentioned forms.

Social support was defined as having at least one person identified as support by the Veteran in the Homeless Program case managers notes. In those same notes social workers narrated if the person was socially isolated and had the means to afford a house. Post-military psychiatric disorders and substance use disorders (as categorized by ICD 10) were gathered from the Problems Section of CPRS. History of MST and serviceconnected disabilities was also gathered in CPRS. Service-connected disability rating (range, 0%-100%) refers to the Veterans Health Administration (VHA)-determined degree of disability due to an injury or medical condition either sustained during aggravated by military service. The Homeless Services Assessment was used to determine poverty status using the household size and the family income at time of requesting services and comparing it to the 2013 U.S. Poverty Measures to create the poverty categories. Readmission to the Homeless Program was defined as requesting services in the program after having received them before.

Statistical Analyses

Statistical analyses were performed using STATA SE 14 (Stata Corp. Texas, USA). Sociodemographic data of female Veterans

regarding conflicts served, military branch, combat experience, poverty and employability status, social isolation, military service, childhood foster care experiences, social support, legal problems, MST, house affordability, substance use and psychological disorders, among others, were described using absolute and relative frequencies. Group comparison by age was done with mean, median, and standard deviations. To determine the association between sociodemographic, psychosocial and military characteristics and readmission to the Homeless Program, Wilcoxon Rank Sum and Chi Square Tests were performed. A logistic regression was made to determine the Odds Ratio and the 95% Confidence Intervals (CIs) to test for significant associations of serviceconnected disabilities and psychological disorders adjusted by type of conflict and age.

RESULTS

A total of 46 medical records were obtained for the retrospective record review. The average of years since finishing their military service and entering the Homeless Program was 11.17 ± 10.86 . The median for these women was seven years. Overall and by serviceconnected disabilities characteristics of a sociodemographic, military and psychosocial nature are shown in Table 1. Most of the homeless women Veterans served in the Army (58%, n=27) and did not have combat experiences (84%, n=39). The conflicts in which these women were deployed varied; 30% (n=14) to Persian Gulf War, 28% (n=13) to Operation Iraqi Freedom (OIF), Operation Enduring Freedom (OEF), and Operation New Dawn (OND), 26% (n=12) to the Vietnam War and 15% (n=7) to multiple conflicts. Only a 15% (n=7) of readmission to the Homeless Program was found. Overall, women reported extreme poverty (65%, n=30), low social support (69%, n=32), unemployment (80%, n=37), and unaffordable housing (78%, n=36). Experiences such as foster care (8%, n=4), social isolation (19%, n=9), and legal problems (19%, n=9) were not as common among the sample. Psychological disorders were found amid 78% (n=36) of the sample. Some of the psychological disorders found were depression (50%, n=23), bipolar (10%, n=5), anxiety (17%, n=8), and PTSD (26%, n=12). MST was found among 28% (n=13) of the homeless women Veterans and substance use disorders (e.g., alcohol and drugs) among 23% (n=11).

There were statistically significant differences for service-connected disability among conflicts served (p<.05) psychological disorders (p<.05). An 88% (n=31) of women who had a serviceconnected disability were not readmitted to the Homeless Program. In the case of poverty (62%, n=22) extreme unemployment (82%, n=29), even when it was not statistically significant, there was a huge percentage of women living in poverty and unemployed while having service-connected disabilities.

Results from the logistic regression (Table 2) show service-connected disabilities by psychological disorders. After adjusting for type of conflict and age, the odds that women with psychological disorders had a service-connected disability was 8.44 (95% CI: 1.33 – 53.45) times higher than the odds of women without psychological conditions.

TABLE 1. Overall and by Service-Connected Disabilities Characteristics of a Sociodemographic, Military and Psychosocial nature among Caribbean Homeless Women Veterans (*n*=46).

