Lifetime and Five-Year Prevalence of Homelessness in the United States

ABSTRACT

Objective. Intense debate exists concerning the number of homeless people in the United States. Previous studies, counting currently homeless people, have provided point-prevalence estimates of homelessness but have been criticized on methodological grounds. This study reports lifetime and 5-year prevalence estimates of homelessness using a different methodological approach.

Methods. Random-digit dialing was used to interview 1507 adults living in households with telephones in the 48 contiguous states in the fall of 1990. Respondents were asked whether they had ever been homeless and if so, where they had slept while homeless.

Results. Lifetime and 5-year prevalence of all types of homelessness combined were 14.0% (26 million people) and 4.6% (8.5 million people), respectively. Lifetime "literal homelessness" (sleeping in shelters, abandoned buildings, bus and train stations, etc.) was 7.4% (13.5 million people). Five-year (1985 through 1990) prevalence of self-reported homelessness among those who had ever been literally homeless was 3.1% (5.7 million people).

Conclusions. The magnitude of the problem of homelessness is much greater than most previous attempts to enumerate homeless people have led us to believe. This finding requires reconsideration of inferences about the causes of homelessness that were derived from point-prevalence studies of currently homeless people. (*Am J Public Health.* 1994;84: 1907–1912)

Bruce G. Link, PhD, Ezra Susser, MD, DrPh, Ann Stueve, PhD, Jo Phelan, PhD, Robert E. Moore, DrPh, and Elmer Struening, PhD

Introduction

The number of homeless people in the United States is of vital importance to public health.[1] The conditions of homelessness pose severe problems for the control of infectious diseases such as tuberculosis and the acquired immunodeficiency syndrome and put homeless people at risk of serious adverse physical and mental health effects.[2–5]

Although there is consensus that the number of homeless people grew dramatically during the 1980s,[4,6–8] an intense debate has developed concerning just how large this growing population has become. Based on reports of key informants located in the nation's largest cities, advocates for homeless people have claimed that the number of homeless people in the United States is as high as 2 to 3 million.[9] However, surveys that try to actually count people who are currently homeless usually produce much smaller estimates.[10–13]

Because some of these surveys[12,13] are based on scientific sampling procedures rather than on assessments of local informants, they would appear to provide a better indication of the size of the homeless population than do the estimates of advocates. However, counting currently homeless people poses extremely difficult problems, problems that some believe have led to severe undercounting.[7,14,15]

The first problem is finding people who are currently homeless. Surveys may miss the so-called hidden homeless, who sleep in box cars, on the roofs of tenements, in campgrounds, or in other places that researchers cannot effectively search.

The second problem is that, once located, respondents may refuse to be interviewed or deliberately hide the fact that they are homeless.[8,10] In one study, the interviewers identified enough people they believed were homeless but who denied it when asked to increase the number of homeless street people identified by 41.5%.[8]

The third problem is missing people who experience relatively short or intermittent episodes of literal homelessness. Such people are less likely to be counted in 1-night or 1-week surveys; however, they must be explicitly included in research studies if factors that are initial causes of homelessness are to be differentiated from factors that cause it to persist.

Finally, there is the problem of extrapolating from data collected in one geographical location or from one subgroup of the population to other geographical areas or subpopulations. For example, Burt and Cohen[12] surveyed homelessness in large cities and then assumed that rural and suburban areas had rates that were one third the rate in urban areas to generate a national estimate.

Although systematic surveys of current prevalence would seem to provide the most accurate estimates of the size of the homeless population, the problems just enumerated pose serious questions about the accuracy of the numbers the surveys provide. We used a different

The authors are with the Division of Epidemiology, School of Public Health, Columbia University, New York, NY. Bruce G. Link, Ezra Susser, and Elmer Struening are also with the New York State Psychiatric Institute, New York, NY.

Requests for reprints should be sent to Bruce G. Link, PhD, Epidemiology of Mental Disorders, 100 Haven Ave, Apartment 31D, New York, NY 10032.

