

# Predisposing, Enabling and Need Correlates of Mental Health Treatment Utilization Among Homeless Men

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**Abstract** There is significant unmet need for mental health treatment among homeless men, but little is known about the correlates of treatment utilization in this population. Within the framework of the Behavioral Model for Vulnerable Populations, this study examines predisposing, enabling and need factors that may be associated with mental health care utilization. Participants were a representative sample of 305 heterosexually active homeless men utilizing meal programs in the Skid Row region of LA. Logistic regression examined the association between predisposing, enabling and need factors and past 30 day mental health service utilization on Skid Row. Results indicated that while need, operationalized as positive screens for posttraumatic stress disorder or depression, was associated with recent mental health care utilization, predisposing and enabling factors were also related to utilization. African-American homeless men, and those men who also reported substance abuse treatment and drop-in center use, had increased odds of reporting mental health care utilization.

**Keywords** Mental health · Service utilization · Homeless men · Behavioral Model for Vulnerable Populations

## Introduction

Vulnerable populations experience significant levels of unmet need for mental health treatment (Bender et al. 2007; Wang et al. 2005); studies among vulnerable populations have found that less than one-third of those who need mental health treatment received it in the past year (Small 2010). Competing priorities are likely to inhibit the health-seeking behavior of persons with social vulnerabilities (Gelberg et al. 2000). This may be particularly true among homeless populations, where survival priorities are likely to take precedence over less urgent needs, such as mental health care. Research has confirmed this relationship by finding high rates of serious mental illness among homeless adults, but low levels of recent mental health service utilization (Koegel et al. 1999; Stergiopoulos et al. 2010). When homeless persons do receive mental health care, it is often inpatient psychiatric care, which accounts for some of the highest behavioral health costs incurred among homeless populations (Poulin et al. 2010).

A myriad of factors are likely to impact utilization of mental health care services. The Gelberg-Andersen Behavioral Model for Vulnerable Populations (Gelberg et al. 2000) provides a framework for organizing these factors into three domains associated with health service utilization: (1) need for mental health care, which can be self-reported symptoms or diagnosed; (2) predisposing characteristics of the individual (e.g., age, race/ethnicity, substance abuse); and (3) enabling characteristics (e.g., enablers of mental health care access, including access to other services). In an equitable system of health care, every person with a need for care would have an equal chance of receiving care; however, the relative dominance of predisposing and enabling factors may indicate an inequitable system (Andersen 1995). Inequality in mental health care

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utilization may leave some of the most vulnerable persons without adequate care.

### Factors Associated with Mental Health Care Utilization

The Gelberg–Andersen Behavioral Model for Vulnerable Populations (Gelberg et al. 2000) provides an expansive framework of characteristics that may be associated with service utilization among vulnerable populations. Predisposing characteristics range from childhood experiences and immigration status to coping skills and substance abuse. Enabling characteristics include varied resources, spanning from family income to the distribution of hospital beds in a community. Given such a broad model, and the limitations of the current data, we were able to assess only a subset of these characteristics, as explicated below.

#### Need

Prior studies have identified need as a primary predictor of mental health treatment utilization among homeless persons (Koegel et al. 1999). However, high levels of unmet need for mental health treatment in this population (Stergiopoulos et al. 2010) suggest that other factors may impede or facilitate service utilization.

#### Predisposing Characteristics

##### *Demographics*

Age, race/ethnicity and education may be key determinants of health service utilization. In particular, multiple studies in the general population have found that the highest levels of unmet need for mental health care exist among racial and ethnic minorities, particularly African American and Hispanic populations (Koenen et al. 2003; Mojtabai and Olfson 2006; Roy-Byrne et al. 2009; Wang et al. 2005; Zuvekas and Fleishman 2008).