Sociodemographic Characteristics Overall No n = 11 Yes n = 35 Age Mean ± SD Median (P25 – P75) 42.91 ± 12.10 49.55 ± 14.74 40.83 ± 10.5 Median (P25 – P75) 40.5 (33 – 54) 57.0 (33 – 59) 39 (33 – 51) Readmission No 39 (84.78) 8 (72.73) 31 (88.57) Yes 7 (15.22) 3 (27.27) 4 (11.43) Conflict Served‡ OIF/OEF/OND 13 (28.26) 1 (9.09) 12 (34.29) Vietnam 12 (26.09) 7 (63.64) 5 (14.29) Persian Gulf War 14 (30.43) 3 (27.27) 11 (31.43) Multiple 7 (15.22) 0 (0.00) 7 (20.00) Military Branch† Army 27 (58.70) 5 (45.45) 22 (62.86) Other 19 (41.30) 6 (54.55) 13 (37.14) Combat Experience No 39 (84.78) 11 (100.00) 28 (80.00) Yes 7 (15.22) 0 (0.00) 7 (20.00) Extreme Poverty No 16 (34.78) 3 (27.27) 13 (37.14) Yes <th></th>	
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No 10 (21.74) 5 (45.45) 5 (14.29) Yes 36 (78.26) 6 (54.55) 30 (85.71) Foster Care No 31 (67.39) 6 (54.55) 25 (71.43)	0.042*
Yes 36 (78.26) 6 (54.55) 30 (85.71) Foster Care No 31 (67.39) 6 (54.55) 25 (71.43)	0.043*
Foster Care No 31 (67.39) 6 (54.55) 25 (71.43)	
No 31 (67.39) 6 (54.55) 25 (71.43)	0.559
	0.559
Vac 4 (9.70) 1 (0.00) 2 (0.57)	
Yes 4 (8.70) 1 (9.09) 3 (8.57)	
Unspecified 11 (23.91) 4 (36.36) 7 (20.00)	0.882
Legal Problems 20 (63 04) 8 (73 73) 24 (60 00)	0.002
No 29 (63.04) 8 (72.73) 21 (60.00)	
Yes 9 (19.57) 2 (18.18) 7 (20.00)	
Unspecified 8 (17.39) 1 (9.09) 7 (20.00)	0.000
Social Isolation 27 (90.42) 11 (100.00) 26 (74.20)	0.089
No 37 (80.43) 11 (100.00) 26 (74.29)	
Yes 9 (19.57) 0 (0.00) 9 (25.71)	0.740
Low Social Support 14 (20.42) 4 (26.26) 10 (28.57)	0.713
No 14 (30.43) 4 (36.36) 10 (28.57)	
Yes 32 (69.57) 7 (63.84) 25 (71.43)	0.664
Unemployment 0 (40.57) 2 (27.27) 6 (47.14)	0.664
No 9 (19.57) 3 (27.27) 6 (17.14)	
Yes 37 (80.43) 8 (72.73) 29 (82.86)	0.000
House Affordability	0.999
No 36 (78.26) 9 (81.82) 27 (77.14)	
Yes 10 (21.74) 2 (18.18) 8 (22.86)	0.444
Military Sexual Trauma	0.141
No 33 (71.74) 10 (90.91) 23 (65.71)	
Yes 13 (28.26) 1 (9.09) 12 (34.29)	0.000
Substance use 25 (70.00) 2 (73.73) 27 (77.44)	0.999
No 35 (76.09) 8 (72.73) 27 (77.14) Yes 11 (23.91) 3 (27.27) 8 (22.86)	

Note. ‡ P values were obtained using Fisher Exact Test *0.01<p<0.05; **0.001<p<0.01; *** p<0.001

TABLE 2. Service-Connected Disabilities & Psychological Disorders.

Service-Connected Disabilities	Crude OR (95% CI)	Adjusted‡ OR (95% CI)
Psychological Disorders	,	,
No	Reference	Reference
Yes	5.00 (1.10 – 22.82) *	8.44 (1.33 – 53.45)*

Note. ‡ Odds Ratio was adjusted by type of conflict served and age. *Statistically Significant Values p<0.05

DISCUSSION

This study examined characteristics of homelessness in 46 U.S. military Caribbean women Veterans who requested the services of the Homeless Program at the VACHS from 2005-2014. Concurrent with the literature, these women exhibited less legal problems, substance use disorders and combat exposure as opposed to extreme poverty, unemployment, and unaffordable housing (Goldzweig et al., 2006; Tsai et al., 2014). In addition, low social support was also reported in this sample.