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TABLE 1—Comparison of Selected Sample Characteristics of 1990 Census Data with Weighted Results from the Current Study (n = 1507)

	Unweighted n[a]	Weighted n	Weighted %	1990 Census %
Ethnicity				
White	1221	1240	82.7	79.9
African American	169	155	10.4	10.8
Hispanic	62	59	4.0	6.5
Other	46	45	3.0	2.8
Gender				
Female	858	857	57.0	51.0
Male	646	647	43.0	49.0
Age, y				
18–24	191	232	15.4	14.7
25–54	971	964	64.2	58.2
55–64	146	144	9.6	11.6
65+	190	162	10.8	15.5
Marital status				
Married	817	930	61.8	55.0
Not married	687	576	38.2	45.0
Education: those 25 years of age or older[b]				
High school graduate	1114	1074	84.7	75.2
Did not graduate from high school	189	194	15.3	24.8
Median family income			$30 000	$30 056

[a]The number of protocols with missing data are 9 for ethnicity, 3 for gender, 9 for age, 3 for marital status, 6 for education, and 51 for family income.
[b]Education is limited to those 25 years or older because the census reports education this way.

strategy, a national household telephone survey, to identify formerly homeless people and thereby provide lifetime and 5-year prevalence estimates of homelessness. To our knowledge, this is the first report on the prevalence of homelessness that is based on a probability sample drawn to be nationally representative.

Household surveys offer a potentially effective means of learning about people who were homeless at some time in the past. Moreover, the focus on past homelessness in a household survey addresses the four main criticisms, described above, that have been leveled at surveys of currently homeless people. People who may have constituted the hidden homeless while they were homeless or people who had relatively short or intermittent episodes of literal homelessness are available for counting in a study of the formerly homeless. In addition, people who might avoid, refuse to speak to, or deny their homelessness to an interviewer in a prevalence study may be more willing to report having been homeless in a telephone survey that ensures anonymity and focuses on the past. Moreover, focusing on formerly homeless people in a nationwide household survey allows the assessment of homelessness in nonurban areas and thus does not require assumptions about the prevalence of suburban or rural homelessness.

Methods

Sample

The target population for our sample was persons living in households with telephones. We used a cluster sample stratified to oversample residents in the 20 largest Standard Metropolitan Statistical Areas. Probability samples of occupied housing units served by numbers in these strata were drawn by using the two-stage strategy proposed by Wakesburg.[16] The first stage included 227 telephone exchanges from which samples of individual numbers were drawn and called. Calls to households were made during evenings and on weekends as well as during normal working hours. Once a household was reached, a respondent was randomly selected from among all adults aged 18 or older in the household by using a variation of the method designed by Kish.[17] This objective method ensures that the respondent selected is not simply the one who happens to be home or is most interested in responding. Extensive efforts were made to reach respondents. The average number of calls required to obtain an interview was 9, and 5% of the interviews required 33 or more calls before the interview was obtained.

Telephone interviews averaging 40 minutes in length were conducted with 1507 residents of the continental United States between August 1 and November 20, 1990. The response rate was 65% among English-speaking persons; with non-English-speaking respondents included in the denominator, the response rate was 63%. Because 95% of the sampled telephone numbers were reached, the main reason for nonparticipation was the respondents' refusal to be interviewed rather than our inability to contact them. All persons who initially refused were recontacted in an attempt to obtain an interview, and 143 respondents, 9.5% of the obtained sample of 1507, were converted. Because the 65% response rate suggested the possibility of sample selection bias, we conducted two checks on the representativeness of the sample.

Comparison with the census. Table 1 shows a comparison between our sample after appropriate weights were applied (see below) and 1990 census data for gender, ethnicity, age, marital status, education, and median family income. We slightly overrepresented women, people aged 25 to 54 years, and married people. Because we conducted our interview in English, our sample underrepresented Hispanics. The largest discrepancy concerns education, with people having more than a high school education overrepresented in our sample by almost 10%. This discrepancy indicates an undersampling of people low in socioeconomic status, a factor that would downwardly bias estimates of the extent of homelessness.

