Sheltered Versus Nonsheltered Homeless Women

Differences in Health, Behavior, Victimization, and Utilization of Care

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OBJECTIVE: **To contrast sociodemographic characteristics, physical and mental health status, substance use, sexual behaviors, victimization, and utilization of health services between homeless women residing in sheltered and nonsheltered environments.**

DESIGN: **Cross-sectional survey. A structured scale was used to measure mental health status. Physical health status, substance use, sexual behavior, history of adult victimization, and health services utilization were measured by content-specific items.**

SETTING: **Shelters (N = 47) and outdoor locations in Los Angeles.**

PARTICIPANTS: **One thousand fifty-one homeless women.**

RESULTS: **Homeless women living on the streets were more likely than sheltered women to be white and longer-term homeless. Controlling for sociodemographic characteristics, multiple logistic regression analyses revealed that unsheltered women had over 3 times greater odds of fair or poor physical health, and over 12 times greater odds of poor mental health than sheltered homeless women. They were also more likely than sheltered women to report using alcohol or noninjection drugs, to have multiple sexual partners, and to have a history of physical assault. About half of the overall sample reported utilization of a variety of health services; however, unsheltered homeless women were less likely to utilize all of the health services that were assessed, including drug treatment.**

CONCLUSIONS: **There is a critical need for aggressive outreach programs that provide mental health services and substance abuse treatment for homeless women on the streets. Comprehensive services that also include medical care, family planning, violence prevention, and behavioral risk reduction may be particularly valuable for homeless women, especially those living in unsheltered environments.**

KEY WORDS: **homeless women; shelter status; health service utilization.**

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Homeless women represent a rapidly growing population at risk for poor health outcomes.[1,2] However, they are not a homogeneous group and relatively little is known about differences in the health status, victimization profiles, and health services utilization of homeless women who reside in emergency or sober living shelters as compared with those who live in alternative, unsheltered places, such as the streets. A reasonable assumption is that homeless women living on the street do not have organized living arrangements and close contact with other people, and consequently, they may be more emotionally distressed, more likely to engage in risky behaviors, more likely to experience poor health and victimization, and less likely to use health services than homeless women who reside in shelters. Thus, in addition to homeless status, clinicians may need to take living arrangements into account when prescribing treatment for homeless women.

The literature has shown that, in comparison with the general population, homeless persons have higher rates of physical morbidity.[3,4] Moreover, despite being sicker, homeless persons are also known to be less likely to use outpatient health services than those in the general population.[5] However, relatively little is known about the physical health or health service utilization of homeless individuals living in different environments.

One study that did assess the physical health status and substance use of homeless adults as a function of sampling site found startling differences.[6] For example, shelter residents compared with homeless persons sampled elsewhere were less likely to suffer skin problems, to have elevated liver enzymes, to have been victimized, and to have used illegal drugs. Interestingly, while no site differences were found in many of the reported symptoms, the outdoor homeless were more likely to have medical problems because of exposure to the elements, poor hygiene, malnourishment, and drug use. However, this study did not examine mental health, sexual risk behaviors, and health care utilization for these subgroups of homeless adults, the sample was predominantly male, and it was not clear whether or not individuals actually lived where they were sampled.

Health services utilization has only recently become an area of targeted focus among the homeless who suffer with a number of physical and mental health problems.[3,7] While authors of a recent study reported that only one third of homeless adults obtained tuberculosis skin tests, sexually transmitted disease (STD) screening, and Pap tests,[8] these authors also found that providing health care in a model program designed to address the special

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needs of the homeless did result in homeless persons returning for follow-up visits as often as a low-income, domiciled group. Thus, a continuing investigation of the homeless, and of the varying needs of different subgroups, is critical to ensure appropriate utilization of health systems.

As part of an effort to identify subgroups of homeless persons with different levels of health service needs, this paper describes similarities and differences in sociodemographic characteristics, physical and mental health status, substance use, sexual behaviors, victimization, and utilization of health care services between homeless women residing primarily in shelters during the previous month and those who did not reside in a sheltered environment, but were found in close enough proximity to shelters that they might be willing and able to avail themselves of outreach programs targeted to their needs.