##### *Substance use*

Because mental illness and substance abuse often have common antecedents, comorbidity of these two disorders is common (National Institute on Drug Abuse 2007). In homeless populations, 77 % of those with mental illness also report substance abuse (Koegel et al. 1999). Comorbidity is particularly problematic because co-occurring substance use decreases the likelihood of receiving mental health treatment (Harris and Edlund 2005; Koegel et al. 1999). We are unaware of research investigating the association between misuse of prescription medications to mental health care utilization, but the prevalence of prescription drug misuse has risen in recent years (Birnbau-

et al. 2011; Currie et al. 2011) and deserves investigation in relationship to mental health service utilization.

#### Enabling

Assistance navigating the health care system or having a regular source of care are important enabling characteristics for mental health care utilization (Small 2010). For homeless populations, who are generally less likely to have a regular source of medical care, it has been hypothesized that utilization of other services might provide opportunities for referral to other needed care services (Wenzel et al. 2001). The use of other services in the same geographic area that homeless men frequent may facilitate use of mental health care services.

##### *Social Network Features*

Aspects of social networks may be related to health service utilization (Gelberg et al. 2000), and prior research has found a relationship between social network features and substance abuse treatment utilization among homeless women (Nyamathi et al. 2000; Tucker et al. 2011). Specific features of social networks may be appropriately considered ‘enabling’ characteristics for health service utilization; for example, the existence of ‘prosocial’ influences in men’s personal networks, such as persons in positions of responsibility (e.g., case managers) and persons who provide assistance, may enable access to care through encouragement and modeling of socially normative behaviors. Prior research has found that homeless women were more likely to seek treatment for substance use disorder if they had intimates in their social network who provided them with advice and information (Tucker et al. 2011).

#### The Present Study

Utilizing the framework of the Gelberg–Andersen Behavioral Model for Vulnerable Populations, this study examines need, predisposing, and enabling factors likely to be associated with the utilization of mental health care among homeless men living in the Skid Row area of Los Angeles. High rates of mental illness and low rates of mental health service utilization indicate tremendous unmet need for services among homeless persons (Koegel et al. 1999; Stergiopoulos et al. 2010). We focused on service use in the Skid Row area, as approximately 9.5 % of Los Angeles’ homeless population can be found within these 50 square blocks (LAHSA 2011). Food, shelter, and services for this population are concentrated in this area. There are advantages to providing services in the areas that homeless people frequent; such services are expected to be the most

accessible and may have fewer barriers to utilization (Burt 2004).

We hypothesize that mental health treatment utilization will be related to need for care, but that predisposing and enabling features will also play a part in this relationship. We operationalize need in this study as positive responses to screening items for depression and posttraumatic stress disorder (PTSD). Depression is perhaps the most common psychiatric diagnosis among homeless persons (Toro and Janisse 2004). Koegel et al. (1999) found that among the major mental illnesses they assessed (i.e. depression, mania, schizophrenia) in a population of homeless men and women in Los Angeles, recent and lifetime depression was the most common. Additionally, because homeless persons experience trauma at higher rates than housed persons, PTSD symptoms have also been found to be prevalent (Kim and Ford 2006; LaGory et al. 2001; North and Smith 1992). We hypothesize that non-white homeless men, and men who use substances will have a decreased likelihood of recent mental health care utilization in the Skid Row area, controlling for PTSD and depression. We hypothesize that enabling features will also be associated with increased recent utilization of mental health care, including the use of other services in the Skid Row area, and having personal networks that include persons in positions of responsibility and persons who provide assistance to the study participant.

## Methods

Participants in this study were 305 homeless men randomly sampled and interviewed in 13 meal programs in the Skid Row area of Los Angeles for a study of HIV risk among heterosexually active homeless men (Wenzel 2009). Men were eligible if they were at least age 18, could complete an interview in English, and had experienced homelessness in the past 12 months (i.e., stayed at least one night in a place like a shelter, abandoned building, voucher hotel, vehicle, or outdoors because they didn't have a home to stay in). As this sample was collected as part of a study of heterosexual risk behavior, all participants reported having had vaginal or anal sex with a female partner in the past 6 months. Of the 338 men who screened eligible for the study, 320 men were interviewed (18 refusals). Of these 320, four cases had large amounts of missing data, seven were partial completes/break-offs, and four were later found to be repeaters. The final sample size was 305, for a completion rate of 91 % (305/334). For the data collection, computer-assisted personal interviews were conducted with the software EgoWeb (<http://egoweb.github.com>), open source software designed specifically for the collection, analysis, and visualization of personal network data. Men

were paid \$30 for participation in the interview, which lasted on average 83 min. The research protocol was approved by the institutional review boards of the University of Southern California and the RAND Corporation.

