Overrepresentation of Women Veterans Among Homeless Women

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Objectives. This study estimated the proportion of veterans among homeless women and their risk of homelessness relative to that of nonveterans.

Methods. Data came from 2 surveys of homeless women (1 clinical and 1 nonclinical) and 1 survey of domiciled women.

Results. The proportion of veterans (4.4%, 3.1%) among homeless women was greater than the proportion among domiciled women (1.3%, 1.2%). When we computed odds ratios for being a veteran among homeless women compared with nonhomeless women, homeless women were significantly more likely than nonhomeless women to be veterans.

Conclusions. Women veterans are at greater risk for homelessness than are nonveterans. Further study is needed to determine whether increased risks for veterans are a product of military service or reflect volunteers' self-selection into the armed forces. (*Am J Public Health.* 2003;93:1132–1136)

The proportion of women in the active-duty US armed forces increased from 4% in 1983[1] to 12% in 2000,[2] and in 2000 women veterans comprised 5% of the total veteran population, a figure that is expected to double in the next 10 years. Data from a representative national sample indicated that women veterans averaged 14.1 years of education, approximately 46% were aged 35 to 49 years, 54% were currently married, 69% were non-Hispanic Whites, 47% had annual household incomes of less than $30 000, and 19% lived alone.[3] Although women veterans' rates of sexual harassment while in the military are similar to national US norms, their rates of sexual assault are higher than those reported by the general female population.[3]

Because the numbers of homeless women veterans are low compared with those of homeless male veterans (25%–40% of homeless men are veterans), research on homeless veterans usually excludes women.[4–7] One study that did compare homeless women veterans with homeless male veterans found that women veterans were younger, less likely to be employed, and more likely to have a major mental illness. These women were also less likely to have a comorbid diagnosis of a mental illness and a substance abuse disorder.[8] However, this research used a Department of Veterans Affairs (VA) clinical sample and did not compare women veterans with women nonveterans.

In contrast to the literature on homeless male veterans, little published information concerns the representation of women veterans among homeless women, their risk of homelessness compared with that of nonveteran women, or their sociodemographic and clinical characteristics compared with those of other homeless women. Evidence on male veterans' vulnerability to homelessness suggests that women veterans are more vulnerable to homelessness than women who have not served in the armed forces. Higher rates of sexual trauma than are found in the general population and the occurrence of duty-related and sexual stress in women veterans also suggest greater potential for posttraumatic stress disorder (PTSD) and comorbidity of substance abuse associated with homelessness.[3,9,10] Notwithstanding these potential vulnerabilities, one could also make the case that because women veterans have more resources, such as education and access to veterans benefits, they should be more resilient to homelessness than their nonveteran counterparts.

In this article we use data from 2 non-VA samples (1 clinical, 1 based on a community sample) of homeless women and a national sample of domiciled women to estimate the risk of homelessness among veterans compared with nonveterans. We also attempt to identify vulnerabilities that may be specific to homeless women veterans compared with homeless women nonveterans.

METHODS

Data for the clinical sample of homeless women with mental illness are from the Access to Community Care and Effective Services and Supports (ACCESS) program.[11] Data for the nonclinical samples of homeless and domiciled women are from the National Survey of Homeless Assistance Providers and Clients (NSHAPC)[12] and the Current Population Survey (CPS).[13]

ACCESS was a 5-year demonstration program sponsored by the Center for Mental Health Services and with locations in the following 18 communities or areas in 9 states across the United States: Bridgeport and New Haven, Conn; the Edgewater–Uptown and Lincoln Park–Near North areas of Chicago, Ill; Sedgwick and Shawnee counties, Kans; St. Louis and Kansas City, Mo; Mecklenburg (Charlotte) and Wake (Raleigh) counties, NC; the West and Center areas of Philadelphia, Pa; Fort Worth and Austin, Tex; Richmond and Hampton–Newport News, Va; and the Uptown and Downtown areas of Seattle, Wash. The program's major goals were to increase service system integration and to evaluate the impact of this integration on clients. ACCESS was limited to homeless persons with serious mental illness who were not involved in ongoing community treatment. Thus, the sample comprised the most disadvantaged of the homeless. Structured interviews were completed for each client. The ACCESS sample consisted of 2658 homeless women aged 19 years or older who were enrolled during a 4-year period (1994–1998) and for whom complete baseline data on relevant variables were available. Detailed criteria for program eligibility have been described elsewhere.[11]