METHODS

Subjects and Setting

The study was part of a larger study examining initiation and continuation of substance use that used a purposive sample of 1,325 homeless women who resided in 1 of 47 traditional or sober living shelters or who were sampled through street outreach in Los Angeles.[9] The sampling plan, as specified by the granting agency, was designed to recruit 64% of women as current substance users (defined as drug and/or alcohol use within the preceding 90 days), while 36% would be past or never users. Women were considered eligible if they were aged 18 or over, and homeless. A homeless woman was defined as one who had spent the previous night in a shelter, hotel, motel, or home of a relative or friend, and was uncertain as to her residence in the next 60 days or stated that she did not have a home or house of her own in which to reside.[10] Data were collected between 1994 and 1996.

Among the original sample, 1,051 women had complete residential history information indicating primary residence in shelters or on the streets. Women with primary residence in shelters were defined as those who reported usually living in an emergency shelter or sober living shelter/residential treatment program during the past 30 nights and had spent at least half of that time in these facilities. Women with primary residence on the streets were defined as those who reported usually living on the streets during the past month and had spent at least 15 of the past 30 nights there. Women who did not fit into either of these categories were excluded from this report. These excluded women did not differ from those who were included in terms of age, length of time homeless, or number of homeless episodes. However, the excluded women were somewhat better educated (12 years vs 11 years), less likely to be Latina (15% vs 34%), and more likely to be African American (60% vs 45%) ($P < .001$). The 2 groups of women also resembled each other on all the study outcomes, with the exception of injection drug use and sexual assault. In particular, women who were excluded were less likely to be injection drug users than their study peers (9% vs 15%) and more likely to report sexual assault (37% vs 29%) ($P < .01$).

Procedures

Initial contacts in homeless shelters were made to site directors. Homeless women residing within the participating shelters or who were obtained through street outreach were then recruited through presentations provided by research staff to groups of women or on a one-on-one basis. All women interested in participating in the study notified the project nurses and outreach workers. Those who met the inclusion criteria were informed of the study and required to read and sign an informed consent. Only 4% of women who met the eligibility criteria declined to participate.

For sheltered women, appointments were made for instrument administration to take place in a room set aside by the director of the shelter. Outreach interviews were conducted in a variety of places considered convenient by the subjects. These places included restaurants, outdoor areas, cars, parking lots, and drop-in shelters. A trained nurse or outreach worker of the subject's ethnicity administered a face-to-face, structured interview that took approximately 60 minutes to complete. Women received $10 for their time.

Measures

Sociodemographic characteristics obtained using the structured interview included ethnicity, age, education, usual living place, length of time homeless, number of times homeless, and number of nights during the past 30 spent in various living arrangements (shelters, streets, friends' homes, etc.).

Substance use was assessed by the slightly revised Drug History Form.[11] Revisions reflected reordering of frequency of use questions. Drugs on the form included alcohol, marijuana, hallucinogens, crack/freebase, other cocaine, heroin, and street methadone. Items included lifetime use and frequency of use in the past 30 days, in the past 6 months, and in the past 12 months. Favorable results regarding the reliability and validity of data collected in this format have been reported by others.[12,13]

Health status was measured by 2 individual items inquiring about the women's physical health and the 5-item Mental Health Index (MHI-5).[14] Respondents were asked to rate their general health on a scale of 1 (excellent) to 5 (poor) and their bodily pain on a scale of 1 (none) to 6 (very severe). The first item has been used in a number of health surveys as a valid overall indicator of physical health.[15] Both items were used as part of the health assessment in the RAND Medical Outcomes Study.[16] The 5 items comprising the MHI-5 all have identical response

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sets on a 6-point scale ranging from "all of the time" to "none of the time." The MHI-5 has well-established reliability and validity, and has been shown to detect significant psychological disorders including major depression, general affective disorders, and anxiety disorders.[17] Cronbach's α in this sample was 0.82. Mean item scale scores were computed and linearly transformed to a 0 to 100 range in order to evaluate them in terms of an established clinical cut point. Higher scores indicate greater psychological well-being.