We implemented a sampling design that yielded a probability sample of heterosexually active homeless men from meal lines in the Skid Row area of Los Angeles. The list of operating meal lines in Skid Row was developed using existing directories of services for homeless individuals and performing interviews with services providers. Our final list contained 13 meal lines: 5 breakfasts, 4 lunches and 4 dinners offered by 5 different organizations. Each of the meal lines was extensively investigated to obtain an estimate of the average number of men served daily. This information was used to assign an overall quota of completed interviews to each site, approximately proportional to the size of the meal line. We then drew a probability sample of homeless men from the 13 distinct meal lines. When the assigned quota could not be achieved in a single visit, the quota was divided approximately equally across visits for each meal line. Interviewers randomly selected potential recruits for screening by their position in line using statistician-generated random number tables. Tables were generated such that the site-daily quota could be achieved before the meal line was exhausted. Once the field director selected a potential recruit, an interviewer would wait for him to finish his meal before screening him.

The adopted sample design deviates from a proportionate-to-size stratified random sample because of changes in sampling rates during the fielding period, differential response rates of men across meal lines and visits, and variability in how frequently men use meal lines. This last factor means that some men are more likely than others to be included in the sample. We accounted for the differential frequency of using meal lines by asking respondents how often they had breakfast, lunch and dinner at a meal line in the Skid Row area in the past 30 days, and how much of the past 6 months they had been homeless. This information was used to construct weights for correcting the potential bias due to differential inclusion probabilities (Elliott et al. 2006).

## Measures

### *Service Utilization*

To assess service use, men were asked “During the past 30 days, have you used the following services or assistance in the Skid Row area: (1) Drop-in or access center (where you can get some of the things that you need like clean clothes or a shower or different services), (2) Job training, (3) Alcohol or drug counseling, (4) Mental health

counseling, (5) Legal assistance, or (6) Medical or dental care,” with yes or no options available for each. Self-reported use of “mental health counseling” represented the outcome variable in this study (Tucker et al. 2011). Because the current analysis is part of a larger study that focused on the Skid Row area, the service utilization measures were also limited to service use in this area.

### *Predisposing Characteristics*

Demographic characteristics included in all models are age in years, race/ethnicity and education (having at least a high school education or GED). Substance use during the past 6 months was measured with four variables: binge drinking (defined as 5 or more drinks of alcohol within a 2 h period), any use of marijuana, any use of ‘hard drugs’ (defined as heroin, crack, cocaine, methamphetamine, or hallucinogens), and prescription drug misuse (defined as use of prescription medications “without a doctor’s prescription, in larger amounts than prescribed, or for a longer period than prescribed”). All substance use items are adapted from the Composite International Diagnostic Interview Short Form (Kessler et al. 1998) and NIAAA task force recommendations (National Institute on Alcohol Abuse and Alcoholism 2003) and have been previously vetted with a population of homeless women (Wenzel et al. 2009).

### *Enabling Characteristics*

In addition to utilization of services other than mental health care (as assessed by the service utilization question discussed above), enabling characteristics were defined as characteristics of respondents’ personal networks. Personal network characteristics were measured using established procedures (McCarty 2002; McCarty et al. 1997) that have also been employed in studies of homeless women (Tucker et al. 2009; Wenzel et al. 2009). We asked respondents to provide the first names of 20 individuals that they knew, who knew them, and that they had contact with sometime during the past six months. Network members (“alters”) had to be at least 18 years or older. Contact could be face-to-face, by phone, mail or through the internet. We constrained network size to be the same across respondents to maximize comparability of network structure measures (Mehra et al. 2001). Twenty alters has been shown to capture structural variability present in personal networks (McCarty and Killworth 2007); four men who were not able to name 20 alters were excluded from the sample to maintain comparability across cases.