Comparison of respondents who initially refused with other respondents. We reasoned that without extensive efforts to complete all interviews, the initial refusers (n = 143) would have been nonresponders. They were therefore more likely to resemble those subjects we were unable to interview than respondents who did not initially refuse. We found no significant differences between converted refusers and other respondents with re-

spect to gender, ethnicity, marital status, family income, and, most importantly, measures of the prevalence of homelessness. Respondents who initially refused to be interviewed were slightly less educated (18.4% had less than a high school education) than other respondents (14.2% had less than a high school education). Overall, our analysis of converted refusers provides no evidence of severe bias.

Measures

We asked the following question: "Have you ever had a time in your life when you considered yourself homeless?" For respondents who reported homelessness, we asked follow-up questions to determine the lifetime duration of homelessness and whether the respondent had been homeless in the 5-year period between 1985 and 1990. In addition, we asked three follow-up questions to determine the nature of the self-reported homelessness. Specifically we asked: "While you were homeless did you ever (1) sleep in a park, in an abandoned building, in the street, or in a train or bus station?; (2) sleep in a shelter for homeless people or in another temporary residence because you did not have a place to stay?; (3) sleep in a friend's or relative's home because you were homeless?" If respondents answered yes to either of the first two follow-up questions, we defined them as having experienced literal homelessness. This allowed us to define lifetime prevalence of literal homelessness in a clear-cut manner. However, we could not definitively identify literal homelessness occurring during the past 5 years because the follow-up questions defining literal homelessness only asked whether respondents *ever* had these experiences. It is possible that a person who was homeless during the last 5 years was also homeless before and that only the earlier experience of homelessness could be classified as "literal." This is unlikely to have happened very often because it requires that a person have multiple episodes of homelessness, at least one of which occurred outside the 5-year period, and that only episodes occurring before the 5-year period involved literal homelessness.

Data Analysis

We classified self-reported homelessness as (1) lifetime prevalence of all types of homelessness combined, (2) lifetime prevalence of literal homelessness, (3) 5-year prevalence of all types of homelessness combined, and (4) 5-year prevalence of homelessness among those who have ever been literally homeless. In addition, to examine poverty-related and other sociodemographic correlates of homelessness, we determined prevalence estimates of homelessness in subpopulations and tested the significance of the differences between those estimates. Although these correlates of homelessness are interesting in their own right, our main purpose in reporting them is to provide a context for the main issue addressed in this paper concerning the overall prevalence of homelessness in the United States. Results were weighted to take into account the stratification by Standard Metropolitan Statistical Areas, the number of persons in a household, and the number of telephone numbers within a household. A weighting scheme was necessary to ensure that certain types of persons were not over- or underrepresented in our analysis. For example, a person living in a household with two telephone numbers had a better chance of being selected into our sample than a person with only one telephone number. To correct for this possibility, we assigned a smaller weight to a person whose household had two telephone numbers. Specifically, the weights assigned were the inverse of the probability of selection. Although our weighting scheme generated the same number of cases as the unweighted sample (n = 1507), standard statistical packages (SPSS, SAS), which assume simple random sampling, produce incorrect standard errors for a complex survey design such as ours. To address this problem we used the software program called SUPERCARP,[18] which provides more accurate estimates of standard errors for complex survey designs. All confidence intervals (CIs) and statistical tests were calculated with this program.

Results

Prevalence of Self-Reported Homelessness of Any Type

The lifetime prevalence of homelessness of any type was 14% (CI = 12.0%, 16.2%); 9.3% were homeless only as adults (age > 17 years), 3.2% were homeless only as children, and 1.5% were homeless as both children and adults. Five-year prevalence of homelessness of any type occurring between 1985 and 1990 was 4.6% (CI = 3.3%, 5.9%).

Prevalence of Literal Homelessness

When attention was restricted to literal homelessness as defined above, 7.4% of the respondents (CI = 5.7%, 9.1%) were literally homeless at some time in their lives (2.1% as children only). Lifetime prevalence of literal homelessness can be further broken down into its components as follows: (1) staying *only* in shelters or other temporary housing for homeless people (4.2%); (2) staying *only* in parks, abandoned buildings, and so forth (1.2%); and (3) staying in both these settings (2.0%).

Slightly fewer than half of those who had ever been literally homeless and 3.1% (CI = 2.3%, 4.4%) of the sample as a whole had been homeless in the past 5 years.