Sexual behavior was measured by 3 items. Women were asked how many sexual partners they had in the past 6 months and whether they had any unwanted pregnancies in their lifetime. They were also asked whether they had been told they had a "sexual disease" in the past 6 months.

History of adult victimization was assessed by 3 items using a yes/no response format that asked women if, since they started living on their own, they had been physically assaulted or attacked, not including sexual assault; sexually assaulted; or robbed (i.e., something belonging to them was taken from them personally against their will).

Health services utilization was measured by items inquiring about both preventive health services such as Pap, tuberculosis (TB), and HIV testing, as well as necessary or discretionary health services, which included talking with a doctor or other health professional at any time from the past 2 weeks (1) to never (7), seeing a dentist at any time from the past 12 months (1) to 5 or more years ago (4), and having ever participated in a drug treatment program.

Analysis

Sheltered and unsheltered homeless women were contrasted on the categorical study variables by χ^2 tests and on continuous variables by t tests. For analytic purposes, the MHI-5 score was dichotomized at 66 when it was used as an outcome. Individuals may be at high risk for mental health problems if they score less than 66 out of 100.[18] Multiple logistic regression analysis was used to assess the impact of shelter status on physical and mental health, substance use, sexual behaviors, victimization, and health service utilization, controlling for possible confounding effects of sociodemographic characteristics. The logistic regressions were also rerun with women who reported living primarily in sober living shelters or residential treatment programs removed to examine possible effects of this important subcategory of women who had undergone some rehabilitation and were presumably more functional. Further, injection and noninjection substance use and the continuous MHI-5 score were added as predictors to the original logistic models for physical health, sexual behaviors, victimization, and health services utilization to determine whether substance use and mental health had a major impact on shelter status effects.

Finally, the logistic regressions were rerun separately for 2 groups of women: those who reported recent substance use and those whose MHI-5 scores suggested poor mental health. The small numbers of unsheltered women who did not report recent substance use and who had MHI-5 scores of 66 or greater did not permit separate analyses for nonsubstance-using women or for those with relatively good mental health. To partially compensate for the large number of comparisons, the significance level for all tests was set to .01.

RESULTS

The sample consisted of 472 African Americans, 207 Caucasians, 362 Latinas, and 10 women of other ethnicities. Almost 82% of the women reported their usual place of residence to be sheltered; 16% of this subgroup resided in sober living shelters or residential drug treatment programs. On average, the women were about 33 years of age and had less than a high school education (Table 1). Women living in unsheltered environments were somewhat younger than their sheltered counterparts, and they were more likely to be white and to have been homeless for a year or more.

As shown in Table 2, 38% of the sample reported fair or poor health, and those living in unsheltered environments were especially affected. Women living on the streets were also more likely to report some degree of pain. Over half of the sample was at risk for poor mental health, which characterized almost all of the street women.

Homeless women living on the streets were also more likely than their sheltered peers to report use of noninjection drugs or alcohol, and having multiple sexual partners, a recent STD, unwanted pregnancies, and a history of victimization. However, while large differences in rates of physical assault and robbery were found between the 2 groups of women, the difference in sexual assault rates was not significant.

Almost all of the women reported seeing a health care professional in the past year and about 60% said they had a Pap or TB test. Women living on the streets were less likely to report these two tests, but no difference was found in HIV testing rates. However, sheltered women were far more likely to have seen a dentist in the past year. Among current or past drug users, sheltered women were also more likely to have sought formal treatment.