For all non-relative alters, we asked how the respondent met these individuals (e.g., in shelters, drop-in centers, on the street, places of employment). If men indicated that

these individuals were service providers (the type was not specified, but this could include health care providers, social workers, case managers, counselors, etc.), teachers, bosses or supervisors, or probation officers, then they were coded as “persons in positions of responsibility.” Respondents were also asked which alters provided them with tangible or advice/informational support in the prior six months. From these questions, measures were created indicating having at least one alter in a position of responsibility and the number of alters who provide assistance (tangible or intangible) to the respondent. The latter was coded as a continuous proportion of the total network, but ‘alters in a position of responsibility’ had a disproportionate number of respondents with no alters meeting those criteria and was instead coded as a binary indicator.

### *Mental Health*

Past 12-month depressive disorder (Y/N) was measured using a 3-item screening instrument (Rost et al. 1993) that has been tested on community residents, medical patients and mental health patients, and that has demonstrated sensitivity between 83 and 94 % and specificity of 90 % in these samples (Kessler 1987). Items from this instrument were drawn from the Diagnostic Interview Schedule (Von Korff et al. 1987) and the CES-D (Radloff 1977). This screening instrument has been used in several recent studies with homeless persons (Rayburn et al. 2005; Tucker et al. 2009). PTSD was measured with the PC-PTSD Screen, a 4-item screener originally designed for use in primary care settings (Prins et al. 2003). In a sample of VA primary care clinic patients, the PC-PTSD had better overall quality, sensitivity, specificity, and efficiency than the more commonly used PTSD Symptoms Checklist (Blanchard et al. 1996). The four items reflect four underlying factors specific to PTSD: re-experiencing, numbing, avoidance, and hyper-arousal. Respondents in this study are defined as screening positive for current PTSD if they answer ‘yes’ to any three of four items. A cut point of 3 on the Primary Care PTSD Screen has been shown to maximize sensitivity and specificity of this measure in primary care patients (Calhoun et al. 2010). In a primary care setting, persons identified as having at least 3 of the 4 PTSD symptoms would then be administered a structured interview to formally diagnose PTSD (Prins et al. 2003).

### *Analysis*

Weighted logistic regression models were used to assess differences in all considered characteristics by symptoms of PTSD or depression, and to estimate the odds of utilizing

**Table 1** Descriptive statistics (weighted): mental health counseling, predisposing, enabling and need characteristics among heterosexually active homeless men, N = 305

Variables	Overall			By symptoms of PTSD or depression						
				Yes (N = 185)			No (N = 118)			
	%	Mean	SE	%	Mean	SE	%	Mean	SE	
Outcome										
Mental health counseling (past 30 days, Skid Row) <sup>b</sup>	26.30	–	–	36.75	–	–	11.74	–	–	
<i>Predisposing factors</i>										
Demographic characteristics										
Age	–	45.56	0.66	–	45.30	0.80	–	45.93	1.12	
Race/ethnicity										
African American	71.69	–	–	73.22	–	–	69.56	–	–	
White	11.52	–	–	8.13	–	–	16.25	–	–	
Hispanic	10.43	–	–	11.03	–	–	9.60	–	–	
Other or multiracial	6.35	–	–	7.61	–	–	4.59	–	–	
Education										
Less than high school	26.69	–	–	26.15	–	–	27.43	–	–	
High school or equivalent	73.31	–	–	73.85	–	–	72.57	–	–	
Substance use (past 6 mos)										
Binge drinking	41.31	–	–	42.68	–	–	31.70	–	–	
Marijuana	56.07	–	–	60.06	–	–	49.18	–	–	
Any hard drug use <sup>a</sup>	50.74	–	–	56.73	–	–	42.40	–	–	
Prescription drug misuse <sup>b</sup>	16.79	–	–	23.35	–	–	7.65	–	–	
<i>Enabling factors</i>										
Other service use (past 30 days, Skid Row)										
Emergency/transitional shelter	71.47	–	–	69.30	–	–	74.50	–	–	
Drop-in center	66.65	–	–	67.10	–	–	66.02	–	–	
Alcohol or drug counseling	22.60	–	–	23.42	–	–	21.46	–	–	
Medical/dental care <sup>a</sup>	34.55	–	–	40.50	–	–	26.27	–	–	
Social network features										
>1 alter in position of responsibility <sup>a</sup>	33.93	–	–	27.28	–	–	43.20	–	–	
Number of alters providing assistance	–	7.26	0.42	–	7.59	0.51	–	6.79	0.73	
<i>Need for mental health care</i>										
Neither depression nor PTSD	41.78	–	–	–	–	–	100.00	–	–	
Depression only	15.36	–	–	26.39	–	–	–	–	–	
PTSD only	11.85	–	–	20.36	–	–	–	–	–	
Both depression and PTSD	31.00	–	–	53.25	–	–	–	–	–	