The NSHAPC provided data on a nationally representative sample of clients who used homeless assistance services in 1996. The survey was designed and sponsored by 12 federal agencies and was conducted by the Bureau of the Census.[12] Telephone interviews and mail surveys were conducted with providers of services to homeless persons in 76 primary sampling areas, including the 28 largest US metropolitan statistical areas (MSAs). In addition, 24 agencies from small and midsize MSAs and 24 rural counties were randomly selected.

Clients were randomly chosen from these agencies and were interviewed during October–November 1996. Interviews lasted about 45 minutes, and clients were paid $10 each for their cooperation. The NSHAPC sample included 832 women aged 19 years or older who were then homeless.

Data from the CPS, a joint project of the Bureau of Labor Statistics and the Bureau of the Census, provided estimates of proportionate numbers and other characteristics of women veterans and nonveterans in the domiciled general population and in a subsample of low-income domiciled women. These data were also used to compute the relative risk of homelessness among domiciled women veterans compared with domiciled women nonveterans.[13]

Measures

Data available from all 3 sources (ACCESS, NSHAPC, CPS) included age (categorized as 20–34, 35–44, 45–54, and ≥55 years), sex, and service in the armed forces (veteran status vs nonveteran status). Age categories were chosen to correspond approximately with eras of service (e.g., World War II, Persian Gulf War).

ACCESS and NSHAPC measures available for veteran–nonveteran comparisons included age, race/ethnicity, employment, monthly income, education, current marital status, substance abuse, and duration of homelessness. Three subscales of the Addiction Severity Index (ASI) were used to measure the severity of alcohol, drug, and psychiatric problems; higher scores reflected more severe problems.[14] The variable "long-term homelessness" was used to compare women with homeless episodes lasting more than 6 months with women with episodes lasting 6 months or less.

In the ACCESS data, childhood abuse was measured by positive responses to a single question that addressed the respondent's exposure to emotional, physical, or sexual abuse before 18 years of age. In the NSHAPC, we combined 2 questions that concerned abuse before the respondent reached age 18 years, 1 about abuse that caused physical injury and 1 about being forced or pressured into unwanted sexual acts. The ACCESS variable "lived in city" was measured in years; the NSHAPC variable was dichotomous (equal to 1 if woman veteran had "lived in this city all [her] life"; equal to 0 otherwise).

In addition, we reported ACCESS variables that were not available in the NSHAPC data. Diagnostic data (schizophrenia, major depression, bipolar disorder, or PTSD) consisted of a series of dummy variables derived from working clinical evaluations made by referring case managers. (It should be noted that how these diagnoses were made is unknown.) Because childhood problems have been found to contribute to homelessness,[15] we also included measures of conduct disorder[16] and family instability that occurred before the respondent was 18 years of age.[17]

Data Analysis

We computed odds ratios (ORs) expressing the "risk"of being a veteran among homeless women versus nonhomeless women. The exposure odds ratio, that is, the risk of being a veteran, is algebraically equivalent to the disease odds ratio, that is, the relative odds of becoming homeless.[18] If the odds ratio is above 1.0, the presence of the risk factor (i.e., being a veteran) is thought to increase the risk of homelessness; when it is less than 1.0, being a veteran is thought to be associated with a reduced risk of homelessness.

Because low income is a factor that has been consistently associated with homelessness,[6] we also conducted analyses with data from women with low incomes in the general population as a reference group to determine whether the risk of homelessness among women veterans was higher or lower when income was stratified. We constructed a CPS variable that represented poverty-level income (less than twice the federal poverty level versus twice or more than the poverty level). ACCESS and NSHAPC data also were used to compare the characteristics of veterans and nonveterans with χ^2 and 1-way analysis of variance, as appropriate. All analyses included only women who were aged 20 years or more.

