Characteristics and Service Use of Homeless Veterans and Nonveterans Residing in a Low-Demand Emergency Shelter

James C. Petrovich, Ph.D., L.M.S.W.
David E. Pollio, Ph.D., M.S.W.
Carol S. North, M.D., M.P.E.

Objectives: This study examined use of U.S. Department of Veterans Affairs (VA) and non-VA services and predictors of service use among veterans and nonveterans who resided in a low-demand emergency shelter. **Methods:** Equal numbers (N=110) of veterans and nonveterans recruited between January and June 2008 at a low-demand emergency shelter were interviewed about demographic characteristics, histories of military service and homelessness, general medical and mental functioning, current alcohol and drug problems and substance use, and use of medical, psychiatric, and substance abuse services. The Behavioral Model for Vulnerable Populations was used to identify need-based, enabling, and predisposing variables for analysis. **Results:** Both groups reported high rates of arrest and incarceration, very low incomes, extensive histories of homelessness, and a similar need for services. However, significantly more veterans than nonveterans used psychiatric services, nonemergency medical services, and inpatient substance use services. Similar proportions of veterans and nonveterans used public non-VA health care services. Need-based variables appropriately predicted service use, but veterans and individuals with insurance were also more likely to access services. **Conclusions:** The veterans and nonveterans residing in a low-demand shelter faced several barriers to escaping homelessness. Both groups made similar use of non-VA services, but veterans used more services overall because of their access to VA services. The predictive power of insurance indicated that veterans may experience barriers to care despite the availability of VA services. The presence of veterans in this low-demand shelter may represent evidence of barriers to veteran and other public housing services. (*Psychiatric Services* 65:751–757, 2014; doi: 10.1176/appi.ps.201300104)

V eterans of military service continue to represent a sizable subpopulation of the people who are homeless in the United States. Recent point-in-time counts identified just over 62,000 homeless veterans on a single night (1), and estimates are that over 130,000 veterans will experience homelessness over the course of a year (2).

For the general homeless population, assistance is offered by various programs, such as permanent supportive housing, transitional housing, emergency shelter, medical care, mental health and substance abuse treatment, employment training, and providers of food (3). Veterans of U.S. military service also may have access (based on eligibility) to an additional network of programs exclusively for veterans who are homeless (4). These programs, often provided by the U.S. Department of Veterans Affairs (VA), mirror many of those available to homeless nonveterans, including access to permanent supportive housing through the Department of Housing and Urban Development Veterans Affairs Supportive Housing (HUD-VASH) program (5).

Despite this array of assistance services, people who are homeless continue to seek services from low-demand, public emergency shelter programs that provide basic overnight shelter or shelter during inclement weather rather than engaging in long-term transitional or permanent supportive housing programs. For veterans who are homeless, the use of emergency shelters indicates a lack of engagement not only in mainstream housing assistance services but also in the VA continuum of care, including domiciliary care for homeless veterans and grant and per diem programs. Little is known about the characteristics of users of low-demand emergency shelters, and even less is known about the subset of homeless veterans who use these services.

The purpose of this study was to describe the characteristics of veterans and nonveterans who use low-demand shelters, identify variables that predict their use of services, and compare the predictors of use of services by veterans and nonveterans. The Behavioral

Dr. Petrovich is with the Department of Social Work, Texas Christian University, Fort Worth (e-mail: j.petrovich@tcu.edu). Dr. Pollio is with the Department of Social Work, University of Alabama, Tuscaloosa. Dr. North is with the Department of Psychiatry, University of Texas Southwestern Medical Center, Dallas.

Model for Vulnerable Populations (6) was used to identify variables that might predict service use. This model has been used extensively with homeless and other impoverished populations (4,6–10). It proposes that service use is driven by need for services (general medical, psychiatric, and substance abuse problems), predisposing characteristics (demographic characteristics, such as level of education and housing status), and enabling factors (insurance, income, and service use that facilitates further service use [medical service use that leads to psychiatric service use]).