TABLE 2—Lifetime and 5-Year Prevalence of Self-Reported Homelessness (n = 1507)

	Prevalence per 100 (95% Confidence Interval)
Literally homeless during lifetime	7.4 (5.7, 9.1)
Literally homeless during lifetime and homeless (including doubled up) between 1985 and 1990	3.1 (2.3, 4.4)
Homeless during lifetime (including doubled up)	14.0 (12.0, 16.2)
Homeless between 1985 and 1990 (including doubled up)	4.6 (3.3, 5.9)

Duration of Homelessness

Respondents who reported homelessness were asked "Altogether, how much of your life have you been homeless—would you say less than a week, more than a week but less than a month, more than a month but less than a year, or more than a year?" As such, our data on duration included all types of self-reported homelessness and did not allow us to determine how much of the time a person was literally homeless. With this caveat in mind, 8% reported they had been homeless less than a week, 33% between a week and a month, 46% between a month and a year, and 13% for more than a year. Thus, only a very small proportion experienced brief dislocations lasting less than a week,

TABLE 3—Lifetime and 5-Year Prevalence of Self-Reported Homelessness Stratified by Indicators of Socioeconomic Status

Indicator of Socioeconomic Status	Percentage Literally Homeless		Percentage Homeless (Including Doubled Up)	
	During Lifetime	During Lifetime and Homeless (Including Doubled Up) between 1985 and 1990	During Lifetime	Between 1985 and 1990
Did not graduate from high school	16.2*	10.0**	29.5***	12.1**
High school graduate or more	5.9	2.0	11.3	3.3
Currently rents	12.6***	7.8***	22.2***	11.7***
Currently owns	5.4	1.3	10.8	1.8
Ever received public assistance	19.8***	9.9***	31.2***	11.4***
Never received public assistance	3.2	0.8	8.0	2.3
Current income $20 000 or less	14.4***	8.9***	27.0***	11.5***
Current income above $20 000	5.2	1.3	9.7	2.4

*$P < .05$; **$P < .01$; ***$P < .001$.

and a majority had been homeless for more than a month.

Poverty and Self-Reported Homelessness

Table 3 reports lifetime and 5-year prevalence estimates by several poverty-related variables. Having less than a high school education, ever having received public assistance, and currently renting or having low income were each significantly related to all measures of homelessness. The 5-year prevalence of homelessness ranged from about four to more than ten times greater in these groups than in the rest of the population.

Gender, Marital Status, Race, and Urban-Suburban-Rural Residence

Our design allowed us to identify formerly homeless people who may not have been identified in point-prevalence studies of currently homeless people. It is therefore of considerable interest to compare the sociodemographic characteristics of our sample with sociodemographic profiles reported in two reviews of studies of point prevalence.[4,19] Although the criteria for including studies in these reviews differed substantially, they both reported that people who were young, single, male, and African-American were overrepresented among the population of currently homeless people. Moreover, most studies were conducted in urban settings, where the prevalence of homelessness was generally assumed to be higher than that in nonurban areas. In sharp contrast, we found only modest trends for age, gender, marital status, and race and no differences whatsoever for current community size, whether measured by current residence in one of the 20 largest Standard Metropolitan Statistical Areas vs the rest of the country or by self-reported community size.

Discussion

We found surprisingly high rates of lifetime and 5-year prevalence of homelessness in the United States. Prevalence was high whether homelessness was narrowly defined as literal homelessness or broadly defined to include doubling up.

The 1990 census counted slightly over 185 million adults 18 years or older living in the United States. Using our lifetime prevalence rates as a basis, we estimate that about 13.5 million (7.4%) adult residents of the United States have been literally homeless at some time during their lives; and using our 5-year prevalence rates, we estimate that 5.7 million of these have been homeless in the past 5 years. If those who doubled up are included, the estimated figures are nearly 26 million for lifetime homelessness and 8.5 million for homelessness within the past 5 years. These figures are all the more compelling because the major biases of our method—sampling currently housed people with telephones—would lead to underestimates of the number of homeless people. We missed all currently homeless people and, by excluding people without telephones (about 7% of the US population), we missed a segment of the population that was poor and thus more likely to have experienced homelessness. Our focus on households also means that we missed people in institutions like prisons and mental hospitals, who are also more likely to have experienced homelessness than the currently housed population.

