

Risk Factors for Homelessness Among Indigent Urban Adults With No History of Psychotic Illness: A Case–Control Study

ABSTRACT

Objectives. This study identified risk factors for homelessness among indigent urban adults without dependent children and with no history of psychotic illness.

Methods. We conducted a matched case–control study, stratified by sex, of 200 newly homeless men and women and 200 indigent men and women with no history of homelessness. Newly homeless case subjects were recruited from shelter assessment centers in New York City. Never-homeless control subjects, selected from public assistance centers, were single adults applying for home relief. Control subjects were matched with case subjects according to ethnicity, age, and sex. Trained interviewers employed standardized research instruments to probe 3 domains of risk factors: symptom severity and substance use disorder, family support and functioning, and prior use of services.

Results. Significant interaction effects by sex were present for symptom severity, heroin use disorder, and prior service use. Greater numbers of the homeless of both sexes lacked a high school diploma and had less income from all sources, including from their families, than of the never homeless.

Conclusions. Newly homeless men and women with no history of psychotic illness differed from their never-homeless counterparts in the 3 domains investigated, but socioeconomic factors were also important. (*Am J Public Health*. 2000;90:258–263)

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About two thirds of the homeless adults in the United States have never experienced a psychiatric hospitalization and apparently do not suffer from psychotic disorders.^{1–5} Almost no information exists on risk factors and protective factors for homelessness among this group. Studies comparing the homeless with the stably housed have not distinguished between those with and without mental illness or have focused only on patient groups^{3,6–11}; however, homeless persons who are not psychotic may have problems and needs different from those of homeless persons who are mentally ill¹² and different reasons for becoming homeless.

Studies of homelessness among the severely mentally ill show risk factors in 3 domains: severity of illness, family relationships, and use of services. In the illness domain, the homeless are less compliant with treatment^{7,9,10} and more likely to abuse alcohol and/or drugs,^{7–11} and to have psychiatric symptoms^{7,9,10,13} and antisocial personality disorder.^{10,11} In the family domain, more of the homeless were physically abused as children by their families of origin, in foster care, or in group homes^{8,14,15} or ran away from home.⁸ Family disorganization in childhood, characterized by residential instability, parental pathology, and family violence, is greater among the homeless than among the never homeless,^{10,16} and family support in adulthood is less adequate.^{10,11} The homeless with mental illness have higher rates of hospitalization and arrest when compared with the mentally ill who have never been homeless—findings that are gender specific.^{10,11}

To determine whether these results applied more generally to indigent persons on the threshold of homelessness due to socioeconomic circumstances, we compared housed and newly homeless indigent persons who were free of psychotic illness. Repeating the design of Caton et al.,^{10,11} we compared the

never homeless and newly homeless on socioeconomic background factors, symptom severity, substance use disorder, family support and functioning, and utilization of treatment.

Methods

We employed a matched case–control design stratified by sex. We studied 200 homeless case subjects and 200 never-homeless control subjects; each group had 100 men and 100 women. No subject had ever experienced a psychiatric hospitalization or an episode of psychosis (past or current) as determined by the Structured Clinical Interview for DSM-IV Axis I Disorders (SCID).¹⁷ All spoke English or Spanish and were 18 to 65 years of age. We obtained informed consent after determining that subjects were likely to meet the study criteria. At completion of the interview, subjects were paid \$25. If, during the course of the interview, it was learned that the subject had a past psychotic episode or psychiatric hospitalization, the interview was terminated and the subject was paid.

Case subjects were literally homeless (i.e., they had no fixed abode and were forced to sleep in the street, a public place not meant for sleeping, or a shelter for the homeless¹⁸)

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and applying for admission to New York City's municipal shelter system for the first time. We used the Homeless History Form¹⁹ to determine that the current period was the first of literal homelessness, and shelter staff verified through a computerized information system that the current shelter admission was the first. About 28% of the subjects had been homeless for 1 week or less, and about 77% had been homeless for 3 months or less. About 21% of the women and 32% of the men had slept outdoors, 20% of men and 9% of women within the past 2 weeks. Men were much more likely than women to report economic or multiple reasons for homelessness rather than interpersonal reasons (likelihood ratio χ^2 test adjusted for age and race = 10.7, $P < .05$).