Methods

Sample

The sample consisted of two subgroups, one of veterans and one of nonveterans, each comprising 110 unaccompanied homeless male adults (≥18 years of age). Study participants were recruited simultaneously over a six-month period (January–June 2008) by random selection prior to admission to a private, low-demand nonprofit emergency shelter located in Texas. Six percent of the shelter's guests are veterans of military service (11). Low-demand shelters have no length-of-stay restrictions, provide shelter services at no cost, and do not require government-issued identification or a breathalyzer test prior to entry. No consideration was given during the sampling process to the number of previous nights they had stayed in the shelter. Veterans reporting a dishonorable discharge were not eligible to participate, given that typically they are not eligible for the VA services examined by this study. All participants were given a $5 gift card in appreciation of their participation. Institutional review board approvals were obtained from the University of Texas at Arlington and the Dallas VA Medical Center in advance of the study.

Instruments

After providing informed consent, participants completed a structured interview that obtained information about demographic characteristics; history of homelessness, employment, and military service; and specific substance use in the past 30 days. The interview was developed by using items from a study of chronic homelessness (12)

and the homeless supplement to the Diagnostic Interview Schedule (13). The Short Michigan Alcohol Screening Test (SMAST) and the Drug Abuse Screening Test (DAST-10) were used to obtain information about alcohol and drug problems in the past 12 months. The SMAST and the DAST have demonstrated good discriminant and known-groups validity and are reliable (Cronbach's α=.86 and .93, respectively) (14–16). Possible scores range from 0 to 10 for the DAST-10 and 0 to 13 for the SMAST, and scores of ≥1 for the DAST-10 and ≥3 for the SMAST indicate a positive screen.

Mental and physical functioning in the past four weeks were measured by the Veterans Rand 12-Item Health Survey (VR-12) (17). Possible scores on the mental and physical functioning scales range from 0 to 100, with higher scores indicating better health (18). Participants were also asked about their use of services in the general medical, psychiatric, and substance abuse sectors in the previous 12 months. Use of services was assessed by subcomponent (inpatient, outpatient, and emergency subcomponents of the medical and psychiatric sectors and inpatient and outpatient subcomponents of the substance abuse sector). Veterans were asked to provide information separately about use of VA services and non-VA services.

Data analysis

Dichotomous variables for alcohol and drug problems were defined as SMAST scores of ≥3 and DAST scores of ≥1, respectively, in accordance with the scoring convention for each measure (15). Variables representing summary scores for the VR-12 components for physical and mental health were used as indicators of general medical and mental functioning.

Statistical analysis was completed by using IBM SPSS statistics, version 19. Descriptive data were summarized with raw numbers, percentages, and means and standard deviations. Categorical variables were compared by using chi square tests, and continuous variables were compared with Student's t tests. Statistical significance level was set at α=.05.

Three multiple logistic regression models were constructed to predict

use (dichotomized as yes or no) of general medical, psychiatric, and substance abuse services (one per model) on the basis of predisposing, need, and enabling factors from the Behavioral Model for Vulnerable Populations (6). In each of these regression models, service use (dependent variable) was predicted by entering two enabling factors (veteran status and insurance) as independent variables. Predisposing variables (age and education) and need variables (an alcohol problem, 30-day cocaine use, and mental and physical functioning) that were found in bivariate analyses to be associated with service use were entered into the model as independent covariates.

Service use variables were initially evaluated as covariates for prediction of other services—for example, use of medical services as a predictor of use of psychiatric services—but ultimately they could not be included in the final models because their strong associations with other independent variables caused unacceptable levels of confounding. The models used 30-day cocaine use rather than results for the DAST-10 as an indicator of drug problems because use of cocaine constituted a majority of drug use and was highly associated with service use in bivariate analyses and because previous research has established that cocaine use has a substantial prevalence and salience in homeless populations (19–21).

For each model, separate analyses were conducted by entering independent variables simultaneously and by a stepwise fashion in which the need-based, enabling, and predisposing variables were entered one at a time. The results produced by simultaneous versus stepwise methods of variable entry did not differ, so the results of the models that entered variables simultaneously are presented.