Table 3 shows the results of multiple logistic regression analyses on our health and utilization outcomes to examine the effect of shelter status when the sociodemographic characteristics listed in Table 1 were controlled. As compared to sheltered women, those living primarily on the streets had over 3 times greater odds of fair or poor physical health and over 12 times greater odds of poor mental health. They were also more likely to experience pain, to report alcohol or noninjection drug use, to have multiple sexual partners, and to have been physically assaulted or robbed. In contrast, unsheltered women were

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Table 1. Sociodemographic Characteristics of Sheltered Versus Nonsheltered Homeless Women

Characteristics	Sheltered* Homeless (n = 860)	Nonsheltered† Homeless (n = 191)	Total (N = 1,051)	P value‡
Mean age, y (SD)	33.1 (8.8)	31.0 (9.1)	32.7 (8.9)	.003
Mean education, y (SD)	11.0 (2.6)	10.9 (2.6)	10.9 (2.6)	.772
Race, %				
African American	47.4	33.5	44.9	.001
White	13.8	46.1	19.7	
Latina	37.9	18.9	34.4	
Other	0.8	1.6	1.0	
Homeless for the first time, %	42.6	36.7	41.5	.132
Homeless for at least 1 year, %	43.6	73.8	49.4	.001

**Sheltered homeless women are those who report usually living in a homeless or sober living shelter and have spent less than half of the previous 30 nights on the street.*

†Nonsheltered homeless women are those who report usually living on the street and have spent at least 15 of the past 30 nights there.

‡P values for comparisons between sheltered and nonsheltered homeless women.

less likely than their sheltered counterparts to report utilization of any health service. No significant differences were found with respect to injection drug use, recent STDs, unwanted pregnancies, or sexual assault.

Eliminating women who resided in sober living shelters or residential treatment programs from the models produced relatively minor differences. When mental health and substance use were controlled, the adjusted association

Table 2. Comparison of Patient Characteristics as a Function of Residential History

Characteristic	Sheltered* Homeless, % (n = 860)	Nonsheltered† Homeless, % (n = 191)	Total, % (N = 1,051)	P value‡
Health status				
Fair/poor physical health	33.0	59.5	37.8	.001
Some pain in past 6 months	57.0	73.8	60.0	.001
Poor mental health	48.0	93.2	56.2	.001
Substance use				
Injection drug use in past 6 months	14.5	18.2	15.2	.187
Alcohol or noninjection drug use in past 6 months	56.2	79.6	60.5	.001
Sexual activity and pregnancy				
Multiple sex partners in past 6 months	29.4	56.3	34.3	.001
Sexually transmitted disease in past 6 months	3.3	11.5	4.8	.001
Any unwanted pregnancies	34.5	48.7	37.1	.001
Adult victimization				
Physically assaulted	27.9	56.8	33.2	.001
Robbed	28.0	72.8	36.2	.001
Sexually assaulted	27.1	35.5	28.6	.021
Access to services				
Talked with health care professional in past year	89.8	83.4	88.7	.013
Saw dentist in past year	41.0	14.7	36.2	.001
Pap test in past year	68.2	48.6	64.7	.001
TB test in past year	65.3	34.8	59.8	.001
HIV test in past 6 months	47.1	42.4	46.2	.242
Drug treatment program (lifetime)§	47.7	28.3	43.8	.001

**Sheltered homeless women are those who report usually living in a homeless or sober living shelter and have spent less than half of the previous 30 nights on the street.*

†Nonsheltered homeless women are those who report usually living on the street and have spent at least 15 of the past 30 nights there.

‡P values for comparisons between sheltered and nonsheltered homeless women.

§Among 931 women with a history of drug use.

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Table 3. Comparison of Adjusted Odds Ratio* for Homeless Women in Unsheltered Versus Sheltered Environments† (*N* = 956)