Homeless subjects were recruited from an intake and assessment center for homeless adults operated by the New York City Department of Homeless Services. All were single and without dependent children. Recruitment was assisted by assessment center staff, who alerted research staff of new admissions willing to be interviewed. Because of an institutional review board requirement that shelter staff contact potential subjects before referring them to the research team, we could not enumerate those who refused referral. Research staff ensured that subjects met the study criteria on the basis of their mental health and housing histories. Interviewing was carried out over a period of 12 months to ensure that subjects were selected throughout the seasons. There was 1 dropout, a homeless woman.

Control subjects were single adults applying for home relief from public assistance centers. They had no lifetime history of literal homelessness as determined by the Homeless History Form.¹⁹ Those eligible for Aid to Families With Dependent Children were not included. Case subjects were matched with control subjects on race/ethnicity (Black, Hispanic, White, other) and age within 5 years (2.5 years younger or older than the index case). Research staff screened volunteers to ensure that they met the study's inclusion criteria and could be matched with homeless case subjects. Seventeen women and 5 men refused to be interviewed and were excluded from the study. Interviewing of control subjects also covered a 12-month period and was timed to facilitate matching on age and ethnicity.

Subjects were interviewed by master's-level psychologists and social workers trained to administer the assessment battery. Interviews were conducted privately in the assessment and public assistance centers. Interviewers were not blind to the housing status of study subjects.

TABLE 1—Background Characteristics of Never-Homeless and Homeless Men for a Matched Case–Control Study

	Never Homeless (n = 100)	Homeless (n = 100)	Odds Ratio	95% CI
Education, %				
<12 y	27	48	2.91	1.47, 5.77**
≥12 y	73	52		
Place of birth, %				
United States	83	84	0.91	0.39, 2.14
Foreign	17	16		
Years in New York City, %				
<3	5	17	4.00	1.34, 11.96*
≥3	95	83		
Prior living arrangement, %				
Family	52	48	1.22	0.60, 2.49
Nonkin	20	31	1.88	0.88, 4.03
Alone (reference group)	28	21	1.00	
Religion, %				
Catholic	28	35	0.89	0.41, 1.96
Muslim/other	24	9	0.28	0.12, 0.70**
None	18	13	0.47	0.19, 1.17
Protestant (reference)	30	43	1.00	
Marital status, %				
Married/conjugal	3	6	2.31	0.57, 9.46
Separated/divorced	24	34	1.85	0.90, 3.79
Widowed	2	1	0.92	0.07, 11.32
Single (reference)	71	59	1.00	
Served in armed forces, %				
Yes	12	14	1.18	0.53, 2.64
No	88	86		
Employment status, %				
Employed	15	13	0.85	0.38, 1.89
Unemployed	85	87		
Income from entitlements, %				
Yes	18	20	1.13	0.57, 2.27
No	82	80		
Earned income, %				
Yes	30	18	0.50	0.25, 0.99*
No	70	82		
Income from family, %				
Yes	57	17	0.11	0.04, 0.28**
No	43	83		

Note. Odds ratio and 95% confidence interval (CI) were used with conditional logistic regression.

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

Instruments

To enhance comparability of findings with our previous risk factor studies involving people with psychotic illness,^{10,11} we used many of the same research instruments. The SCID¹⁷ was used to determine current and lifetime *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV)* psychiatric and substance use disorders. Antisocial personality disorder was evaluated with the SCID-II, the SCID module for personality disorders.²⁰ Social achievement in late adolescence was rated with the Los Angeles Social Attainment Scale, a 7-item instrument that focuses on peer relationships and social participation in adolescence²¹ ($\alpha = .66$). Symptom severity was assessed with the Positive

and Negative Syndrome Scale (PANSS).²² This scale is ordinarily used in studies of psychotic subjects, but it was included in the present study to make the study comparable to earlier research (α for total PANSS score = .83). Family disorganization in childhood was evaluated with 4-point ratings²³ on nurturing constancy, residential stability, adequacy of income, dependence on public assistance, family violence, parental criminality, parental mental illness, and parental substance abuse—the components of an index of family disorganization (α for the 8-item family disorganization index = .61). Current family support was rated on the basis of a single item covering family support for money, shelter, food, clothing, advice, and companionship.²³ Prior use of health, mental health, and

substance abuse treatment services was assessed.²³ Data on lifetime treatment utilization, shown in Tables 3 and 4, is reported in this article.