Results

Table 1 presents demographic and other characteristics of the two study subgroups. Nearly half (N=103, 47%) of the sample was Caucasian, 50% (N=110) were African American, and 3% (N=7) were members of other racial groups. Nine percent (N=19) reported Hispanic ethnicity. Few (N=15, 7%)

were currently married. Total lifetime homelessness averaged almost four years. Most participants (N=157, 71%) had a history of adult felony conviction, and an overwhelming majority (N=209, 95%) had been incarcerated; many (N=38, 17%) had a recent arrest with criminal charges. Approximately three-quarters (N=158, 72%) of the sample reported working for pay, but the average income earned by the sample in the past 30 days was very low ($463.3±$392.6). Compared with nonveterans, the veterans were older and more educated, more likely to have ever married, and less likely to have private or public (non-VA) health care insurance. In addition, veterans were significantly older upon first experiencing homelessness.

Compared with a national population norm, the sample's mean±SD VR-12 scores were significantly better for physical functioning (44.9±8.8 versus 38.4±12.2; t=10.9, df=219, p<.001) but significantly worse for mental functioning (40.0±13.5 versus 51.1±11.4; t=−12.2, df=219, p<.001) (22). Approximately two-thirds (N=140, 64%) of the sample had an identified alcohol problem, and a vast majority of the sample (N=181, 82%) had an identified drug problem. More than half of the sample (N=127, 58%) reported having used illicit drugs in the past 30 days; among those reporting drug use, cocaine and marijuana were the most frequently used substances. No significant differences were found between veterans and nonveterans in physical or mental functioning scores, alcohol or drug problems, or use of specific substances.

Veteran participants had served most often in the Army and during the Vietnam and post-Vietnam service eras. Slightly fewer than one-third served in a war zone, and just over two-thirds had received an honorable discharge. Fewer than one-fifth received a non–service-connected pension or service-connected disability benefits. A clear majority of veterans (N=101, 92%) reported that they were able to access VA clinical services in the past year.

Service use data are provided in Table 2. Almost three-quarters (N=158, 72%) of the sample reported some use of general medical services, especially

Table 1

Characteristics of veterans and nonveterans residing in a low-demand emergency shelter

Characteristic	Veterans (N=110)		Nonveterans (N=110)		Test statistic	df
	N	%	N	%		
Age (M±SD)	49.3±9.2		42.1±11.5		t=−5.05**	208
Racial-ethnic minority	52	47	65	59		
Ever married	82	75	52	47	χ²=17.18**	1
Currently married	5	5	10	9		
Education (M±SD years)	12.3±2.0		11.0±2.2		t=4.93**	218
High school diploma or GED	95	54	43	37	χ²=36.42**	1
Has children	81	73	68	62		
Health insurance in past year[a]	19	17	34	31	χ²=5.59*	1
History of homelessness						
Age first homeless (M±SD)	40.9±11.7		35.3±12.1		t=3.46**	218
Length of current episode (M±SD months)	15.0±25.4		16.9±20.7			
Total lifetime (M±SD months)	46.3±51.9		43.8±46.7			
Income and employment						
Income in past 30 days (M±SD $)	466±431		461±352			
No income in past 30 days	14	13	10	9		
Currently working	75	68	83	76		
Physical functioning (M±SD score)[b]	43.8±9.1		46.0±8.4			
Mental functioning (M±SD score)[b]	39.4±14.3		40.5±12.7			
Alcohol problem	68	62	72	66		
Drug problem	87	79	94	86		
Illicit drug use in past 30 days	61	56	65	59		
Cocaine	42	38	44	40		
Marijuana	37	33	44	40		
Criminal history						
Adult felony conviction	78	71	79	72		
History of incarceration	104	95	105	95		
Arrested and charged in past 90 days	16	15	22	20		
Branch of military service						
Army	54	49				
Marine Corps	25	23				
Navy	19	17				
Air Force	11	10				
Coast Guard	1	1				
Service era						
Post-Vietnam (May 1975–April 1991)	49	45				
Vietnam (August 1964–April 1975)	47	43				
Persian Gulf (August 1991–present)	12	11				
Korea (June 1950–January 1955)	2	2				
Served in war zone	32	29				
Discharge type						
Honorable	74	67				
General	25	23				
Medical	11	10				
Non–service-connected pension	21	19				
Non–service-connected pension amount per month (M±SD $)	871±275					
Service-connected disability benefits	20	18				