Outcome	Adjusted Odds Ratio	95% Confidence Interval	*P value*
Health status			
Fair/poor health	3.40	(2.34 to 4.94)	.001
Some pain in past 6 months	2.28	(1.54 to 3.37)	.001
Poor mental health	12.69	(6.68 to 24.13)	.001
Substance use			
Injection drug use in past 6 months	1.14	(0.69 to 1.88)	.618
Alcohol or noninjection drug use in past 6 months	2.95	(1.94 to 4.50)	.001
Sexual activity and pregnancy			
Multiple sex partners in past 6 months	2.79	(1.93 to 4.03)	.001
Sexually transmitted disease in past 6 months	2.10	(1.05 to 4.21)	.036
Any unwanted pregnancies	1.53	(1.07 to 2.19)	.021
Adult victimization			
Physically assaulted	2.74	(1.91 to 3.94)	.001
Robbed	5.37	(3.64 to 7.92)	.001
Sexually assaulted	1.08	(0.74 to 1.59)	.687
Utilization of services			
Talked with health care professional in past year	0.44	(0.26 to 0.75)	.002
Saw dentist in past year	0.34	(0.21 to 0.53)	.001
Pap test in past year	0.40	(0.28 to 0.59)	.001
TB test in past year	0.22	(0.15 to 0.33)	.001
HIV test in past 6 months	0.58	(0.40 to 0.84)	.004
Drug treatment program (lifetime)‡	0.31	(0.21 to 0.47)	.001

**Adjusted for the linear effects of age, education, ethnicity, number of times homeless, and length of time homeless.*
†*Sample sizes range from 845 to 957, depending on missing values.*
‡*For 845 women with a history of drug use.*

between fair/poor health and shelter status became weaker (odds ratio [OR], 1.99; 95% confidence interval (CI), 1.33 to 2.98), as did that for pain (OR, 1.78; 95% CI, 1.17 to 2.70). Similarly, the sexual activity and victimization measures were not as strongly related to shelter status. However, the health services utilization results were almost identical.

Table 4 shows logistic regression results for 2 subgroups of women: those who reported substance use in the past 6 months and those who were at risk for poor mental health. Although the associations between shelter status and fair or poor health were weaker than in the overall sample, unsheltered women still had over twice the odds of poor physical health outcomes as sheltered women. Further, among women at risk for poor mental health, those lacking shelter were still more likely to use noninjection drugs and alcohol, and among substance-using women, the unsheltered group was still at far greater risk for poor mental health.

Turning to sexual activity and pregnancy, having multiple sexual partners was significantly associated with shelter status in both subsamples, and the odds ratios were similar to that in the overall sample. Similarly, shelter status findings in the 2 subsamples with respect to victimization and health services utilization generally mirrored those in the total sample. In particular, among substance-using women and those at risk for poor mental health, those living in unsheltered environments were more likely than their sheltered counterparts to have experienced nonsexual victimization and they were less likely to use most health services.

DISCUSSION

This study confirms previous research findings that homeless adults are at risk for poor physical health, and unsheltered homeless persons have poorer physical health status and use less medical care than their sheltered counterparts.[6,19] The worst health was reported by women living on the streets. Almost three fourths of the unsheltered homeless women reported being in some degree of pain, and 60% reported fair or poor health. The latter figure contrasts with a rate of 38% for the sample as a whole and a 36% rate of fair/poor health found in a representative sample of homeless adults in Los Angeles.[19] By way of comparison, only 10% of the general population report fair or poor health.[20]

While homeless populations are known to have relatively high rates of serious mental illness,[21,22] the fact that virtually all of the unsheltered homeless women were at risk for poor mental health is still remarkable. Even among substance users, unsheltered homeless women still had 11 times greater odds of poor mental health than sheltered homeless women, controlling for covariates. Thus, it would appear that the streets are becoming a congregating place

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Table 4. Comparison of Adjusted Odds Ratio* for Homeless Women in Unsheltered Versus Sheltered Environments for Key Subgroups of Women

