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Pathways to homelessness among the mentally ill*

Abstract *Background*: Persons with mental illness are over-represented among the homeless relative to the general population, and mental illness is most likely one of many vulnerabilities that confer risk for homelessness. *Method*: This paper elucidates the pathways to homelessness for persons with mental illness by comparing and contrasting groups of mentally ill homeless persons, non-mentally ill homeless persons, and housed mentally ill persons drawn from RAND's Course of Homelessness (COH) study and the Epidemiological Catchment Area (ECA) survey. *Results*: Homeless persons share childhood histories of economic and social disadvantage. The mentally ill homeless appear to have a "double dose" of disadvantage: poverty with the addition of childhood family instability and violence. Among the mentally ill homeless, those who became homeless prior to becoming mentally ill have the highest levels of disadvantage and disruption; while those who become homeless after becoming ill have an especially high prevalence of alcohol dependence. *Conclusions*: Mental illness may play a role in initiating homelessness for some, but is unlikely in and of itself to be a sufficient risk factor for homelessness. In addition to outreach and treatment programs for adult mentally ill homeless persons, emphasis should be placed on interventions with children and on addressing more pervasive causes of homelessness.

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Introduction

The mentally ill homeless, one of the most poignantly visible groups of homeless persons, comprise between 20 and 25% of the contemporary homeless [1, 2], a population estimated to include at least three million unique individuals annually in the US [3, 4]. The emergence of a substantial homeless population over the past twenty years can probably be best understood as resulting from a combination of structural changes (e.g., declines in low-cost housing stock, reductions in entitlements, and growing numbers of persons in poverty [5–7]) and individual vulnerabilities (e.g., mental illness, substance abuse [8–17]). That is, over the past twenty years, structural factors have produced an imbalance between available low-income housing units and the demand for them, setting the stage for homelessness. Personal vulnerabilities have determined who, within this context of housing scarcity, becomes homeless [18–20].

Persons with mental illness are over-represented among the homeless relative to the general population [1, 2], and mental illness is most likely one of many vulnerabilities that confer risk for homelessness [21–25]. In this paper, we explore pathways to homelessness for mentally ill persons by examining mental illness as a risk factor for homelessness as distinct from other personal vulnerabilities (such as histories of poverty, abuse, or

family instability) that are likely to increase risk for homelessness when affordable housing is in short supply. An ideal approach to studying the role of mental illness as a risk factor would be to conduct a longitudinal study of a community sample over many years with repeated assessments of all potential risk factors, including mental illness. However, since this approach would be prohibitively expensive, we used data from two existing data sets: RAND's Course of Homelessness (COH) Project and the national Epidemiological Catchment Area (ECA) Survey [26]. To examine pathways to homelessness we conducted three analyses.

First, we compared and contrasted three groups:

1. The mentally ill homeless
2. The non-mentally ill homeless (obtained from the COH Study), and
3. The mentally ill housed (obtained from the ECA study).

If mental illness alone confers sufficient risk for homelessness then we would expect the mentally ill homeless to be more demographically similar to housed mentally ill persons than they are to non-mentally ill homeless. Second, within the COH sample we examined differences in potential risk factors for homelessness (e.g., poverty, abuse, etc) between the mentally ill and non-mentally ill homeless. If mental illness is a sufficient personal risk factor for homelessness, we would expect mentally ill homeless persons to have less deprived backgrounds than non-mentally ill homeless persons. Third, within the mentally ill homeless, we described patterns in the sequencing of mental illness and homelessness. If mental illness is a sufficient risk factor for homelessness, we would expect the great majority of the sample to have become homeless after the onset of mental illness.

In raising issues about pathways to, or risk factors for, homelessness, it is our intent to pose a larger question about how we might best respond to the mentally ill homeless. Should we focus our attention on interventions directed at mental illness itself, such as rehabilitation and treatment programs for adults, or would we be more successful by emphasizing remedies for other risk factors in this group that may occur much earlier, even in childhood? Finally, although this study cannot definitively address the question of what causes homelessness, we hope to contribute to what is known on this important topic.

