Housing Patterns and Correlates of Homelessness Differ by Gender among Individuals Using San Francisco Free Food Programs

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ABSTRACT Homeless individuals experience high rates of morbidity and mortality, yet many homeless studies include small percentages of female participants. We therefore sought to determine correlates of homelessness separately for men and women in a sample of individuals visiting free food programs. Between August 2003 and April 2004, 324 individuals were recruited from San Francisco free food programs and interviewed regarding housing, sociodemographics, health, drug use, sex trade, and incarceration. Over one-half of women and almost three-fourths of men reported homelessness in the prior year. Among women, white race, younger age, not living with minor children, engaging in sex trade and recent incarceration were strongly associated with homelessness; however, only incarceration maintained the strong association in adjusted analysis (OR=7.16, CI=3.83–13.4). Among men, heavy alcohol use, drug use, years spent living in San Francisco and monthly income were strongly associated with homelessness; however, only years living in San Francisco (OR=0.28, CI=0.19–0.42) and monthly income maintained strong association in adjusted analysis (OR=0.27, CI=0.13–0.57). Housing patterns and the strongest correlates of homelessness among individuals visiting free food programs differ by sex. These results suggest the need to characterize homelessness and develop effective homeless interventions separately for men and women.

KEYWORDS Disparities, Homeless, Incarceration, Women.

BACKGROUND

Living without shelter increases health risks,¹ decreases personal safety,^{2,3} and results in higher rates of morbidity and mortality than exist in the general population.^{4–6} Predictors of homelessness are often applied to all individuals, yet many research studies among the homeless and marginally housed include low proportions of women. Women-specific studies confirm that gender is one of the strongest predictors of poor health among homeless adults,⁷ and that homelessness is a risk factor for infectious diseases such as HIV among indigent women.^{8,9} Gender distinctions are therefore an important consideration when characterizing home-

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lessness, developing interventions based on unstable housing, and delivering services to the poor and marginally housed.

Recognizing an extraordinary need for services targeted to indigent women,⁸ as well as a need for prevention efforts that address structural considerations like homelessness,¹⁰ we sought a better understanding of the housing dynamics among individuals using San Francisco free food programs. We particularly intended to address the possibility that results of studies conducted among poor and marginally housed individuals may be strongly influenced by large numbers of men that disproportionately influence population averages. To this end, we determined recent housing patterns and correlates of homelessness separately for men and women.

METHODS

The intention of the current study was to recruit a reproducible sample of indigent persons at risk for homelessness. Because venues that traditionally draw large numbers of homeless individuals (e.g., shelters and low-income housing) would bias a study based on housing, we recruited participants from free food programs. From August 2003 through April 2004, a mobile outreach recruitment team approached individuals at San Francisco free food programs providing more than 100 meals per day (five sites). All individuals attending the food program during morning hours of recruitment days were eligible and invited to participate in research study activities. Study participants underwent a consent procedure, HIV test and 30-minute interview regarding housing, socioeconomic characteristics, drug use, sex trade, and history of incarceration. Participants completed standardized interviewer-administered questionnaires and were reimbursed \$15. This protocol was conducted with the approval of the University of California, San Francisco Committee on Human Research.

The dependent variable for the current study, recent homelessness, was based on previous homeless research^{2,5,11-14} and was defined as sleeping on the street/in a public place or spending nights in a homeless shelter anytime during the past 12 months. Current drug use was defined as having snorted, smoked, or injected heroin, crack or methamphetamines in the past 30 days. Incarceration and sex trade were assessed for the previous year. Heavy alcohol use was considered in accordance with the National Institute of Alcohol and Alcoholism guidelines¹⁵ and defined as having more than 7 and 14 drinks per week for women and men respectively. The aim of this study was to address housing and associated factors among biological men and women. Given that transgender individuals experience social and institutional forces that sustain discrimination,¹⁶ which make seeking social services or legal assistance difficult,¹⁷ create unique health problems,¹⁶ and result in different needs than nontransgender individuals,¹⁸ correlates of housing among transgender persons will be considered and reported separately.

Data were cross-sectional in nature, thus associations were estimated using Rao-Scott chi-square tests, as well as odds ratios and confidence intervals to determine the magnitude of effect as well as the amount of variability in each estimate. Inferences were based on simultaneous adjustment for independent variables using multiple logistic regression and clustering by recruitment venue. A backward stepwise approach was employed based on recommendations of Hosmer and Lemeshow¹⁹ in which bivariate predictors with a *p*-value of 0.25 or less were included in the initial multivariable model, and variables were eliminated in order of their *p*-values, until all remaining parameter estimates had *p*-values less than

0.05. Multicollinearity between explanatory variables was examined using a tolerance and variance inflation factor in which predicted probabilities resulting from the initial logistic model were used to weight a least squares regression of the initial model.²⁰