[a] Public or private insurance, not including access to U.S. Department of Veterans Affairs services
[b] Possible scores on the physical and mental functioning scales of the Veterans Rand 12-Item Health Survey range from 0 to 100, with higher scores indicating better health.
*p<.05, **p<.001

Table 2

Use of services by veterans and nonveterans residing in a low-demand emergency shelter, by sector

| | Veterans (N=110) | | | | | | | | Non-VA services | | All services | |
| | VA services | | Non-VA services | | All services | | Nonveterans (N=110) | | | | | |
Sector	N	%	N	%	N	%	N	%	χ^{2a}	p	χ^{2a}	p
General medical	70	64	57	52	93	84	65	59			17.61	<.001
Emergency	24	22	45	41	61	56	55	50				
Inpatient	18	16	22	20	38	35	34	31	3.45	.044		
Outpatient	65	60	23	21	76	69	45	41	10.30	<.001	17.65	<.001
Psychiatric	45	41	24	22	61	56	25	29			23.47	<.001
Emergency	10	9	14	13	22	20	8	7			7.57	.005
Inpatient	12	11	14	13	24	22	12	11			4.78	.022
Outpatient	39	36	17	16	52	47	21	19			19.70	<.001
Substance abuse	10	9	25	23	34	31	22	20				
Inpatient	8	7	20	18	27	25	13	12				
Outpatient	3	3	9	8	12	11	13	12			5.90	.011

[a] df=1

emergency and outpatient care, in the past 12 months. Just over one-third (N=86, 39%) reported use of psychiatric services, usually outpatient services (86% of those using any psychiatric services). One-quarter (N=57, 26%) reported use of substance abuse services, especially inpatient services (71% of those using any substance abuse services).

Significantly more veterans than nonveterans used any medical or any psychiatric services, but there were no differences between the groups in the proportion that used any substance abuse services. Significantly more veterans than nonveterans used medical outpatient services; psychiatric emergency, inpatient, and outpatient services; and substance abuse inpatient services. No differences were found in the proportions of veterans and nonveterans who used non-VA medical, psychiatric, or substance abuse services. However, more nonveterans than veterans used two subcomponents of non-VA medical services (inpatient and outpatient services). Because veterans and nonveterans did not differ in the proportions using non-VA medical, psychiatric, or substance abuse services, the finding that more veterans than nonveterans used any medical, psychiatric, and substance abuse services

was accounted for by the veterans' additional use of VA services in these sectors.

Table 3 presents the results of multiple logistic regression models predicting use of services (dependent variable) in the general medical, psychiatric, and substance abuse sectors on the basis of need-based, predisposing, and enabling variables (independent covariates). Use of services in the medical sector was predicted by veteran status and having insurance and also by poor physical and mental functioning. Use of services in the psychiatric sector was predicted by younger age, veteran status, and poor physical and mental functioning. Use of services in the substance abuse sector was predicted by veteran status, lower mental functioning, an alcohol problem, and 30-day cocaine use.

The results of similar multiple logistic regression models for predicting the use of specific subcomponents of services in the medical, psychiatric, and substance abuse sectors were almost completely consistent with the results described above (data not shown). The only exception was that a lower level of education (p=.027) and having insurance (p=.016) also predicted use of psychiatric inpatient services.

Discussion

This sample of low-demand shelter users was similar in age and duration of lifetime homelessness to samples of shelter users studied elsewhere, although this sample had fewer participants who were members of racial-ethnic minority groups (10). The high rate of participants with an alcohol problem in the current study's low-demand sample (64%) was identical to the rate for a sample of unsheltered homeless persons in New York City (23), but it was considerably higher than the rates for two sheltered samples of homeless persons in New York City (41% and 38%) (24,25).