<sup>a</sup> Difference between those with and without PTSD or depression statistically significant at  $p < 0.05$

<sup>b</sup>  $p < 0.01$

mental health care services on Skid Row in the prior 30 days (analyses conducted in STATA 9.2). For the multivariable model assessing mental health care utilization, we first examined the univariable association between each need, predisposing and enabling characteristic and mental health care utilization. Adapting a model-building technique suggested by Hosmer and Lemeshow (1989), each variable associated at  $p < 0.10$  with the outcome in univariable analyses was retained in the multivariable model. Individual demographic characteristics (age, race/

ethnicity and education) were retained in the multivariable model as control variables.

## Results

### Sample Characteristics

As shown in Table 1, most men self-identified as African American (71.69 %), followed by white (non-Hispanic,



11.52 %), Hispanic (10.43 %) and other or multiracial (6.35 %). Most respondents (73.31 %) had a high school diploma/GED. Binge drinking was reported by 41 % of respondents in the past 6 months, marijuana use by 56 %, hard drug use by 51 %, and prescription drug use by 17 %. More than one-third (33.93 %) of the men had at least one network alter who was in a position of responsibility, and on average, men had 7 total alters who provided assistance to them. Most men (71.47 %) had slept in an emergency of transitional shelter in the Skid Row area in the prior 30 days; nearly 23 % had utilized alcohol or drug counseling in the same time period, 66.65 % had visited a drop-in center, and 34.55 % had accessed medical or dental services.

Overall, 26.30 % of the sample had utilized mental health care services on Skid Row in the prior 30 days. A minority of men (41.78 %) reported neither PTSD nor depression, while 31 % reported both, 15.36 % reported depression only, and 11.85 % reported PTSD only. Mental health care utilization was higher among those who screened positive for either PTSD or depression, at 36.75 % (compared to 11.74 % among those without PTSD or depression); however, this suggests that 63.25 % of the homeless men in this study may have unmet need for mental health care. Men with and without PTSD or depression were similar on most characteristics, but men with these symptoms were significantly more likely to utilize medical/dental care, more likely to use hard drugs and misuse prescription medication, and less likely to have alters in positions of responsibility.

### Logistic Regression Results

The final multivariable model included all measures significantly associated at the univariable level with mental health care utilization and controlled for demographic factors. As shown in Table 2, screening positive for PTSD and depression was associated with increased likelihood of mental health care utilization, with those experiencing depression (OR 7.13, CI 2.73, 18.59), PTSD (OR 6.42, CI 2.31, 17.86), or both depression *and* PTSD (OR 3.75, CI 1.62–8.70) all more likely to have accessed mental health care on Skid Row in the past 30 days, when compared to those who screened negative for PTSD or depression. Race/ethnicity was associated with increased mental health care utilization as well, with African American men more likely than white men to have accessed mental health care in the prior 30 days (OR 6.56, CI 1.61, 26.67), although age and education were not. Other service use in the past 30 days on Skid Row was also associated with mental health service utilization; those who visited a drop-in center (OR 3.23, CI 1.45, 7.19) or accessed alcohol or drug counseling (OR 4.31, CI 2.11, 8.80) were more likely to