Statistical Methods of Analysis

The homeless case subjects were compared with the never-homeless control subjects with respect to the 3 study domains. In the illness domain, there were 6 variables: premorbid social attainment scale, total PANSS score, and binary indicators of lifetime alcohol abuse, drug abuse, antisocial personality disorder, and any lifetime psychiatric diagnosis. In the family domain, there were 2 variables: family disorganization index and adequacy of family support. In the service use domain, there were 3 variables: prior use of outpatient mental health services, prior substance abuse treatment, and use of a hospital emergency room within the past 12 months.

Case and control subjects were stratified by sex and matched on age and ethnicity. Conditional logistic regression was implemented, with the binary case/control variable treated as the outcome and the risk variables treated as explanatory variables. The test statistics reported in Tables 1 through 4 are the likelihood ratio χ^2 test and the odds ratio from the conditional logistic analyses.²⁴ Initially, analyses were done separately for men and women, but formal tests of gender-by-risk interactions were carried out in the regression framework. The risk variables that appeared to be important in the initial analyses were entered together as explanatory variables in a conditional logistic regression model that treated housing status as the outcome.

Results

Demographic Profile

Background characteristics of male and female subjects are shown in Tables 1 and 2, respectively. Homeless case subjects and never-homeless control subjects of both sexes had many traits in common, including the matching variables age and ethnicity. The median age for all 4 groups ranged from 34 years to 37 years, while 93% of men and 95% of women were Black or Hispanic. More than 80% in all groups were born in the United States. The majority in all groups were single (range = 57%–71%) or separated/divorced (range = 24%–34%). Similar percentages of homeless and never homeless of each sex had served in the armed forces (14% of homeless men and 12% of never-homeless men, 1% of homeless women and 1% of never-homeless

TABLE 2—Background Characteristics of Never-Homeless and Homeless Women for a Matched Case–Control Study

	Never Homeless (n = 100)	Homeless (n = 100)	Odds Ratio	95% CI
Education, %				
<12 y	39	48	1.47	0.82, 2.64
≥12 y	61	52		
Place of birth, %				
United States	86	88	0.82	0.34, 1.97
Foreign	14	12		
Years in New York City, %				
<3	6	8	1.40	0.44, 4.41
≥3	94	92		
Prior living arrangement, %				
Family	45	57	5.84	2.22, 15.37**
Nonkin	18	34	8.38	2.89, 24.21**
Alone (reference)	37	9	1.00	
Religion, %				
Catholic	41	37	0.69	0.30, 1.57
Muslim/other	6	6	0.83	0.25, 2.78
None	10	9	0.79	0.31, 2.05
Protestant (reference)	43	48	1.00	
Marital status, %				
Married/conjugal	5	6	1.34	0.35, 5.17
Separated/divorced	30	31	1.17	0.60, 2.27
Widowed	3	6	2.15	0.52, 8.88
Single (reference)	62	57	1.00	
Served in armed forces, %				
Yes	1	1	1.00	0.06, 15.99
No	99	99		
Employment status, %				
Employed	16	7	0.40	0.16, 1.03
Unemployed	84	93		
Income from entitlements, %				
Yes	29	46	2.13	1.16, 3.94*
No	71	54		
Earned income, %				
Yes	23	6	0.19	0.07, 0.55**
No	77	94		
Income from family, %				
Yes	54	26	0.22	0.10, 0.48**
No	46	74		

Note. Odds ratio and 95% confidence interval (CI) were used with conditional logistic regression.

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

women). Current unemployment was high in all 4 groups (range = 84%–93%).