The high lifetime and 5-year prevalence rates appear to be inconsistent with estimates given by previously published studies[12,13] and by the 1990 US Census.[11] The largest estimate from these studies was 508 300 homeless adults (567 000–600 000 including children) during a 1-week period in March 1987.[12] However, these estimates are not directly comparable to ours because they estimated point prevalence or prevalence during a short period, whereas our study estimated lifetime and 5-year prevalence rates. Burt and Cohen[12] and Rossi,[8] however, derived annual prevalence and incidence rates from their point-prevalence rates and data on duration of homelessness. Based on this information we derived estimates of 5-year prevalence according to the classic epidemiological formulation of the relationship between current prevalence, incidence, and period prevalence: period prevalence equals the number of cases at the beginning of the period (point prevalence) plus the number of new (incident) cases emerging during the period.[20] Based on this information, we derived 5-year prevalence estimates of 1.6% for Burt and Cohen[12] and 0.9% for Rossi et al.[21] These are one third to one half as large as our estimate of 3.1% and fall outside the range of our 95% confidence interval (our lower bound estimate was 2.3%).

We also obtained very different findings with respect to the social patterning of homelessness by gender, race, marital status, and current community size. The formerly homeless people in our study were far less likely to be single, urban,

minority men than reviews of other studies would lead one to expect—a finding that is consistent with two other studies that used methods similar to ours.[22,23] The discrepancies with respect to age, race, gender, and marital status suggest the possibility that these factors may strongly influence the duration or the reoccurrence of homelessness. If, for example, the duration of homelessness is longer among men than women, current prevalence studies would show a predominance of men among the currently homeless. Our findings on duration suggest that this may be true. More homeless men (18%) than women (9%), more homeless minorities (22%) than Whites (11%), and more of the homeless people who are separated or divorced (20%) than those who are not (12%) have been homeless for more than a year. These results are consistent with the possibility that the duration of homelessness—as opposed to incidence alone—dramatically shapes the characteristics of the currently homeless population.

One possible explanation for differences between our results and those of others lies with the potential for respondents in our survey to misinterpret what we meant by homelessness because we did not explicitly define it for them. Theoretically, it is possible that college students caught away from home for a night or two or people staying in a motel while they wait for a closing date on a new home might inappropriately define themselves as homeless. However, the primary focus of our study concerned public attitudes about homelessness. The questions about personal experience with homelessness came after we had implicitly defined what we meant by homelessness by asking respondents many questions about their attitudes toward homeless people. In addition, the relatively small number of people who reported the duration of their homelessness to be less than a week helps rule out the possibility that these were simply traveling mishaps or other temporary and inconsequential dislocations. Finally, the strong associations between our measures of homelessness and socioeconomic status and poverty suggest that formerly homeless respondents were people financially vulnerable to a severe economic dislocation like homelessness.

Moreover, there is growing evidence from other recent studies to support our findings. The only other nationwide evidence of which we are aware comes from a question in the 1991 General Social Survey.[23] Specifically, the survey asked whether the respondent "had to temporarily live with others or in a shelter or on the street." Twenty-six (2.6%) of the 1012 respondents who answered the question reported that they had been homeless in the past year. To determine whether our estimate was consistent with that of the General Social Survey, we compared the survey's 1-year prevalence of homelessness of any type to our 5-year prevalence estimate of homelessness of any type. Clearly, if 2.6% of the American population was homeless in a given year, it is reasonable to expect that 4.6% could have been homeless in a 5-year period. Our results are further supported by a recent study that used data on shelter admissions to produce unduplicated counts of the number of people entering shelters annually and for longer periods of time. The study showed that 2.8% of the population of Philadelphia used shelters over a 3-year period and that 3.3% of New York City's population used a shelter over a 5-year period.[24] Finally, a nationwide study of male veterans who served during the Vietnam era found that 8.4% reported having had "no regular place to live for at least a month or so."[22]

Although these studies were either less detailed in terms of the questions asked[22,23] or were focused on local[24] or special[22] populations, they nevertheless represent independent confirmation of a relatively high prevalence of homelessness. These findings, taken together, lead us to stand with the critics who question the lower rates of the point-prevalence studies.

