ABSTRACT

This study used data from four surveys conducted in 1986/87 to identify age-race cohorts of homeless men in which veterans are overrepresented. The overall proportion of veterans among homeless men (41%) was somewhat higher than that in the general population (34%). This overrepresentation is largely attributable to the disproportionate representation of veterans in the youngest age cohort (20 to 34 years) of homeless White men. Veterans in this group are 4.76 times more likely to be homeless than nonveterans. Other national data on this cohort reveal higher rates of unemployment, substance abuse, and antisocial personality among veterans than among nonveterans. (Am J Public Health. 1994; 84:466-469)

The Proportion of Veterans among Homeless Men

Robert Rosenheck, MD, Linda Frisman, PhD, and An-Me Chung, PhD

Introduction

Community surveys conducted during the 1980s reported that, on average, 38% of homeless men were veterans $(range = 29\% \text{ to } 49\%),^{1-7} \text{ as compared}$ with only 30% of men in the general population.8 While these findings suggest that veterans may be at a somewhat greater than expected risk for homelessness, such an overrepresentation is not easy to explain. Most veterans are entitled to special benefits, including educational assistance, home loan guarantees, pension and disability payments, and free health care. In 1990, veterans had higher median incomes, had lower rates of poverty and unemployment, and were better educated than nonveteran US men in similar age groups.9 These data suggest that veterans should be less vulnerable to homelessness than other Americans. The present study sought to determine whether veterans, in general, are disproportionately represented among homeless people or whether vulnerability to homelessness is specific to one or another age or race cohort of veterans.

Methods

Estimates of Proportions

The proportion of male veterans among homeless men was estimated through secondary analyses of the Urban Institute's 1987 national survey of homeless service users $(n = 1140)^{10}$ and three single-city surveys conducted in Los Angeles (n = 270), ¹¹ Baltimore (n =295), 12 and Chicago (n = 486) 13 between 1985 and 1987. These studies were chosen because of their sophisticated sampling strategies (see the original publications for details) and overall rigorous design. Veteran status, judged in all four studies from a single question concerning past US military service, was used to estimate the proportion of veterans among homeless men within each of five age cohorts (20 through 34, 35 through 44, 45 through 54, 55 through 64, > 64) and by race (White vs Black).

The 1987 Current Population Survey, a national household survey con-

ducted by the Bureau of the Census, was used to estimate the proportion of male veterans in the general population in each of these age-race cohorts.¹⁴ These data were used to estimate odds ratios (ORs) of homelessness among veterans as compared with nonveteran US men.

Adjustment Factors Associated with Veteran Status

To account for differences in the risk of homelessness among veterans relative to nonveterans in the various age-race cohorts, we also compared veterans and nonveterans in the general population on factors that have been associated with homelessness.

Socioeconomic characteristics. Further analyses of the Current Population Survey were undertaken to compare veterans and nonveterans on personal income, poverty rates, unemployment, educational achievement, marital status, and household size. ¹⁴ Only the subgroup of men whose income was less than twice the poverty level were included in the last four analyses.

Psychiatric and substance abuse disorders. An analysis of the public access data tape of the Epidemiological Catchment Area Study was conducted to compare rates of lifetime psychiatric and substance abuse diagnoses among male veterans and nonveterans in each 1987 age-race cohort.¹⁵

Military service. Information regarding service era and combat exposure of veterans in various age groups was obtained through analyses of data from the Third Survey of Veterans, a 1987 survey of a representative national

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sample of 9442 noninstitutionalized veterans. 16 These analyses were also limited to low-income veterans: those who earned less than \$15 000 per year (the bottom third of the veteran income distribution).

Results

Veterans among Homeless Americans

Results were similar from all four homeless surveys, and unweighted data were combined to simplify their presentation. Among homeless men more than 20 years old, 41% reported past military service, as compared with only 34% in the general population of US men surveyed in the 1987 Current Population Survey (Table 1).

Odds ratios (Table 2) show significantly greater likelihood of homelessness among veterans 20 to 34 and 45 to 54 years of age than among nonveterans in the general population. The most dramatic finding is that White veterans 20 to 34 years old were 4.8 times more likely to be homeless than their nonveteran counterparts in the general population (95% confidence interval [CI] = 3.8, 5.9). Although the risk of homelessness was also elevated among Black veterans in this age group, the odds ratio (2.1, 95% CI = 1.7, 2.7) was significantly lower than that for Whites. Homelessness was also increased among veterans 45 to 54 years old (OR = 1.7, 95%CI = 1.4, 2.1), but differences between races were not significant.