There were also differences between the homeless and the never homeless. A difference in education (<12 years vs ≥12 years) between the homeless and the never homeless was significant in men (odds ratio [OR] = 2.91, 95% confidence interval [CI] = 1.47, 5.77) but only a trend in women. While most subjects were Protestant or Catholic, the never-homeless men were 3.5 times more likely than the homeless men to be Muslim or of another religion. In terms of residence history, homeless men were more likely to have lived in the New York City area for less than 3 years than never-homeless men (OR = 4.00, 95% CI = 1.34, 11.96). The never homeless of both sexes were more likely than the homeless to have

received income from work in the past month (for men, OR = 0.50, 95% CI = 0.25, 0.99; for women, OR = 0.19, 95% CI = 0.07, 0.55). Homeless women were more than twice as likely as their never-homeless counterparts to have received entitlement support, a difference that was not found for men. The never homeless of both sexes were more likely than the homeless to receive income support from family (for men, OR = 0.11, 95% CI = 0.04, 0.28; for women, OR = 0.22, 95% CI = 0.10, 0.48). Median monthly income ranged from \$240 (homeless women) to \$400 (never-homeless men) (not shown in table).

Family settings were the most common current or prior living arrangements for study subjects of both sexes. Homeless women were approximately 6 times more likely than never-

TABLE 3—Test of Key Hypotheses About Differences Between Never-Homeless and Homeless Men for a Matched Case-Control Study

	Never Homeless (n = 100)		Homeless (n = 100)		LRT	P	Odds Ratio	95% CI
	Mean	SD	Mean	SD				
Illness domain								
Premorbid adjustment score	27.15	5.85	25.92	6.28	2.38	.13	...	...
PANSS total score	35.09	6.20	39.44	10.83	15.60	<.001	...	...
Alcohol (0 = absent, 1 = abuse/dependence)	0.49	0.50	0.51	0.50	...	...	1.09	0.61, 1.95
Marijuana (0 = absent, 1 = abuse/dependence)	0.37	0.49	0.32	0.47	...	...	0.76	0.39, 1.46
Heroin (0 = absent, 1 = abuse/dependence)	0.17	0.38	0.11	0.31	...	...	0.60	0.26, 1.37
Cocaine (0 = absent, 1 = abuse/dependence)	0.22	0.42	0.33	0.47	...	...	1.92	0.95, 3.85
Any drug (0 = absent, 1 = abuse/dependence)	0.51	0.50	0.55	0.50	...	...	1.18	0.67, 2.09
Antisocial personality disorder	0.11	0.31	0.19	0.39	...	...	2.14	0.87, 5.25
Any lifetime psychiatric diagnosis	0.53	0.50	0.52	0.50	...	...	0.96	0.54, 1.69
Family domain								
Index of family disorganization	11.98	3.32	12.51	3.57	0.83	.36	...	...
Adequacy of family support	1.74	1.06	2.16	1.21	8.00	<.01	...	...
Service use domain								
Mental health outpatient (0 = no, 1 = yes)	0.26	0.44	0.23	0.42	...	...	0.83	0.42, 1.65
Drug/alcohol treatment (0 = no, 1 = yes)	0.31	0.46	0.33	0.47	...	...	1.10	0.60, 2.02
Emergency room use in past 12 months (0 = no, 1 = yes)	0.25	0.44	0.22	0.42	...	...	0.83	0.42, 1.65

Note. Likelihood Ratio Test (LRT), P value, odds ratio, and 95% confidence interval (CI) were used with conditional logistic regression. PANSS = Positive and Negative Syndrome Scale.

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

homeless women to have lived with a family member and 8 times more likely to have lived with nonkin. This pattern was not observed among the men. The interaction effect of sex and prior living arrangement (living alone) was significant ($\chi^2 = 7.40$, $P < .01$). The homeless of both sexes expressed greater dissatisfaction with the socioemotional atmosphere of their former living arrangements than did the never homeless (for men, likelihood ratio χ^2 test = 21.19, $P < .001$; for women, likelihood ratio χ^2 test = 14.01, $P < .001$) (not shown in table). Compared with the never homeless, greater numbers of the homeless reported that others living in the household were moderate to heavy users of drugs and/or alcohol (for men, likelihood ratio χ^2 test = 12.97, $P < .001$; for women, likelihood ratio χ^2 test = 10.74, $P < .01$) (not shown in table).