A comparison of the veteran and nonveteran subgroups in this study found that veterans were older, first experienced homelessness later in life, were better educated, and were more likely to have ever been married. These results are consistent with differences between veterans and nonveterans, both in the general population and other homeless samples, that have been noted in other research (26–28). Veterans were also found to be less likely than nonveterans to possess health insurance. Both groups reported extensive criminal histories, which can impede access to critical services (including housing) and other resources (29). A majority of both groups reported working for pay, but mean monthly incomes reported by either group were extremely low. The prevalence of a current alcohol problem and cocaine use and levels of physical or mental functioning were similar for veterans and nonveterans. A notable finding was that the sample's mean physical functioning score was higher than that of the general population norm. This finding reflects the demands of living in a low-demand shelter, which require that individuals be ambulatory and be able to transport all of their belongings, tolerate the daytime conditions outside the shelter, and negotiate the admission process. Despite a comparable need for services, however, considerably more veterans than nonveterans accessed services in all three sectors.

The Behavioral Model for Vulnerable Populations proved to be a useful framework for this assessment of

Table 3

Predictors of use of services by veterans (N=110) and nonveterans (N=110) residing in a low-demand emergency shelter[a]

Service sector and predictor	Unstandardized beta	Exp(B) OR	95% CI	p	Nagelkerke R^2	χ^2	p
General medical services					.267	45.2	<.001
Veteran	1.62	5.08	2.34–11.05	<.001			
Age	−.01	.99	.95–1.02	.469			
Education	−.06	.95	.80–1.12	.508			
Insurance	1.34	4.00	1.54–10.19	.004			
Alcohol problem	−.24	.79	.35–1.76	.558			
Cocaine use past 30 days	−.10	.90	.41–1.97	.795			
Physical functioning	−.08	.93	.88–.98	.003			
Mental functioning	−.03	.97	.94–.99	.020			
Psychiatric services					.317	58.5	<.001
Veteran	1.98	7.25	3.31–15.87	<.001			
Age	−.04	.97	.93–1.00	.049			
Education	−.14	.87	.74–1.02	.088			
Insurance	.40	1.48	.68–3.21	.324			
Alcohol problem	−.10	.91	.42–1.97	.806			
Cocaine use past 30 days	.20	1.23	.57–2.63	.602			
Physical functioning	−.05	.95	.91–.97	.008			
Mental functioning	−.62	.94	.92–.97	<.001			
Substance abuse services					.291	48.1	<.001
Veteran	.79	2.37	1.07–5.28	.034			
Age	−.01	.99	.96–1.04	.904			
Education	−.14	.86	.72–1.03	.102			
Insurance	−.38	.66	.27–1.62	.367			
Alcohol problem	.97	2.73	1.03–7.21	.043			
Cocaine use past 30 days	1.04	2.92	1.32–6.49	.008			
Physical functioning	.01	1.01	.97–1.06	.695			
Mental functioning	−.05	.94	.92–.97	<.001			

[a] The Nagelkerke R^2 analysis indicates the proportion of the variance in use of services that was based on the predictive power of the independent variables, and the chi square analysis indicates statistical significance for the multiple regression models for each service (df=3).

low-demand emergency shelter users and their use of services. Service sector use was predicted by indicators of need linked to each sector. For example, use of general medical services was linked to physical functioning, use of psychiatric services was linked to mental functioning, and use of substance abuse services was linked to an alcohol problem and recent cocaine use. These linkages point to the appropriate use of services by the study sample. Mental functioning, however, further predicted the use of medical and substance abuse services, and physical functioning predicted the use of psychiatric services, suggesting that service use is a complex phenomenon characterized by multiple viable pathways for obtaining services in various sectors. It was somewhat surprising that an alcohol problem and cocaine use did not predict the use of medical services, given the negative physical effects of problematic alcohol use and cocaine use and their prevalence in this sample.