RESULTS

Veterans composed 4.4% of the ACCESS clinical sample of homeless women with mental illness and 3.1% of the NSHAPC nonclinical sample of homeless persons. Women veterans accounted for 1.3% (1994–1998, ACCESS comparison) and 1.2% (1996, NSHAPC comparison) of the CPS samples. The proportion of veterans in the domiciled low-income subsample was 1.04%.

Sociodemographic and Clinical Characteristics

Table 1 shows the characteristics of veteran and nonveteran women in the clinical and nonclinical samples. For veterans, 2 of the 3 childhood experience measures were significantly higher than for nonveterans. As expected, veterans had more education and higher proportions of intact marriages in both samples; despite women veterans' significantly more stable family backgrounds and lower rates of childhood conduct disorder, we found no significant differences in childhood abuse between veteran and nonveteran samples.

The samples did not differ with respect to either age or race; approximately one half of both sample populations were Black. In both samples, women veterans were significantly more likely than nonveterans to have been employed in the past 30 days, but differences in monthly income were not significant. None of the 3 ASI measures (severity of alcohol, drug abuse, or mental health problems) differed statistically among the samples, nor did rates of PTSD or comorbidity with PTSD. In both samples, veterans reported less time residing in the city or town where they were now homeless than did nonveterans. This difference was significant in the

TABLE 1—Comparisons of ACCESS and NSHAPC Sample Data of Homeless Veteran and Nonveteran Women[a]

	ACCESS Sample				NSHAPC Sample			
	Total (n = 2658)	Veteran (n = 117)	Nonveteran (n = 2548)	*P*	Total (n = 832)	Veteran (n = 26)	Nonveteran (n = 806)	*P*
Mean age, y	38.5	38.2	38.5	NS	35.4	38.4	35.3	NS
Black, %	49.4	50.4	49.4	NS	44.8	46.2	44.7	NS
Employed in past 30 days, %	17.5	23.1	17.2	<.10	32.8	61.5	31.9	<.05
Mean income for last 30 days, $	323	353	321	NS	392	461	390	NS
More than a high school education, %	27.4	52.1	26.3	<.001	32.6	69.2	31.4	<.001
Currently married, %	7.9	12.0	7.8	<.10	12.3	23.1	12.0	<.10
Drug problem severity[b]	0.058	0.057	0.058	NS	0.013	0.019	0.013	NS
Alcohol problem severity[b]	0.098	0.082	0.098	NS	0.059	0.072	0.059	NS
Psychiatric problem severity[b]	0.524	0.499	0.525	NS	0.175	0.162	0.175	NS
Long-term homelessness[c]	38.4	41.1	38.3	NS	26.7	29.2	26.7	NS
Lived in city[d]	17.1	10.4	17.4	<.0001	22.3	11.5	22.3	NS
Childhood abuse, %[e]	69.2	65.8	69.3	NS	35.0	46.2	35.0	NS
Mean childhood misconduct score[f]	2.1	1.5	2.1	<.05	…	…	…	…
Mean childhood family instability score[g]	5.1	4.5	5.1	<.05	…	…	…	…
Mental illness diagnosis, %								
PTSD	19.5	20.5	19.4	NS	…	…	…	…
Schizophrenia	28.5	31.3	28.4	NS	…	…	…	…
Bipolar disorder	23.4	26.8	23.2	NS	…	…	…	…
Major depression	53.3	42.9	53.8	<.05	…	…	…	…
PTSD with comorbidity	43.8	43.2	43.9	NS	…	…	…	…

Notes. ACCESS = Access to Community Care and Effective Services and Supports; NSHAPC = National Survey of Homeless Assistance Providers and Clients; NS = not significant; ASI = Addiction Severity Index; PTSD = posttraumatic stress disorder.
[a]Ns may vary owing to missing data.
[b]ASI subscale.
[c]Percentage > 6 months.
[d]ACCESS = average years; NSHAPC = percentage of one's life.
[e]As noted in the text, the measure differs between the samples.
[f]Index of 10 antisocial behaviors observed before age 15 years (e.g., child was arrested or ran away).
[g]Index of 11 characteristics of the family of origin before age 18 years (e.g., child was placed in a foster home, residential treatment center, or orphanage).

clinical sample but not in the nonclinical sample.