Distinctions Between the Homeless and the Never Homeless

Tables 3 and 4 summarize tests of study hypotheses about the differences between never-homeless and homeless men and women, respectively. Within the illness domain, there were no significant differences between the homeless and the never homeless on the Los Angeles Social Attainment Scale scores for either men or women. Average ratings on peer socialization and social participation in late adolescence were at the "good premorbid" level for all 4 groups. No significant differences were present in lifetime Axis I psychiatric diagnosis or antisocial

personality disorder, findings that again were the same for both sexes.

Slightly more than half of subjects in all 4 groups had had an Axis I psychiatric disorder at some time in their lives. Affective disorders were the most common diagnostic disorders for both sexes. Major depression was found in 20% of homeless women, 28% of never-homeless women, 19% of homeless men, and 14% of never-homeless men. Substance-induced mood disorders were found in 21% of homeless women, 17% of never-homeless women, 19% of homeless men, and 19% of never-homeless men. Posttraumatic stress disorder was also common, having been diagnosed in 15% of homeless women, 17% of never-homeless women, 9% of homeless men, and 12% of never-homeless men. Differences in Axis I disorders by homeless status were not significant. Although more men (19% of homeless men, 11% of never-homeless men) than women (6% of homeless women, 5% of never-homeless women) had received a diagnosis of antisocial personality disorder, there were no significant differences by homeless status.

Substance use disorders were widespread. Half of all the men studied had a lifetime diagnosis of alcohol use disorder and slightly more than half had a lifetime diagnosis of drug use disorder. There were no significant differences by homeless status for male subjects. Greater numbers of homeless women than of never-homeless women had a lifetime diagnosis of alcohol use disorder, but this difference was not significant. However, home-

less women were almost twice as likely as never-homeless women to have a lifetime diagnosis of drug use disorder. As shown in Table 4, homeless women had greater use of heroin and cocaine than never-homeless women (OR for heroin = 3.00, 95% CI = 1.28, 7.06; OR for cocaine = 2.13, 95% CI = 1.16, 3.94). The interaction effect by sex was significant for heroin ($\chi^2 = 7.80$, $P < .01$). Homeless men were more likely to have higher total PANSS scores than their never-homeless counterparts (likelihood ratio χ^2 test = 15.60, $P < .001$). Among women, unexpectedly, it was the never homeless who had higher total PANSS scores (likelihood ratio χ^2 test = 9.40, $P < .01$). The interaction effect for total PANSS scores by sex was significant ($\chi^2 = 23.10$, $P < .001$).

Within the family domain, there were no significant differences in the index of family disorganization for the homeless and never homeless of both sexes. However, family support was less adequate for homeless men than for men who had never been homeless (likelihood ratio χ^2 test = 8.00, $P < .01$). A similar trend existed among homeless and never-homeless women, but differences did not reach statistical significance.

In the services domain, there were no differences in prior use of mental health outpatient services or use of emergency room services within the past 12 months for homeless men and women compared with the never homeless. Although there were no differences in prior drug or alcohol treatment for men, homeless women were almost

TABLE 4—Test of Key Hypotheses About Differences Between Never-Homeless and Homeless Women for a Matched Case Control Study