Socioeconomic Factors

Data from the 1987 Current Population Survey show that the average personal income among White veterans 20 to 34 years of age was about the same as that of White nonveterans (\$17 490 vs \$17 653), as were poverty rates (10.0% vs 10.8%). White veterans aged 20 to 34 were more likely to be unemployed than nonveterans (18.6% vs 11.4%), but veterans of all ages and races, including White veterans aged 20 to 34, were more likely to have a high school degree, more likely to be married, and no more likely to be living alone than their nonveteran counterparts (data available on request).

Psychiatric Risk Factors

Among White men in the 20- to 34-year-old cohort, prevalences of non-substance abuse psychiatric disorders and substance abuse disorders were two to three times higher among veterans

TABLE 1—Veterans among Homeless Men and among Men in the General Population, by Age and Race

	White		Black		Total Sample ^a		
Age, y	No.	% Veterans	No.	% Veterans	No.	% Veterans	
		Homeles	s surveys	s (n = 2223)			
20-34	400	33.7	483	25.6	939	30.6	
35-44	253	42.4	297	33.6	576	37.2	
45-54	240	64.6	161	48.0	412	58.7	
55-64	154	67.4	89	51.9	251	61.7	
>64	22	67.8	23	7.1	45	37.4	
Total	1 071	48.2	1 052	33.1	2 223	41.2	
	19	87 Current Pop	oulation S	Survey (thousa	nds)		
20-34	25 522	9.6	3 487	13.8	30 021	10.0	
35-44	14 202	38.0	1 566	33.3	16 310	36.9	
45-54	9 696	49.9	1 805	21.9	11 845	44.8	
55-64	9 133	72.2	941	53.9	10 304	69.9	
>64	10 418	47.5	941	37.6	11 550	46.3	
Total	68 971	35.1	8 740	25.9	80 029	33.6	

alncludes Whites, Blacks, and others.

TABLE 2—Odds Ratios of Homelessness among Veterans Compared with Nonveterans

Age, y	White		Black		Total Sample ^a	
	OR	95% CI	OR	95% CI	OR	95% CI
20–34	4.76	3.83, 5.93	2.13	1.68, 2.72	3.95	3.39, 4.58
35-44	1.19	0.92, 1.55	0.95	0.66, 1.37	1.01	0.85, 1.21
45-54	1.83	1.39, 2.42	3.25	2.29, 4.63	1.75	1.45, 2.15
55-64	1.42	0.56, 1.14	0.91	0.57, 1.45	0.69	0.53, 0.91
> 64	2.36	0.91, 6.40	0.15	0.04, 0.70	0.71	0.37, 1.34
Total	1.71	1.52, 1.94	1.42	1.22, 1.63	1.38	1.05, 1.85

Note. OR = odds ratio; CI = confidence interval. alncludes Whites, Blacks, and others.

than among nonveterans, and rates of antisocial personality disorder were five to six times as high (Table 3). In contrast, Black veterans in this age cohort, in comparison with Black nonveterans, showed a significantly greater prevalence for lifetime substance abuse disorder only. Other veteran age—race groups, for the most part, showed no greater rates of these disorders than nonveterans.

Military Service Characteristics

Data from the Third Survey of Veterans revealed that veterans in the 20 to 34 and 45 to 54 cohorts were far less likely than other veterans to have served during a wartime service era or to have been exposed to combat (data

available on request). Among the 20 to 34 age group, 79% served during the post-Vietnam era (the era of the All Volunteer Force), and only 7% served in combat. Among the 45 to 54 age group, 78% served between the Korean and Vietnam eras, and only 17% served in combat. More than 40% of veterans in other age groups, in contrast, reported combat service.

Discussion

The proportion of veterans among homeless male Americans is greater than the proportion in the general population, but this overrepresentation is most striking among Whites 20 to 34 years old; to a lesser extent, Blacks 20 to

TABLE 3—Lifetime Prevalence (%) of Psychiatric Disorder among Men in the Epidemiological Catchment Area Study of Five US Cities, by 1987 Age Cohort, Race, and Veteran Status

	n	Non-Substance Abuse		Substance Abuse		Antisocial Personality	
Race/Age, y		Veterans	Non- veterans	Veterans	Non- veterans	Veterans	Non- veterans
White							
20-34	1146	39.0	16.5***	53.3	30.2***	24.7	4.8***
35-44	1255	21.0	22.7	38.6	31.1**	9.5	7.2
4554	663	15.4	16.3	25.4	27.3	1.6	4.5**
55-64	581	13.1	20.6**	20.2	22.7	4.3	3.2
>64	2284	11.7	12.2	14.6	13.2	0.7	0.5
Black							
20-34	346	12.0	25.4	33.6	15.0*	4.9	2.2
35-44	324	21.0	22.2	39.5	22.0*	8.3	3.5
45-54	166	14.2	25.5	27.2	42.7	3.7	4.6
55-64	141	19.8	24.6	29.2	34.6	3.5	0.8
>64	451	20.7	34.0	28.0	24.7	0.8	1.6

^{*}P < .10, **P < .05; ***P < .001.