Risk of Homelessness

Table 2 presents the odds ratios within each of the age cohorts among the ACCESS women veterans compared with women nonveterans in the general population and in the low-income subsample. The odds ratios indicate that the likelihood of homelessness was significantly greater among veterans than among nonveterans. Homelessness was 3.6 times more likely for veterans than for nonveterans in the general population and was 4.4 times more likely for veterans than for nonveterans with low incomes in the CPS subsample. The highest risk of homelessness was in the 45- to 54-year age cohort, where women veterans were more than 4 times as likely to be homeless as their nonveteran counterparts.

As is also shown in Table 2, the odds ratios in the nonclinical NSHAPC sample indicate a significantly greater risk of homelessness (2.7 times greater) among veterans compared with nonveterans; moreover, the odds were greater (3.2 times greater) when the comparison group was limited to domiciled women with low incomes. The odds ratios were significant in the 35- to 44-year age cohort, with 4 times the risk for homelessness among veterans in the general comparison and 5 times the risk for homelessness among veterans in the low-income comparison. The odds ratios were not significant in other age groups, in part owing to small sample sizes.

DISCUSSION

In this study, we found the risk of homelessness to be 2 to 4 times greater for women veterans than for nonveterans. The overall odds ratios found in this study were substantially higher than those found in similar studies of homeless male veterans, in which only certain age groups showed risks of this magnitude. In 1987, for example, the overall odds ratio reported for male veterans compared with male nonveterans was 1.38[5]; in 1996, it was 1.25.[19]

As with male veterans, the substantially increased risk of homelessness for women veterans is perplexing, for at least 2 reasons. First, women veterans are presumably eligible for the same VA benefits as male veterans.

TABLE 2—Odds Ratios of Homelessness Among Women Derived From ACCESS, NSHAPC, and CPS Data, by Age

	CPS Domiciled vs ACCESS		CPS <2× Poverty Level vs ACCESS		CPS Domiciled vs NSHAPC		CPS <2× Poverty Level vs NSHAPC	
Age, y	OR	95% CI	OR	95% CI	OR	95% CI	OR	95% CI
20–34	3.61**	2.63, 4.94	4.32**	3.08, 6.07	1.60	0.73, 3.50	2.43*	1.01, 5.81
35–44	3.48**	2.57, 4.71	4.20**	2.97, 5.94	3.98**	2.26, 7.01	5.08**	2.52, 10.20
45–54	4.42**	2.80, 6.98	5.01**	2.96, 8.47	2.00	0.48, 8.39	1.21	0.27, 5.36
≥55	1.54	0.49, 4.9	2.03	0.64, 6.44	4.40*	1.05, 18.6	5.20*	1.2, 22.6
Total	3.58**	2.95, 4.33	4.39**	3.57, 5.39	2.71**	1.80, 4.08	3.18**	2.04, 4.97

Notes. ACCESS = Access to Community Care and Effective Services and Supports; NSHAPC = National Survey of Homeless Assistance Providers and Clients; OR = odds ratio; CI = confidence interval; CPS = Current Population Survey.
*P < .05; **P = .0001.

However, because the VA has historically focused on services for male veterans, equal access to health care for women veterans has been controversial. Veterans' groups have been critical of VA services for women,[20] but studies have shown little difference between male and female veterans in terms of service utilization.[21–23] Second, veterans appear to have greater personal resources, such as more childhood family stability, more education, and higher proportions of current employment and intact marriages, than do nonveterans. We found no significant differences in reported childhood abuse between women veterans and nonveterans. Such childhood traumas have been linked to substance abuse, mental illness, and homelessness.[9,24] Although single, separated, and divorced veterans are more likely than married veterans to report abusive situations, marriage, which can protect against homelessness, also represents opportunities for domestic violence.[25] More research is needed to determine the precise nature of the associations among military service, domestic violence, and homelessness.