RESULTS

The recruitment rate from San Francisco free food programs was 97%, resulting in 45 female and 279 male participants. Forty-one percent of participants were of nonwhite race/ethnicity and more than 20% did not graduate from high school. The median age was 44 years for women and 45 years for men ($p=0.31$); the median monthly income was \$443 for women and \$585 for men ($p=0.36$), compared to the median monthly income of \$5,002 for San Francisco’s general population.²¹ Sex trade was reported by 14% of women and 18% of men ($p=0.55$), while injection drug use was reported by 13% of women and 21% of men ($p=0.17$). Slightly more than half of both men and women reported heavy drinking. Residing in a single room occupancy (SRO) hotel was reported equally by gender and there was a modest trend for more men than women to report being homeless during the past year (Table 1). Among individuals reporting no nights sleeping on the street or in a shelter, 7% (all male) lived with at least one other person. Among those who had lived in their own residence, 50% of women and 34% of men reported it as their only source of shelter during the year ($p=0.06$).

Homelessness was experienced by 53% of women during the past year. Among women only, unadjusted analyses showed that the odds of being homeless during the previous year were significantly higher among white respondents, those who reported sex trade, and those who had been in jail or prison during the previous year; the odds of homelessness were significantly lower among women older than the population median, and those living with minor children (Table 2). In adjusted analysis, only incarceration retained its strong association with homelessness for women.

Homelessness was experienced by 71% of men during the past year. Among men only, unadjusted analyses showed that the odds of being homeless during the previous year were significantly higher for heavy alcohol users, methamphetamine users, and heroin users. Odds were significantly lower for individuals with higher monthly income than the population median, more years spent living in San Francisco than the population median, and those who tested HIV-positive (Table 2). In adjusted analysis, higher monthly income and more time spent living in San Francisco retained their

TABLE 1 Housing sources during the past 12 months among users of San Francisco free food programs, 08/03–04/04

Housing source	Female <i>n</i> =45	Male <i>n</i> =279	Rao–Scott chi-square
Own house or apartment	40%	22%	0.002
The street or other public place	36%	51%	0.06
Homeless shelter	29%	45%	0.20
Single room occupancy hotel	47%	47%	0.99
Friend’s place	29%	35%	0.53
Relative’s place	16%	16%	0.96

TABLE 2 Associations between experiencing recent homelessness and study characteristics among users of San Francisco free food programs, 08/03–04/04

Characteristic	Female (n=45)			Male (n=279)		
	n (%)	Unadjusted odds (95% CI)	Adjusted odds (95% CI)	n (%)	Unadjusted odds (95% CI)	Adjusted odds (95% CI)
Age ≥ population median	Median 44.2	0.35 (0.13–0.94)		Median 44.7	0.79 (0.48–1.28)	
White race	26 (58%)	2.09 (1.08–4.06)		163 (59%)	1.35 (0.87–2.09)	
Median monthly income	Median \$443	0.43 (0.15–1.29)		Median \$585	0.27 (0.13–0.53)	0.27 ♂ [†]
≥ population median						(0.13–0.57)
Any minor children	5 (11%)	0.21 (0.06–0.75)		3 (1%)	**	
living with you now						
Years spent living in San Francisco	Median 9 years	0.34 (0.10–1.17)		Median 6 years	0.26 (0.16–0.42)	0.28 ♂ [†]
≥ population median						(0.19–0.42)
Graduated high school	37 (82%)	0.70 (0.10–4.93)		207 (74%)	0.79 (0.55–1.12)	
HIV positive serostatus	3 (7%)	**		35 (13%)	0.18 (0.05–0.60)	
Recent use of mental health services	8 (21%)	0.89 (0.34–2.35)		58 (27%)	0.56 (0.24–1.29)	
Sex trade in past 12 months	6 (14%)	6.47 (1.34–31.27)		47 (18%)	1.93 (0.76–4.83)	
Incarcerated in the past 12 months	12 (27%)	7.16 (3.83–13.4)	7.16 ♀	116 (42%)	1.53 (0.76–3.08)	
Crack cocaine use in past 30 days	12 (27%)	1.94 (0.57–6.62)		94 (34%)	1.33 (0.72–2.48)	
Heroin use in past 30 days	3 (7%)	**		42 (16%)	2.09 (0.90–4.87)	
Methamphetamine use in past 30 days	5 (11%)	0.66 (0.05–8.49)		52 (19%)	3.81 (1.48–9.81)	
Heavy alcohol use in past 30 days [‡]	24 (53%)	0.94 (0.13–6.86)		160 (58%)	1.55 (1.18–2.03)	

**Small cell size prohibited estimate; ‡ 30 for women and 60 for men; ♀ variables in final female-restricted regression model; ♂ variables in final male-restricted regression model

strong association with homelessness among men. There was no evidence of interaction or collinearity between exposure variables for men or women.

DISCUSSION

The primary finding of the study is that men and women visiting free food programs experience different patterns of housing and have different predictors of homelessness. These results suggest that homeless studies with large proportions of male participants may inappropriately generalize results and may not identify factors important to women. With regard to housing patterns, 50% of women and 34% of men who reported staying in their own place during the past year also reported that it was their only residence. This finding underscores the instability of housing among indigent persons.