Subjects and methods

Sampling design

Data from homeless individuals were collected as part of RAND's COH Project, a longitudinal study of predictors of exit from and re-entry into homelessness. As part of this study, an initial survey interview was conducted with 1563 adults between October 1990 and September 1991. Data in this paper are from this baseline survey only, and exclude subjects with severe cognitive impairment and missing diagnostic information ($N = 32$). The sample, all of whom were homeless (defined as having spent at least 1 night in the past 30 either unsheltered or in emergency shelters designed for the homeless), was selected to represent the homeless populations of two Los Angeles County communities – the urban downtown area, which has the largest and most dense concentration of homeless individuals in Los Angeles County, and the suburban Westside beach communities of Santa Monica and Venice, which contain the second highest concentration of homeless in the county.

To draw a sample that represented the homeless populations of interest, we used a multi-stage stratified probability sample design. Within each of the two communities, three mutually exclusive sampling strata were defined: the population that used emergency shelter beds, the homeless population that used meal facilities (for example, soup kitchens) but not shelter beds, and the homeless population that used neither shelter nor meal services. To sample homeless individuals who did not use shelter or meals facilities, a weighted sample of census blocks in each of the areas was drawn (weighted proportionally to the likelihood that homeless individuals would be found on the block at night). These blocks were searched during late night and early morning hours. Individuals found on the blocks were screened, and those who were homeless and had not used shelter or meal facilities in the past month were selected to participate in the survey. Women, whose actual representation in the homeless population across these two sites was 16%, were oversampled such that they comprised 30% of the total survey sample. Across the two communities, interviews were allocated proportionally to the estimated homeless population size. This sampling design combined elements of two approaches that have been described in the literature for assuring representativeness of homeless samples: the service setting approach used by Burnam and Koegel [27] and the one-night "blitz" approach used by Rossi et al. [28]. For a more detailed description of the sampling plan, see Koegel et al. [29].

This sampling approach was systematically designed to allow us to estimate the probability of sampling each individual. Probabilities were estimated using two different underlying stochastic models that were conceived as bounds on actual probabilities, one assuming that individuals repeatedly go to the same facilities and street location over time, and the other assuming that individuals choose randomly among geographically available facilities and street locations. Estimation of probabilities under each of these models included two components: the selection of facilities and street locations on any given day (or night) of sampling, and the selection of individuals within locations. In the analyses that follow, data are weighted by the reciprocal of the estimated probability of selection, using the average of the estimates derived from the two stochastic models. Because data are weighted, the results are presented as percentages only.

Survey instrument

Informed consent was obtained from all respondents. The baseline survey instrument, administered face-to-face by trained interviewers, was a highly structured interview that averaged 2 h in length, covering demographic data, mental health status and functioning, homelessness history, pre-homeless background, recent housing and subsistence patterns, and use of formal and informal services. Pre-homeless background was defined as the individual's history before the age of 18 and refers to experiences prior to adulthood, even in those instances when the individual may have been homeless as a child or adolescent. Date of illness onset was determined by asking subjects two questions and taking the mean of subjects' answers: "How old were you when you first saw a doctor or mental health specialist for emotional or mental problems?" and "How old were you when you were first prescribed medication for an emotional or mental problem?"

The survey assessed major mental disorders using the Diagnostic Interview Schedule (DIS, version III-R), a structured diagnostic instrument that determines lifetime and recent diagnoses according to the published criteria of the American Psychiatric Association (DSM III-R criteria), [30, 31]. For the purposes of this study, information on diagnostic status, duration, and recency of

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episodes was used to define mental illness. Surveyed individuals were defined as mentally ill when they met criteria for:

1. Lifetime schizophrenia, excluding those without any symptoms in the past 3 years, and
2. Lifetime affective disorder, excluding those whose episode fell below DIS severity criteria (e.g., did not see a doctor, did not take medication, did not experience a deterioration in functioning, and were not hospitalized), those who had a single episode only, those who had no episode in the last 3 years, those with grief only, and those with dysthymia only

This definition was utilized to focus our analysis on persons with the most chronic and serious mental illnesses. Persons with cognitive impairment were excluded.