**Table 2** Multivariable binary logistic regression model assessing past 30 day mental health counseling among heterosexually active homeless men (weighted), N = 305

	Odds ratio (95 % CI)
<i>Predisposing factors</i>	
Age	0.99 (0.96–1.02)
Race/ethnicity (white is omitted)	
African American	6.56 (1.61–26.67) <sup>b</sup>
Hispanic	2.58 (0.52–12.89)
Other or multiracial	0.63 (0.05–7.89)
High school or more (vs. <HS)	0.81 (0.39–1.68)
Hard drug use	1.40 (0.68–2.88)
Prescription drug misuse	1.48 (0.59–3.69)
<i>Enabling factors</i>	
Other service use (past 30 days Skid Row)	
Drop-in center	3.23 (1.45–7.19) <sup>b</sup>
Alcohol or drug counseling	4.31 (2.11–8.80) <sup>b</sup>
Medical/dental care	1.02 (0.53–1.97)
<i>Need for mental health care (neither is omitted)</i>	
Depression only	7.13 (2.73–18.59) <sup>b</sup>
PTSD only	6.42 (2.31–17.86) <sup>b</sup>
Both depression and PTSD	3.75 (1.62–8.70) <sup>b</sup>

<sup>b</sup>  $p < 0.01$

also utilize mental health care, although this was not the case for accessing medical or dental care. Social network features did not meet the eligibility criterion for inclusion in the multivariable model, and substance use was not significantly associated with mental health treatment in the multivariable model. We conducted a sensitivity analysis in which we ran univariable and multivariable models for the sub-sample of men who reported symptoms of either PTSD or depression. This analysis showed that among men in need, African Americans, men who had recently used drop-in centers, and those who had accessed alcohol or drug counseling had significantly greater odds of recent mental health care utilization. This analysis confirmed the importance of measures that were found to be significant in the full sample.

### Discussion

Need for mental health care, identified as screening positive for PTSD or depression, was a significant correlate of utilizing mental health services in the past 30 days on Skid Row, and 37 % of men with need reported utilizing mental health care in the past month. This rate is higher than the past 60-day rate of mental health service utilization found

by Koegel et al. (1999). Though it is difficult to compare the two studies directly, as nearly 20 years elapsed between the two periods of data collection, it should be noted that the Koegel et al. study utilized diagnostic tools to assess for mental health disorders, rather than screeners, which may have higher false-positive rates [though both the screeners used here have demonstrated good reliability (Freedy et al. 2010; Kessler 1987)].

The relationship found here between mental health care need and service utilization suggests a promising level of equity in healthcare utilization for homeless men in this study. However, there are also high rates of unmet mental health care need in this population, with 63 % of those men who screened positive for symptoms of PTSD or depression not reporting any mental health service utilization in the past month. Particularly given the other vulnerabilities faced by these men which may be complicated by mental health disorder symptoms, addressing this unmet need for mental health treatment should be a high priority for service providers. Additionally, the association of predisposing and enabling characteristics with mental health care service utilization suggests that there remain areas for improvement within the mental health care system for homeless men in the Skid Row area.

Contrary to prior research in general populations (Koenen et al. 2003; Mojtabai and Olfson 2006; Wang et al. 2005; Zuvekas and Fleishman 2008), African American homeless men in this study were more likely than white men to have utilized mental health care in the Skid Row area in the prior 30 days. One possible explanation for greater service use among African American respondents is the over-diagnosis of schizophrenia (compared to other mood disorders) in this population (Barnes 2004; DeCoux Hampton 2007; Neighbors et al. 2003). However, previous research with homeless women found that white women reported more unmet need for health care than African American women (Teruya et al. 2010), suggesting that race-based disparities in populations of homeless persons may differ from those that have been identified in less vulnerable populations.