34 years of age and 45- to 54-year-old men of both races are overrepresented. Although Current Population Survey data are national rather than strictly urban, as in the case of the survey data, they suggest no special socioeconomic vulnerabilities among high-risk age-race cohorts of veterans. The much higher prevalence of psychiatric illness, substance abuse, and, especially, antisocial personality disorder among White veterans 20 to 34 years old would seem to be a likely contributor to the greater vulnerability to homelessness of this group. Veterans in these most vulnerable groups are the least likely to have served during wartime or in combat, reducing the role that can be attributed to combat stress in the genesis of homelessness among veterans.

Perhaps the most distinctive characteristic of veterans in the vulnerable age cohorts is that they served during nonwartime eras, especially during the post-Vietnam era, after establishment of the All Volunteer Force in 1973. The shift to the volunteer force marked an important change in military manpower policy, a change that was accompanied by widespread concern that the military would become an employer of last resort for poorly skilled youth. 17,18 Studies comparing volunteer force recruits and agematched civilians show these recruits to have had slightly lower socioeconomic status than their nonveteran peers,19-21 as well as poorer intellectual aptitude test results^{22,23} and greater problems with substance abuse.^{24–26}

Although it appears that, during the post-Vietnam era, young adults with greater psychopathology and lower earning potential joined the military, this does not appear to have been the case during the period between Korea and Vietnam.¹⁷ Nonwartime era veterans, however, are eligible for a more limited range of Veterans Affairs benefits. Only 25% of post-Korean era veterans used GI Bill educational benefits, as compared with 54% of Vietnam era veterans.16 More limited availability of Veterans Affairs benefits may therefore have played some role in increasing the risk of homelessness among veterans in the 45 to 54 age cohort.

Since veteran status in this study was not validated through a review of military records, it is possible that, either as a point of pride or in the hope of obtaining some other advantage, some homeless respondents may have falsely claimed military service, thus inflating estimates of the number of veterans among homeless people. This seems unlikely, however, since there is no reason to expect such falsification in some age-race cohorts more than in others.

Since the homeless surveys involved prevalence rather than incidence samples, an association between veteran status and duration of homelessness could have biased our results.²⁷ Other studies, however, suggest no difference

between veterans and nonveterans in duration of homelessness.²⁸

Veterans appear to be overrepresented among homeless men, but this overrepresentation primarily affects younger veterans who served in nonwartime eras, especially the post-Vietnam era. The increased vulnerability for homelessness among veterans may be related to the admission of poorly adjusted young men to military service during nonwartime eras and to the reduced availability of Veterans Affairs benefits to these veterans.

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ABSTRACT

Driver's license lists are infrequently used for population-based sampling, presumably because of suspicions of poor population coverage. The 1990 Iowa driver's license list was compared with the 1990 census to evaluate coverage by 5-year age group, sex, resident county, and urbanicity. Coverage exceeded 90% among 15- to 74-yearold men and 15- to 64-year-old women, with uniform coverage by county and county urbanicity group in these age ranges. In Iowa, these lists are convenient and cost-effective and appear to be representative for 25- to 64-year-olds. The representativeness of driver lists in regard to other factors and in other geographic regions deserves further evaluation. (Am J Public Health. 1994;84:469-472)

The Driver's License List as a Population-Based Sampling Frame in Iowa

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Introduction

Epidemiology is among many research disciplines that struggle with subject selection for population-based studies. Complete population rosters are rarely available. Without such listings, researchers must identify sampling frames that adequately represent the target population.

In the United States, sampling frames can be compared with the decennial census, stratifying on a few factors that serve as indicators of overall representativeness. We applied this strategy to examine the adequacy of driver's license lists as a sampling frame. We identified age groups with high coverage and then stratified by sex, county, and four levels of county urbanicity to assess representativeness within these groups.

Methods

The Iowa Department of Transportation provided driver's license data in February 1991. We adjusted this data set to reflect resident license holders on

April 1, 1990, and then compared it with 1990 census enumerations. Approximately 5% of these records were for nondrivers with picture identification cards.

The original data set contained 2 506 843 records. We eliminated (1) 18 records involving birth dates before January 1, 1870, or after April 1, 1990; (2) 1836 records listing a state of address outside Iowa; (3) 279 records listing nonexistent county codes; (4) 3081 duplicate records; (5) 2313 deceased individuals; (6) 121 887 individuals who had

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