Epidemiologic catchment area survey

The ECA survey, conducted in five sites across the US between 1980 and 1984, was designed to estimate the prevalence of mental disorders in both treated and non-treated community populations. We used data from the Los Angeles ECA site only ($N = 3084$). For this analysis, we further reduced the sample to include only those who were non-institutionalized ($N = 2901$). The ECA utilized highly structured interviews – including the DIS, conducted by trained lay interviewers – and survey sampling procedures that allowed generalization of results to defined populations [26]. We chose to use comparisons between the COH study and the ECA survey in large part because virtually identical diagnostic instruments were utilized in both studies. This allowed us to use identical definitions of mental illness, as described in the previous paragraph. Even though there were changes in the definitions of mental disorders between the early 1980s and the 1990s, there were negligible changes in definitions for the disorders studied here. Further, we adjusted the ECA sample on age and gender to make it comparable to the COH sample. In the COH study, 22% of subjects were mentally ill, while in the Los Angeles ECA study 5.9% were mentally ill. The prevalence of specific disorders differed across the two study populations. Fifty percent of the COH mentally ill homeless population comprised persons with schizophrenia, while approximately 25% of the ECA mentally ill housed were schizophrenic. However, there were no significant differences detected between our schizophrenic and severe affective disordered homeless subjects in most measures of functioning, including instrumental and physical functioning [32]. It seems likely that by applying identical definitions of mental illness to both homeless and housed subjects, we identified a seriously impaired population irrespective of diagnosis.

Analysis plan

Our analyses first compared the COH sample of mentally ill homeless and the ECA sample of mentally ill housed in terms of demographic characteristics and substance use (drugs and alcohol) (Table 1). Second, within the COH sample we compared the pre-homeless backgrounds of the mentally ill homeless with those of the non-mentally ill homeless. Third, we examined differences within the mentally ill homeless group by comparing those who became ill prior to becoming homeless with those who became homeless prior to becoming ill.

For univariate comparisons between the COH and ECA samples, and between groups within the COH sample, we used Pearson chi-square tests for categorical variables and Students t-tests for continuous variables. Logistic regression was used to determine factors associated with being mentally ill and to becoming homeless prior to becoming mentally ill. For each of these models we followed identical variable selection procedures. Starting with a full model containing all variables in Tables 1 and 2, variables were removed via backwards elimination based on an exit significance level of 0.05. Variables were not allowed to re-enter the model after being removed.

Results

Comparing the mentally ill homeless (COH study) with the mentally ill housed (ECA study)

As Table 1 indicates, the mentally ill homeless are more demographically similar to the non-mentally ill homeless than they are to the mentally ill housed persons. For example, both the non-mentally ill homeless and the mentally ill homeless populations consist of a majority of ethnic minority persons, while the mentally ill housed sample is more than 70% white. Almost one-third of the mentally ill housed population is currently married, while less than 10% of the homeless population is married. More than half of the mentally ill housed have at least some college education, while smaller proportions of the severely mentally ill homeless (36.8%) and the non-mentally ill homeless (28.1%) have attended college.

Current alcohol and drug dependence follow a similar pattern. Like the non-mentally ill homeless, the mentally ill homeless are at very high risk for substance abuse. Homeless subjects have almost twice the prevalence of alcohol dependence and six times the prevalence of drug abuse compared with the housed subjects. These comparisons show that homeless persons, whether or not they are mentally ill, are more likely to be socially disadvantaged (less educated, ethnic minorities) and to have a high likelihood to be currently dependent on alcohol or drugs.