Previous studies of the risks of homelessness among male veterans compared with nonveterans found that it was not Vietnam-era veterans but rather post–Vietnam-era male veterans—those who were among the first to enlist in the all-volunteer force—that were most at risk for homelessness.[5] In contrast, in the women's clinical sample, Vietnam-era women veterans were most at risk. The overall increased risk for homelessness among women veterans may reflect the fact that women, like male veterans of the all-volunteer force, enter the military on a voluntary basis. Women with unstable or insecure current living arrangements may be more likely than their more stable peers to volunteer for military service.

A limitation of this study is that the ACCESS sample was restricted to homeless persons with mental illness; therefore, the results may not generalize to homeless persons without mental illness. However, the NSHAPC data also show a greater risk of homelessness among women veterans, which suggests that our results are not attributable to the specific characteristics of the clinical sample. These results should be viewed with caution, given the small number of women veterans in the NSHAPC sample. This small number may also have limited the ability of the statistical tests to determine significance. In addition, it is possible that rates of PTSD were underestimated and that our PTSD variable was not sufficiently sensitive to distinguish between veteran and nonveteran responses to trauma.

No consistent pattern of personal characteristics emerges that distinguishes women veterans from nonveterans or that might explain their increased risk for homelessness. Women veterans possess many characteristics that are likely to be risk factors for homelessness, such as low income, high rates of childhood abuse, comorbid PTSD, and self-rated poor physical health (data not shown). Homeless women veterans also share with one another similar levels of substance abuse and psychiatric problems as measured by the ASI.

One potential reason for the high risk of homelessness among veterans is that the veterans in the homeless samples had lived in their current cities for shorter periods of time than had the nonveterans. Veterans, owing to their service in the military, leave their homes and families to travel to distant places. Women with unstable family situations may turn voluntarily to military service as a means of escape. Alternatively, military service itself may attenuate social ties. The residential mobility of military service may be accompanied by a reluctance to return home on discharge, with a resulting loss of family support for the veteran when hard times come.

In this study, we found an unexpectedly high risk of homelessness in virtually all age groups of women veterans compared with nonveterans. The reasons for the greater risks for homelessness among women veterans compared with nonveterans are unclear. With increases in the number of women veterans predicted during the coming decade, the issue deserves further study, because current data offer no clear explanation for this greater risk. A detailed survey of sociodemographic and clinical characteristics among women veterans and nonveterans in the general population might well illuminate which risk factors are specific to women veterans and whether these risk factors are a product of military service or reflect the self-selection of women with predisposing factors for homelessness into the armed forces. ■

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This article was accepted June 30, 2002.

Contributors

G. Gamache was primarily responsible for writing the article, analyzing the data, constructing tables, managing drafts, and incorporating the conceptualizations and suggestions of her co-authors. She took sole re-

sponsibility for revising the article in response to reviewer comments. R. Rosenheck contributed to the initial conceptualization of the article, supplied the ACCESS data, contributed to the writing and revising of the article, and obtained funds to support this study. R. Tessler contributed to the initial conceptualization of the article and reviewed the article during various stages of its development.

Acknowledgments

The ACCESS program was funded under interagency agreement AM9512200A between the Center for Mental Health Services and the Department of Veterans Affairs (VA) Northeast Program Evaluation Center, West Haven, Conn. This study was supported in part by the VA's Connecticut/Massachusetts Mental Illness, Research, Education, and Clinical Center (MIRECC). The authors gratefully acknowledge the assistance of the late Julie Lam, PhD, in the early stages of their data analysis and also wish to thank 2 anonymous reviewers for helpful comments on an earlier version of this article. In the ACCESS program, structured interviews were completed only for those clients who provided written informed consent.

Human Participant Protection

This study was exempt from protocol review because it used data that are unidentifiable.

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