	Never Homeless (n = 100)		Homeless (n = 100)		LRT	P	Odds Ratio	95% CI
	Mean	SD	Mean	SD				
Illness domain								
Premorbid adjustment score	24.79	5.81	25.15	5.61	0.18	.67	...	...
PANSS total score	38.20	6.31	35.76	5.13	9.40	.01	...	...
Alcohol (0 = absent, 1 = abuse/dependence)	0.28	0.45	0.40	0.49	...	...	1.71	0.94, 3.10
Marijuana (0 = absent, 1 = abuse/dependence)	0.19	0.39	0.22	0.42	...	...	1.21	0.59, 2.46
Heroin (0 = absent, 1 = abuse/dependence)	0.09	0.29	0.23	0.42	...	...	3.00	1.28, 7.06*
Cocaine (0 = absent, 1 = abuse/dependence)	0.23	0.42	0.40	0.49	...	...	2.13	1.16, 3.94*
Any drug (0 = absent, 1 = abuse/dependence)	0.42	0.50	0.59	0.49	...	...	1.94	1.10, 3.43*
Antisocial personality disorder	0.05	0.22	0.06	0.24	...	...	1.25	0.34, 4.65
Any lifetime psychiatric diagnosis	0.60	0.49	0.55	0.50	...	...	0.79	0.43, 1.45
Family domain								
Index of family disorganization	13.17	3.89	12.98	3.95	0.35	.56	...	...
Adequacy of family support	1.92	1.16	2.21	1.20	2.92	.09	...	...
Service use domain								
Mental health outpatient (0 = no, 1 = yes)	0.41	0.49	0.29	0.46	...	...	0.59	0.32, 1.07
Drug/alcohol treatment (0 = no, 1 = yes)	0.26	0.44	0.48	0.50	...	...	2.83	1.47, 5.47**
Emergency room use in past 12 months (0 = no, 1 = yes)	0.35	0.48	0.30	0.46	...	...	0.82	0.47, 1.43

Note. Likelihood Ratio Test (LRT), P value, odds ratio, and 95% confidence interval (CI) were used with conditional logistic regression. PANSS = Positive and Negative Syndrome Scale.

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

3 times more likely than never-homeless women to have received prior drug or alcohol treatment services. Interaction by sex was significant ($\chi^2 = 4.40, P < .05$).

When the risk variables that were significant for men in Table 3 were included as a set in a conditional logistic regression model, both variables—the total PANSS score and adequacy of family support—remained significant (Wald for total PANSS = 9.17, $P < .01$; Wald for adequacy of family support = 4.23, $P < .05$). This suggests that for men, symptomatology and family support are separate dimensions of the differences between the homeless and never homeless. When the same procedure was carried out for the risk variables shown in Table 4 to be significant for women, 2 of the 3 variables—the total PANSS score and prior alcohol/drug treatment—remained significant (Wald for total PANSS = 14.12, $P < .001$; Wald for prior alcohol/drug treatment = 10.20, $P < .01$), while lifetime diagnosis of drug abuse/dependence was no longer a discriminating variable.

When the procedure was repeated by including both significant background and risk variables (for men, significant variables in Tables 1 and 3; only 1 income variable, income support from family, was included in this analysis), 4 variables—total PANSS score (Wald = 6.18, $P < .05$), number of years in New York City (Wald = 7.88, $P < .01$), religion Muslim/other (Wald = 9.16, $P < .01$), and income support from family (Wald = 18.40, $P < .001$)—remained significant. Education and adequacy of family support were no longer

discriminating variables when other background and risk variables were controlled for. Inclusion of significant background and risk variables for women (shown in Tables 2 and 4; only 1 income variable, income support from family, was included) in a single conditional logistic regression analysis revealed that 5 variables—prior family living arrangement (Wald = 14.32, $P < .001$), prior nonkin living arrangement (Wald = 13.69, $P < .001$), income support from family (Wald = 14.50, $P < .001$), total PANSS score (Wald = 10.55, $P < .01$), and lifetime alcohol/drug treatment (Wald = 10.58, $P < .01$)—remained significant. A lifetime diagnosis of drug use disorder was no longer a discriminating variable when other background and risk variables were controlled for.

Discussion

We have attempted to identify factors that distinguish economically disadvantaged people who have never been literally homeless from those who are homeless and live in public shelters. This study focused on subjects who did not have psychotic disorders, the majority of people without homes in late-20th-century America. Guided by prior studies, we explored 3 domains of possible influence on homelessness. Use of a common set of variables enabled a comparison of risk factors for homelessness in subjects who differ on the dimension of mental illness. We used the matched case-control method and stratified

the sample by sex to adequately test our study hypotheses. Homeless case subjects were matched with never-homeless control subjects on sex, age, and ethnicity to minimize the possibly confounding effect of background variables. The cross-sectional nature of our study made it difficult to determine whether some variables were a cause or a consequence of homelessness. We chose homeless subjects who were experiencing their first episode of literal homelessness to minimize reporting bias of events and circumstances immediately preceding the loss of a home. Findings reveal similarities and differences in risk factors for men and women.