Comparing the mentally ill homeless to the non-mentally ill homeless (COH Study)

Homeless persons appear to have experienced considerable poverty in childhood. As Table 2 shows, about one in five stated that their family was on welfare and that their primary caregiver was never or rarely employed. The mentally ill homeless did not differ significantly from the non-mentally ill homeless in terms of childhood poverty. However, the mentally ill homeless did experience significantly more family and home instability. Fully 60% of the mentally ill homeless sample had a primary caregiver who was either mentally or physically disabled, and more than one out of four were placed at least once in an institution or foster care. Further, mentally ill homeless persons were also more likely to come from backgrounds marked by physical or sexual abuse. Compared to the non-mentally ill homeless, twice as many mentally ill homeless – almost 40% of the sample – reported having lived in a household where violence or abuse took place regularly. One-third had actually been physically abused, while 5% reported having been sexually abused. The slight majority of the physical abuse (19% compared to 13%) and the great majority of the sexual abuse (12% compared to 1%) were reported by women respondents.

Table 1 Comparisons between mentally ill homeless (Course of Homelessness Study; COH) and mentally ill housed (Epidemiological Catchment Area Survey; ECA) samples

	Non-mentally ill homeless (COH) N = 1197	Mentally ill homeless (COH) N = 334	Mentally ill housed (ECA) N = 183
Age (mean)	36.6	37.5	–
Gender (% male)[a]	83.7	80.2	35.9
Ethnicity[a,b]			
% Black	57.2	46.0	5.1
% White	19.0	36.2	52.8
% Hispanic/Other	23.9	18.0	42.1
Marital status[b]			
% Ever married	47.7	53.8	67.9
% Married now	8.0	4.8	45.7
Education[a,b]			
% Some college	28.1	36.8	50.2
Veteran	25.7	28.1	11.2
Recent alcohol dependence[a,b]	37.2	48.5	19.8
Recent drug dependence[a,b]	25.4	30.8	4.3
Lifetime alcohol dependence[a,b]	57.8	69.4	38.3
Lifetime drug dependence[a,b]	42.1	56.3	9.4

[a] Significant difference between non-mentally ill homeless and mentally ill homeless samples ($P \leq 0.05$)
[b] Significant difference between mentally ill homeless and mentally ill housed samples ($P \leq 0.001$)

Table 2 Childhood backgrounds of homeless persons

	Non-mentally ill homeless N = 1197	Mentally ill homeless N = 334	Homeless before ill N = 118	Homeless after ill N = 216
Poverty (%)				
Family on welfare[a]	22.1	21.6	28.6	18.2
Lacked utilities	10.0	12.5	14.8	11.6
Caregiver never/rarely employed[b]	13.4	19.0	22.4	16.2
Hungry[a,b]	27.6	33.1	44.4	27.7
Perceived self "poor"	17.9	18.7	20.1	18.1
Any of the above	46.2	47.2	52.3	44.2
Family/home instability (%)				
Residential instability[a,b]	17.0	24.6	31.2	21.5
Caretaker illness or disability[b]	39.6	60.4	63.8	58.5
Parent jailed[b]	7.1	15.3	14.5	15.4
Out-of-home placement[a,b]	24.3	27.7	34.9	24.3
Any of the above[a,b]	57.8	76.4	84.2	72.0
Violence or abuse (%)				
Violence/abuse in household[b]	19.7	39.1	40.8	37.2
Experienced physical abuse[b]	10.0	30.2	35.9	26.6
Experienced sexual abuse[a,b]	2.2	5.5	1.9	7.5
Any of the above[b]	19.5	39.0	40.8	37.1

[a] Significant difference between homeless before ill and homeless after ill samples ($P \leq 0.05$)
[b] Significant difference between non-mentally ill homeless and mentally ill homeless ($P \leq 0.05$)

Using logistic regression, we identified five factors uniquely associated with being mentally ill in our COH homeless population:

1. Having been physically abused (OR = 2.88; SE = 0.51; $P < 0.0001$; 95% CI: 2.04–4.07)
2. Being white (OR = 1.78; SE = 0.27; $P < 0.0001$; 95% CI: 1.32–2.40)
3. Residential instability in childhood (OR = 1.60; SE = 0.27; $P = 0.005$; 95% CI: 1.15–2.21)
4. Caregiver illness (OR = 1.39; SE = 0.20; $P = 0.02$; 95% CI: 1.05–1.83) and
5. Having some college education (OR = 1.38; SE = 0.19; $P = 0.02$; 95% CI: 1.05–1.82).

Relative to the homeless population as a whole, the mentally ill homeless appear equally impoverished. However, they are more advantaged in terms of ethnicity and education, but their childhoods are characterized by physical abuse, residential instability, and caregiver illness.

Sequencing of homelessness and mental illness

Approximately two-thirds (64.7%) of our mentally ill homeless sample had become ill prior to becoming homeless, while the remainder (35.3%) had become homeless prior to the onset of mental illness. On average, those who became homeless before becoming ill tended to become homeless at age 20, and then became ill at age 28. Those who became ill first did so at age 19, then became homeless at age 31. Those who became homeless first were more likely to be Hispanic (16.4% compared to 6.6%) or Caucasian (42.5% compared to 33.2%), to be less educated (23.4% with some college compared to 42.9%), and were less likely to be currently dependent on alcohol (39.9% compared to 52.2%). Further, as Table 2 shows,

those who became homeless first were more likely to have grown up within a family on welfare, more likely to have been hungry in childhood, more likely to have been homeless as a child, and more likely to have been placed out-of-home. There were no differences between these two groups in terms of marital status, recent drug dependence, or lifetime alcohol or drug dependence.

Using logistic regression, we found that the factors that uniquely characterize the group of mentally ill persons who became homeless prior to becoming ill were:

1. They were less likely to have attended college (OR = 0.55; SE = 0.15; P = 0.026; 95% CI: 0.32–0.93).
2. They were more likely to have been hungry as a child (OR = 2.47; SE = 0.70; P = 0.001; 95% CI: 1.42–4.30).
3. They had a higher likelihood of out-of-home placement (OR = 2.03; SE = 0.55; P = 0.009; 95% CI: 1.19–3.45).

These findings suggest that the group that became homeless prior to becoming ill may represent the most extreme cases of childhood disadvantage among the mentally ill homeless, while those who became homeless after becoming ill are characterized by very high levels of recent alcohol dependence.

Discussion

Clearly, the relationship between homelessness and mental illness is complex. In some ways the mentally ill homeless appear more privileged (better educated, less likely to be of minority ethnicity) than other homeless persons. However, they are overall more comparable to other homeless persons than to mentally ill persons living in residences. They share with other homeless people backgrounds marked by poverty: dependency on welfare, childhood hunger, and family unemployment. Our study underscores what others [18] have suggested, namely that the mentally ill homeless appear to have more in common with other homeless people than they do with the mentally ill housed population. Further, homelessness appears to be a phenomenon rooted in the impoverished and disadvantaged backgrounds of homeless people [21–25], regardless of their subsequent mental health status.

However, the mentally ill homeless are distinct in terms of childhood risk factors. Not only do they have mental illness, but they have significantly higher scores on every indicator of childhood family instability and violence or abuse used in this study. About one-fourth of the mentally ill homeless experienced residential instability with their family as a child, about one-fourth were placed out of their homes, and more than a third either witnessed violence within the household or personally experienced abuse. As such, it is as though the mentally ill homeless have received a "double dose" of disadvantage – poverty with the addition of childhood family instability and violence.