Outcome	Substance-Using Women† (n = 713)§ Adjusted Odds Ratio (95% Confidence Interval)	P Value	Women with Poor Mental Health‡ (n = 548)‖ Adjusted Odds Ratio (95% Confidence Interval)	P Value
Health status				
Fair/poor health	3.00 (2.02 to 4.45)	.001	2.24 (1.49 to 3.37)	.001
Some pain in past 6 months	2.33 (1.54 to 3.53)	.001	2.14 (1.38 to 3.33)	.001
Poor mental health	11.09 (5.62 to 21.88)	.001	—	
Substance use				
Injection drug use in past 6 months	—		1.28 (0.74 to 2.22)	.382
Alcohol or noninjection drug use in past 6 months	—		2.21 (1.39 to 3.52)	.001
Sexual activity and pregnancy				
Multiple sex partners in past 6 months	2.37 (1.61 to 3.49)	.001	2.56 (1.69 to 3.86)	.001
Sexually transmitted disease in past 6 months	1.76 (0.86 to 3.59)	.124	1.95 (0.90 to 4.24)	.091
Any unwanted pregnancies	1.31 (0.90 to 1.91)	.162	1.38 (0.93 to 2.05)	.113
Adult victimization				
Physically assaulted	2.40 (1.64 to 3.51)	.001	2.61 (1.75 to 3.88)	.001
Robbed	4.97 (3.31 to 7.48)	.001	5.10 (3.33 to 7.80)	.001
Sexually assaulted	.097 (0.65 to 1.46)	.894	1.07 (0.70 to 1.64)	.744
Utilization of services				
Talked with health care professional in past year	0.52 (0.30 to 0.91)	.021	0.47 (0.25 to 0.89)	.020
Saw dentist in past year	0.41 (0.25 to 0.65)	.001	0.35 (0.21 to 0.56)	.001
Pap test in past year	0.38 (0.26 to 0.57)	.001	0.45 (0.30 to 0.69)	.001
TB test in past year	0.22 (0.14 to 0.33)	.001	0.25 (0.16 to 0.38)	.001
HIV test in past 6 months	0.58 (0.39 to 0.86)	.007	0.59 (0.40 to 0.90)	.013
Drug treatment program (lifetime)	0.033 (0.21 to 0.50)	.001	0.36 (0.23 to 0.56)	.001

Adjusted for the linear effects of age, education, ethnicity, number of times homeless, and length of time homeless.
†*Women who reported use of injection or noninjection drugs or alcohol within the past 6 months.*
‡*Women with MHI-5 scores <66.*
§*Sample sizes range from 704 to 713, depending on missing values.*
‖*Sample sizes range from 511 to 548, depending on missing values.*

for persons with poor mental health. Women living on the streets also had higher rates of noninjection drug and alcohol use; however, we do not know if substance-using women lived outdoors because they had been refused entrance to or evicted from shelters due to their active substance use.

As in previous studies of homeless women,[23,24] many participants in this study engaged in risky sexual activity. About one third of the sample, and half of the unsheltered women, reported multiple sexual partners and an unwanted pregnancy at some point in their lives. Although high, the rate of unwanted pregnancy in the sample is

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less than the 50% rate in the general population.[25] This discrepancy may be due to the fact that homeless women frequently lack an adult network for social support and view their children as a primary source of support.[26] Both sheltered and unsheltered homeless women had relatively high rates of sexually transmitted diseases in the past 6 months, with those in the unsheltered group more than 3 times as likely to report them. When covariates were controlled, the impact of shelter status on unwanted pregnancies and STDs was markedly reduced. Nonetheless, even among substance-using women and women with poor mental health, those living on the street still had over one-and-a-half times the odds of having a recent STD as those living in shelters. This finding may reflect a greater need to engage in survival sex or sex for drugs, or it may just be a consequence of having more sexual partners. In any case, unsheltered women clearly need outreach programs that target risky sexual behaviors.

Victimization was reported by close to a third of women in the sample. This finding is in accord with other research indicating that victimization is frequently experienced by homeless women, because of the lack of protection on the street and because many of them engage in street activities such as panhandling, dealing drugs, and prostitution in order to survive.[27] Rates of robbery and physical abuse were particularly high among women living on the street. Even after restricting analyses to substance-using women and those at risk for poor mental health, and controlling for sociodemographic disparities between women living in sheltered and unsheltered environments, street residence was a strong independent predictor of robbery and physical assault. Interestingly, reported rates of sexual assault did not differ between sheltered and unsheltered women. Since we do not know when the women were sexually assaulted or their living situation at the time, it is difficult to explain this finding.