Deployed women sustain physical and psychological injuries like their male counterparts, both in severity and complexity (Boyd et al., 2013). They are exposed to death, witness killings, get injured and kill while in service (Maguen et al., 2012). While VA started to address formally women specific treatment in 1988 the program has undergone numerous transformations (Department of Veterans Affairs, 2020). Still the VA does not as pregnancy certain services cover terminations and not all VA hospital are equipped to offer on-site services and must make referrals for community services. Regarding MST, the Department of Defense reported in 2019 that there were 6,236 reports of sexual assault involving service members as victims (Department of Defense, 2020). Women victims of MST in the military are in a dependent position which prevents them from confronting or breaking ties with the offender, resulting in damage to their well-being, selfconcept, relationships, and worldview (Lutwak & Dill, 2013). In this study, 28% of women in our sample reported MST. This experience

and its consequences should be always a priority among the VA.

suggest that psychological Results disorders are a prevalent characteristic among homeless women Veterans, with a rate of 78% among the sample. Besides conflict served, this was the only variable significantly related to service-connected disability. In accordance with previously reported results on homeless female Veterans, serviceconnected disability was related to mental health conditions (Blackstock et al., 2012). Our sample was eight times more likely to have a service-connected disability due to a psychological condition. Therefore, it is very important to connect female homeless Veterans and at-risk with needed services and benefits regarding this area. An 88.6% of women who had a service-connected disability were not readmitted to the Homeless Program. Receiving treatment for the condition for which the disability was granted may be protective against readmission. Consequently, service-connected disabilities, especially if due to mental health problems, warrants clinical attention to both prevent homeless pathways and better care for this population once they became homeless.

These findings contribute to the development of a Caribbean Homeless Women Veteran profile. An accurate profile serves as an important tool for addressing both the current healthcare needs and the future development of services (Tsai et al., 2013). It is important to note that the Veterans in this study were still living in either Puerto Rico or U.S. Virgin Islands. Acculturation factors must be considered for Caribbean

homeless women Veterans living in any of the 50 states.

Based on the results of this study, the authors recommend more outreach efforts to target and aid Caribbean at risk and Women Homeless Veterans who exhibit extreme poverty, unemployment and unaffordable housing, as well as psychological disorders and have a service-connected disability due a mental health illness. Interventions at the Women's Clinic and Primary Care level are of outmost importance to engage in preventive services. VACHS Homeless Program should work as a bridge connecting these women with needed services while giving usual care. According to Tsai et al. (2012), homeless female Veterans can benefit as much from transitional housing services as male Veterans: therefore, VACHS Homeless Program efforts to improve services should continue.

Despite these findings, we experienced some limitations during the study. There was a lack of consistency in the CPRS notes. Some notes were not completed or uploaded to the electronic system, making it difficult to trace the pattern of services offered to the Veterans. This problem was evident in the earlier years (2006-2008) when the Homeless Program was starting. We had a great diversity in terms of conflicts served (30% Persian Gulf War, 28% OIF/OEF/OND, 26% Vietnam War and 15% multiple conflicts), but our sample was small, and we could not explore differences among these women by conflict served. Seven years had elapsed since most of these women had left their military service. Therefore, we could not explore after deployment aspects that could be linked to homelessness. According to Goodman, et al., (2013) women often experience challenges such as separation anxiety, inadequate maternal role functioning. poor emotional functioning, depression, and anxiety when trying to reassume their family role after a deployment. For future research with this population we suggest the examination of aspects that are specific to

women experiences while homeless such as maternity, family, self-concept and identity, and cultural expectations. Additionally, we suggest a study of a qualitative nature to obtain a richer and better picture of the Caribbean Homeless Veteran Woman.

Research Ethical Standards

Funding: This study was not funded.

Conflict of Interest: There are no conflict of interest to report by any of the authors.

IRB Approval: The study was approved by both IRB and R&D Committee of the VA Caribbean Healthcare System (MIRB #00745/Study: Identification of Homelessness Predictors in Veterans Residing in Puerto Rico)

Informed Consent: This was a record review; does not apply.

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