Although approximately one third of the single, adult homeless suffer from severe mental illness, the lifetime presence of a nonpsychotic psychiatric disorder, including antisocial personality disorder, is not a risk factor for homelessness when severe mental illness is not present. The lifetime prevalence of alcohol abuse/dependence and drug abuse/dependence in the study sample as a whole was considerably higher than the prevalence of these disorders in a national probability sample.²⁵ Alcohol abuse/dependence and drug abuse/dependence were not risk factors for homelessness among men, but lifetime drug abuse/dependence was a risk factor for homelessness among women. When specific categories of drugs were examined, lifetime heroin and cocaine abuse/dependence was more common among homeless women than among women who had never been homeless. In addition, homeless women had received

more prior treatment for substance use problems, suggesting that for many homeless women, substance use problems were severe and long-standing. Severity of substance use disorder, reflected in greater prior use of alcohol/drug treatment services, appears to be a critical dimension of the difference between homeless and never-homeless women.

Greater levels of symptom severity in the homeless men suggest that either impairment precipitated homelessness or the increased hardship imposed by being homeless increased symptoms. Greater symptom severity levels for women were found among the never homeless—the opposite of what we had expected. When we compared total PANSS scores of never-homeless women who were satisfied with their living arrangements with those who were dissatisfied and wished for an alternative, we found significantly greater levels of symptoms among the dissatisfied ($t = -3.54, P < .001$). It is possible that higher symptom severity levels among never-homeless women signify greater stress or dissatisfaction associated with being indigent and housed.

Good family support in adulthood, particularly economic support, appears to be an important safety net to prevent homelessness among the urban indigent of both sexes. For men, income support from family is more important than support that includes interpersonal closeness or companionship. For women, both income and social support are important. Greater numbers of homeless men were relatively new to the New York City area, demonstrating the importance of family support in preventing homelessness. It is of interest that greater numbers of never-homeless men were Muslim. Strong bonds to organized religion may be a functional alternative to family support. In terms of prior living arrangements, the homeless of both sexes were more likely than their counterparts to have been living with nonkin and were less likely to have lived in their own apartments before homelessness. The homeless reported greater dissatisfaction with their living settings before becoming homeless, and they revealed that these settings more often included others who were heavy users of alcohol and/or drugs.

Some important differences between the homeless and never homeless were not a priori study hypotheses in the investigation reported here, but these differences may provide insight into the precursors of homelessness when psychotic disorder is not present. Greater numbers of the homeless of both sexes lacked a high school diploma and had less income from all sources, including from their families, than the never homeless. Level of education was an important risk factor for homelessness among men. For those without

psychotic disorders, external factors, such as socioeconomic problems²⁶ and lack of opportunity, play key roles in homelessness. Internal factors, such as substance abuse, also play a role in homelessness among women.

Our findings suggest that the very poor who seek shelter services or public assistance need access to high school equivalency programs and job skills training. The widespread prevalence of alcohol and drug abuse/dependence in the study cohort as a whole suggests that substance abuse evaluation and treatment services should be made available through public assistance and shelter service programs. Moreover, routine evaluations of an individual's housing situation should be carried out to determine the need for housing allotments for welfare applicants (homeless and never homeless). Those who are "doubled up" in homes where other household members are heavy users of drugs and/or alcohol should be assisted to live as primary tenants in substance-free settings as part of a comprehensive effort to prevent homelessness. □

Contributors

C. L. M. Caton planned the study, analyzed the data, and wrote the paper. D. Hasin and P. E. Shrout assisted in planning the study and analyzing the data and contributed to the writing of the paper. L. A. Opler assisted in analyzing the PANSS data and contributed to the writing of the paper. S. Hirshfield assisted with the literature review and, with P. E. Shrout and B. Dominguez, conducted data analytic procedures. A. Felix contributed to the writing of the paper.

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