The good news from this study is that the vast majority of sheltered homeless women were able to obtain at least some needed medical care and receipt of preventive care was common. In fact, about two thirds of the sheltered homeless reported that they had received Pap and TB testing in the past year, and almost half said they had been tested for HIV in the past 6 months. Even among the unsheltered group, one third to one half reported these preventive care measures. Seeing a dentist in the past year was reported less frequently, especially by unsheltered women, as was lifetime treatment for drug abuse (among women whose histories suggested a need for this service). Regardless of varying levels, a common thread among all of the health services measures examined here is that unsheltered homeless women were less likely than their sheltered counterparts to use them. This failure to utilize health care with comparable frequency is particularly striking in view of the fact that women living on the street had greater need for care and they were more likely to be longer term homeless and thus perhaps more knowledgeable about the homeless health care system.[19] Further, although psychological distress has been shown to be associated with greater barriers to obtaining medical care,[28] and substance use has been found to be associated with failure to seek health care,[29] the relatively low use of health care services by unsheltered homeless women found in this study cannot be explained by either poorer mental health or greater substance use. One positive note is that the 2 groups of women differed less on HIV testing than on other health services utilization measures. This finding supports the effectiveness of community outreach efforts to detect HIV infection. It also suggests the need for similar efforts directed to other health service areas. While homeless women can obtain medical care in outpatient departments, community clinics, and some clinics associated with homeless shelters, those who reside primarily on the streets do not have access to the drop-in services offered to some shelter residents by visiting health care providers or to the case management many shelters provide. Further, they are not eligible to participate in the substance abuse counseling and treatment programs that shelters may provide for their own residents. A somewhat unexpected finding was that homeless women living in sober living and residential treatment shelters did not fare substantially better than those living in emergency shelters. However, we did not assess how long women had resided in the shelters or length of time in drug recovery. Further, sober living/residential treatment shelters may not emphasize other forms of health promotion, and victimization may have occurred prior to entry.

The cross-sectional design of this study limits inferences about cause-and-effect relationships between shelter status and the outcomes examined here. The exclusive use of self-report data is also a limitation, although self-reports are the only practical way to obtain much of the information reported. In addition, this study was conducted in Los Angeles and the participants were part of a directed sample, so the findings may not be generalizable to all homeless women in Los Angeles or to those in other cities. The use of specific services, such as TB and HIV testing, and dental and drug abuse treatment, as a proxy for overall health services utilization is also a limitation. Further, we did not inquire about important sexual risk behaviors, such as trading sex for food, drugs, shelter, or protection, and our measure of mental health is not a diagnostic tool and thus may exaggerate the seriousness of the mental health problems reported here. It should also be noted that the unsheltered women in this study were found near shelters and may have been better off than most women living on the street.

CONCLUSIONS

Homeless women, especially those found on the streets, have major health problems in all domains—physical, mental, violence, and drug and alcohol use. Yet virtually all of these women have had contact with the health system. This contact clearly needs to be strengthened and

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expanded among homeless women on the streets who have poor health and limited health care access and clinicians need to use patient visits as opportunities to screen for shelter status and shelter-related health problems, to educate patients about other needed services, and to attempt to make appropriate follow-up plans for treatment and evaluation.

Homeless women are clearly willing to use available health services, including preventive services for conditions for which they are not currently experiencing symptoms. However, aggressive outreach programs that address mental health and substance use problems are needed for homeless women living on the streets. Ideally, these programs should include comprehensive services such as family planning, violence prevention, and STD risk reduction. In some cases, incentives may be needed to encourage women to avail themselves of future-oriented care if they feel overwhelmed by just obtaining the daily necessities of life. This is particularly likely to be the case for women living in unsheltered environments.

The high levels of access to many health services found among sheltered homeless women suggest that existing shelter resources may be an important link for outreach programs attempting to improve health care for unsheltered homeless persons. Further, as health care for the homeless is being increasingly transferred to managed care systems, the agencies involved may need to establish cooperative arrangements with neighborhood shelters to assure that their homeless enrollees have adequate access to health care providers who understand their special needs, as well as services they are willing and able to use. The beliefs and attitudes of health care providers toward homeless persons merit investigation as well.

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