In the multivariate model, the enabling variable of insurance predicted use of services in the medical sector. Only one-quarter of the sample reported possessing insurance, however, indicating that many individuals may not be able to afford needed medical services, limiting their use of much-needed services. The enabling factor of veteran status was also found to be predictive of use of all service sectors, which confirms that in the midst of comparable rates of non-VA service use by veterans and nonveterans, the ability to access the parallel service system provided by the VA was a significant source of the services used by the veteran subgroup.

This study had a number of methodological strengths. Users of low-demand emergency shelters, particularly veterans, have not been characterized in previous studies. Other methodological strengths included the random sampling of the study sample and the study's construction around the Be-

havioral Model for Vulnerable Populations, which informed the inclusion of predisposing, enabling, and need variables relevant to the study.

This study was not without noteworthy limitations. The study sample did not represent the more general homeless population, and thus the comparisons between veterans and nonveterans and other findings do not necessarily generalize beyond the population of low-demand shelter users. The study also did not verify veteran status or the use of services or use objective diagnostic measures to assess general medical, mental, and substance abuse problems, which may have limited the accuracy of some of the data. Additional limitations were that the study did not gather information about the type of employment of study participants or the length of time between military discharge and first experience of homelessness.

Although the data collected by this study predate the more recently stated

VA goal of ending homelessness, the findings have direct relevance for assessing current VA policy regarding homelessness among veterans, in particular the focus on housing veterans who are chronically homeless. With a mean lifetime duration of homelessness of almost four years and a current homeless episode duration of greater than a year, this sample of veterans from a low-demand shelter likely met the current VA definition of chronic homelessness. The finding that these veterans were relatively involved with VA health care services suggests that they were not completely alienated from the system and thus might be engaged in VA housing services, validating the VA's current emphasis on community outreach.

Together, the fundamental similarities of the veteran and nonveteran homeless groups using low-demand shelter in this study and the finding that veterans were somewhat engaged in VA services (especially medical) suggest possibilities for improving services for homeless veterans. At the time that data were collected, local VA housing options required that individuals meet requirements regarding program participation or treatment compliance, for example, sobriety. An example of this service approach is the VA grant and per diem transitional housing program housed within the low-demand shelter facility, which required veterans to participate in substance abuse treatment or VA employment programs before being linked with permanent housing. At a conceptual level, it might be argued that homeless veterans in low-demand shelters have rejected or have been unable to comply with these programmatic demands, but their continued use of VA medical services indicates that they are still receptive to seeking care from the VA. Therefore, opportunities may still exist to engage this population, and the shelter may serve an important function by keeping this population linked to the assistance network—if only for shelter and food (30).

Although this study provided important information relative to policy and current practices, the limitations noted earlier point to some clear next steps for future research. The recent changes in VA policy on homelessness, including the adoption of the low-demand Housing First intervention, invite subsequent investigation of whether these policy shifts have affected veterans' use of low-demand shelters. This information would be especially important considering the prevalence of cocaine use among the participants of this study, a practice that undermines housing stability, including in Housing First programs (31,32). Now that a new policy has been implemented, repeating the current study using identical methods would allow comparison of findings immediately before and after the shift in policy. One other promising direction for future research is to conduct longitudinal studies of low-demand shelter users. Examining housing trajectories as these individuals engage (or fail to engage) in housing services might provide important information about the predictors of their success in achieving permanent housing.

Conclusions

Given the prevalence of alcohol and drug problems and extensive criminal history among users of low-demand emergency shelters, these individuals may represent a distinct subpopulation of people who are homeless. The association between use of general medical, psychiatric, and substance abuse services by the study sample and the need for services was appropriate. However, overall use of substance abuse and psychiatric services seemed low. Despite some basic differences, the veteran and nonveteran subgroups were remarkably similar in terms of substance abuse, mental health, and general medical problems and factors that may contribute to or perpetuate homelessness (criminal histories and low income). Access to the VA service system, however, seemed to offer veterans an advantage that drove greater use of services.

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