There are three major reasons that past studies may have underestimated the homeless population in such a way as to make our numbers "surprising." First, as Applebaum,[14] Jahiel,[7] Marcuse,[15] and others have pointed out, previous studies may have missed large numbers of homeless people in their efforts to count them. If so, point prevalence was underestimated, as were projections of annual

TABLE 4—Lifetime and 5-Year Prevalence of Self-Reported Homelessness Stratified by Gender, Age, Marital Status, Race, and Urban–Rural Residence (n = 1507)

	Percentage Literally Homeless		Percentage Homeless (Including Doubled Up)	
	During Lifetime	During Lifetime and Homeless (Including Doubled Up) between 1985 and 1990	During Lifetime	Between 1985 and 1990
Men	8.8	3.1	15.5	5.3
Women	6.4	3.1	12.8	4.1
Age 18–35 y	9.3	4.1	15.7	6.3*
Age ≥36 y	6.0	2.4	12.7	3.3
Separated or divorced	10.5	5.0	21.5*	7.2
Other	7.1	2.9	13.2	4.3
African American	5.9	3.2	19.2	5.1
Hispanic	10.4	3.7	17.5	6.9
Other	7.5	3.1	13.2	4.4
20 largest Standard Metropolitan Statistical Areas	7.1	3.4	13.2	4.9
Other areas	7.6	3.1	14.3	4.5
Large city (over 100 000)	7.6	3.8	15.4	5.6
Small city	7.5	0.7	15.0	0.7
Suburb	7.3	4.4	13.0	6.9
Small town	8.1	3.4	13.2	4.5
Rural	6.4	2.1	13.0	3.5

*$P < .05$.

prevalence and annual incidence from these data. Second, our finding concerning relatively equal prevalence by community size suggests that the size of the homeless population outside major urban areas may have been underestimated. Current prevalence studies have generally assumed that homelessness is substantially less prevalent (one third as high) outside urban areas—an assumption that our results suggest may be unwarranted. Third, to make projections to annual prevalence and incidence, these studies used data on the duration of homelessness among the people they sampled on a given night or during a given week. People who are chronically homeless are oversampled in such "one-shot" assessments. As a result, estimates of average duration are biased upwards and estimates of annual prevalence and incidence are biased downwards. Under this scenario, even if point-prevalence rates reported in past studies are accurate, projections to the rate at which our society generates incident cases of homelessness may be vastly underestimated. Because of these possibilities we propose that the question of the number of homeless people in the United States be reopened. Doing so is critically important for two reasons.

First, because point-prevalence studies dramatically underestimate the rate at which our society is generating homelessness, they minimize the magnitude and the seriousness of the problem. The place of homelessness on the national agenda and the resources available to address the problem could suffer as a consequence.

Second, although studies of current prevalence can be important for planning the delivery of services, they can at the same time lead to inappropriate conclusions about the initial causes of homelessness and the characteristics of people who become homeless. If surveys of currently homeless people miss large numbers of people who become homeless, as our study suggests they do, it means that such surveys substantially oversample people who are chronically homeless. As a consequence, studies of current prevalence locate and describe—again and again—those who are most thoroughly beset with dramatic personal problems. Bolstered by seemingly consistent evidence from such studies, researchers and policy makers run the risk of substantially overestimating the importance of the personal troubles of chronically homeless people in understanding the causes of homelessness.

Conclusions

These results reopen the question of the scope of homelessness in the the United States. Our study provides an assessment of the numbers of people who experience homelessness that conforms to standards of social science research, but also (as described above) circumvents many of the biases that critics of past prevalence studies have identified. The fact that our rates are much higher than the rates provided by studies of current prevalence supports the critics of those studies and speaks to the need to reassess two conclusions that have been drawn from them. First, the magnitude of the problem of homelessness is probably much greater than current prevalence studies indicate. Second, because those studies overrepresent chronic, long-term homeless people, they distort our image of who becomes homeless and mistakenly overemphasize the importance of personal deficits as causes of homelessness. □

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