Previous studies have linked incarceration and homelessness,^{22,23} particularly as a surrogate for the mental health system,²⁴ though women-specific data are sparse. Recent incarceration was the only factor strongly associated with homelessness among women in adjusted analysis. The diminished association between homelessness and sex trade in the presence of incarceration was an unexpected finding. It suggests that a high proportion of women who trade sex in this population are incarcerated, and that incarceration likely explains more of the variability in homelessness than does sex trade. Our study suggests that creating viable housing options for indigent women leaving or at risk for entering the corrections system could decrease homelessness in this population. Likewise, identifying interventions that have the potential to decrease incarceration could also decrease homelessness among indigent women.

While over half of all respondents reported homelessness during the past year, a higher proportion of men reported recent homelessness and staying at a friend's place during the past year (Table 1). These findings confirm those reported by Pollio et al., which suggested that women were more likely than men to be housed;²⁵ however, whether findings from both studies are biased due to venues of recruitment remains unclear. Lower income and less time spent in San Francisco were the strongest predictors of homelessness among men. Income as a significant correlate of homelessness suggests that even in a population with severely limited financial resources and less financial heterogeneity than the general population, additional revenue protects indigent men from homelessness. In a previous study, we found that individuals who reported receiving at least half of their income from subsidies were 60% more likely to be sheltered.²⁶ Taken together, these results suggest the importance of consistent income in securing stable housing for indigent men. It is interesting to note that after adjustment for income, the measures of association between homelessness and HIV serostatus as well as use of alcohol and methamphetamines were substantially diminished for men. This reinforces the strong link between alcohol/drug use, poverty, and homelessness found in other studies, but highlights income as the primary predictor of housing among indigent men. Regarding the negative correlation between time spent living in San Francisco and homelessness, it is unclear whether this was due to familiarity with local systems, acculturation, or another unmeasured variable. More detailed inquiries regarding cultural context, structural factors, and the process of negotiating each could elucidate these issues.

Our findings serve to illuminate associations between various known factors associated with unstable housing, though longitudinal studies are needed to further

delineate the temporal genesis of these relationships. While certain factors for homelessness such as gender are unmodifiable, others such as incarceration and income are potentially modifiable, and should be considered as a focus of future interventions. Understanding characteristics of unstable housing is of particular importance in light of the fact that so few individuals who lived in their own place reported it as their sole residence during the year. This lack of consistent residency in a person's own residence supports previous studies indicating high rates of transition in and out of homelessness among indigent persons,^{26,27} and highlights the need for more time-dependent analyses in homeless research. In addition, there is a need for similar gender comparisons in cities outside of San Francisco to assess the generalizability of the results presented here.

This study has several potential limitations. While recruitment did not include venues such as homeless shelters, subsidized housing, or low-income hotels, which would have biased the sample with regard to housing situation, the possibility exists that free food programs may not offer a representative sample of persons at risk for homelessness, particularly women. Less than 15% of individuals recruited from San Francisco free food programs were women. Given that all individuals visiting the program on mornings of a given day were approached, and given the extremely low refusal rates experienced by this study, it can be reasonably estimated that approximately 15% of individuals visiting San Francisco free food programs during the study period were women. Whether this reflects the true gender ratio of poor and marginally housed individuals is unknown. Likewise, whether the gender ratio observed at free food programs and its representation of indigent persons in San Francisco is generalizable to other US metropolitan areas is also unclear and merits further study. Another potential limitation involves the definition of homelessness. Whether traditional definitions such as "lives on the street or in a homeless shelter," captures the experience of homelessness for women is unclear. Our results indicate differences in housing patterns for indigent men and women, suggesting that unstable housing may be navigated differently according to sex. It is possible that indigent women are engaging in informal housing arrangements (e.g., "couch surfing") or negotiating nontraditional agreements (e.g., exchanging sex for housing) to avoid the vulnerability of sleeping on the street. While these situations may render the individual "sheltered" by some standards, it is unlikely that the shelter is stable or even safe in many circumstances, and may increase exposure to violence and sexual risk behaviors. An emphasis on temporary arrangements captures transitions in and out of homelessness,²⁸ and expansion of this concept should be considered for future homeless studies, particularly those focused on women. Additional limitations include potential bias from self-reported information and the absence of data on victimization, which has been linked to homelessness in a variety of studies. Validation studies on many behaviors such as sex trade are impossible; however, the reliability of these findings should be tested by similar studies in alternate cities. The major strengths of this study include a reproducible sample of indigent persons from a lesser studied venue; identical information collected on biological men and women who were recruited in the same manner and during the same time period.

The results and associated limitations presented here illustrate a need to understand specific factors regarding how women experience housing loss and negotiate new shelter, particularly after leaving a corrections setting, as well as how public health practitioners consider and define "homelessness" among women.

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