Our study suggests that within the mentally ill homeless, there may be at least two groups in terms of the sequencing of mental illness and homelessness. One group, representing about a third of our mentally ill homeless sample, had become homeless before becoming ill. This ethnically diverse group was poorly educated, became homeless earlier, and was more likely to suffer from severe, recurrent depression rather than from schizophrenia or bipolar disorder. Their rates of substance abuse co-morbidity were roughly comparable to those of other homeless people. However, their indicators of childhood poverty and physical abuse were the highest of all the subgroups we studied, and almost a third were homeless as children. These individuals likely represent those at the extreme of disadvantage, a population whose homelessness in adulthood is simply a continuation of earlier disruptive and deprived conditions, rather than a direct result of their mental illness. It is unlikely that for this mentally ill homeless subpopulation, mental illness represents either a necessary or a sufficient risk factor for homelessness.

However, the majority of mentally ill homeless persons in our sample had become homeless after the onset of their mental illness and were more likely to suffer from schizophrenia or bipolar disorder. Compared to the group who became homeless prior to becoming ill, homelessness in this population may be more strongly associated with substance dependence. For this group, mental illness alone may be a necessary, but not sufficient, risk factor for homelessness.

Because our study did not include a community sample followed longitudinally, we cannot draw definitive conclusions about risk factors for homelessness. Yet, our data does support what other researchers have found. Both poverty and family instability in childhood or adolescence are risk factors for homelessness [21–25]. Further, it is possible that these risk factors may have an effect independent of mental illness, or that some risk factors for homelessness such as family disruption may be, simultaneously, risk factors for mental illness.

Another possible explanation of our findings is that homelessness itself represents a stress diathesis that activates vulnerabilities. For example, Kessler and Magee [33] report that while there is a distinct link between childhood family violence and recurrent depression in adulthood, in the absence of chronic stress in adulthood there is little or no association between these factors. Using the stress-vulnerability model of mental illness, one could view poverty, family instability, childhood abuse, and, indeed, homelessness itself, as "stressors," all acting to increase the risk for mental illness in this population. Those who receive a higher exposure to these stressors in childhood, e.g., the mentally ill homeless, might be more likely to become mentally ill as adults, particularly in the presence of a higher biologic or genetic vulnerability. It is noteworthy that, of those who went on to develop mental illness, more than 60% had a primary caregiver who was either physically or mentally disabled, compared to only 39% of those who did not become mentally ill. Although the specific question in our survey did not distinguish mental from physical illness in this instance, it is possible that this could represent an increased prevalence of mental illness in the families of those who went on to become mentally ill. Mentally ill parents, in addition to contributing genetically to children's future mental health, may also provide a more socially unstable environment for their

children. However, caution is indicated in interpreting these analyses. Data from the ECA study was collected 10 years prior to the COH data. Its limitations as a comparison sample are inherent, and changes due to historic processes, including changes in mental health policy, cannot be ruled out as confounders.

Our results speak to efforts to prevent homelessness. Since homelessness is linked to disruptive childhoods and early disadvantage, interventions to prevent homelessness in general populations might be directed at lowering risk for these factors in children. One obvious target population would be homeless children [34, 35], especially since homeless careers often begin in childhood. Among adults with mental illness, particularly those with serious, chronic disorders such as schizophrenia and bipolar disorder, interventions that effectively treat or prevent substance abuse [36] are likely to be those with the greatest potential to reduce risk for homelessness.

Conclusions

Taken as a whole, our analyses do not support the notion that mental illness represents a distinctive pathway to homelessness, but rather that the relationship between mental illness and homelessness is both complex and dynamic. While programs that attempt to improve the symptoms and functioning of homeless adults and to alleviate the chronic stresses of homelessness certainly help some individuals, they fail to address the deeper origins of homelessness arising from both structural and personal vulnerabilities which exist for all homeless people. For the subpopulation of seriously mentally ill adults, effective interventions to prevent or treat substance abuse appear to be important in reducing risk for homelessness. In any case, programs designed to help the adult mentally ill homeless should be coupled with programs that address childhood risk factors for homelessness and re-address the structural changes that underlie contemporary homelessness.

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