Researchers have hypothesized that race-based disparities in health care may be ‘neutralized’ by the experience of homelessness (Lewis et al. 2003). That is, by virtue of being homeless in the same economically depressed and hazardous communities, traditional race-based disparities may be equalized among homeless persons facing severe impoverishment. However, this study *did* identify racial/ethnic differences in mental health care utilization—just not in the direction hypothesized. One possible explanation for this finding may be racial/ethnic similarity between homeless men on Skid Row and providers of mental health care services. Race concordance between doctors and patients has been associated with increased satisfaction

with physician care (Cooper et al. 2003; Laveist and Nuru-Jeter 2002). Prior research suggests that race concordance between patients and providers may be particularly important for positive health outcomes among African-American patients. Studies have shown that the uptake of HIV testing in STD clinics is higher among African-American women being seen by African-American female providers (Ford et al. 2008), race concordance among African-American patients and providers was associated with adherence to cardiovascular disease medication (Traylor et al. 2010), and among African-Americans with HIV, having an African-American provider has been associated with earlier receipt of medication (King et al. 2004). Race concordance may help to explain increased utilization of mental health services among African-American homeless men in this study, as informal discussions with providers in the area suggested that the majority of employees at Skid Row organizations are African-American (personal communication, July 11–15, 2011). Despite these potential explanations, the increased likelihood of mental health service utilization among African-American men in this study contradicts much other research and deserves additional study.

Substance use itself was not associated with mental health care utilization, but recent access to alcohol or drug counseling was. It is a promising finding that homeless men in the Skid Row area are more likely to receive mental health care when they are also receiving substance abuse treatment, as prior research suggests that those being treated for substance abuse behavior should be screened for mental health problems and vice versa (Kavanagh and Connolly 2009; Lee et al. 2010). Recent utilization of a drop-in center in the Skid Row area was also associated with mental health care utilization; such an association suggests that usage of other services, even those which may seem unrelated to mental health care specifically, may serve as important enabling gateways through which homeless men come to utilize mental health services. Given that social network features were not significant correlates of mental health care utilization, it may not be necessary for a particular individual at a service site to be a principal or memorable individual within one’s social network. Rather, there may be a variety of other interactions and experiences within substance abuse treatment or drop-in service locations that can enhance the prospects that a homeless man would gain access to needed mental health services. Despite the fact that mental health care providers are in a “position of responsibility,” mental health service utilization was not associated with having alters in positions of responsibility. More research is needed to understand the social networks of homeless men experiencing mental health disorders, and the ways in which service provider relationships may be associated with service utilization.

There are several limitations to be noted in the present study. Although the screening item utilized in this study suggests that depression and PTSD are prevalent among the homeless men in this population and have been shown in other studies to be among the more common mental illnesses among homeless persons (Koegel et al. 1999; North and Smith 1992), restricting our focus to these two disorders limits our ability to examine the association between need for care and use of mental health care. Other disorders, such as schizophrenia, are also likely to be important correlates of mental health service utilization in this population. Recent service utilization for schizophrenia, however, may be more likely to consist of medication management rather than mental health counseling. We are also limited in our ability to address the full scope of predisposing and enabling factors from the Gelberg-Andersen Behavioral Model for Vulnerable Populations, and as such, there may be additional relevant characteristics that were excluded from these analyses. Another limitation arises from our ability to interview only English-speaking men, as previous research has found that mental health care utilization is lower among Spanish-speaking Latinos than English-speaking Latinos and Caucasians (Folsom et al. 2007). However, exclusion based on Spanish-language only ineligibility was low in this study, at only 6.6 %.

Further, two major limitations arise because we were only able to examine past 30 day utilization of mental health services in the Skid Row area. Some of the men in this study may have been receiving mental health counseling for depression and PTSD, but simply had not seen a provider in the past 30 days. A previous study of homeless persons in Los Angeles also employed a narrow service utilization window (60 days), however (Koegel et al. 1999). We purposely focused only on the Skid Row area and thus by design we omitted any services utilized by men outside of this area. Although official estimates are not available, the population of homeless persons in Skid Row is deemed to be fairly stable due to the greater concentration of subsistence and other services for homeless persons in that area relative to other areas of Los Angeles. Understanding and addressing any barriers to accessing local services may therefore be particularly helpful for these men, and rates of service use among the men in our study may be greater in Skid Row than in other areas. Mental health services in the Skid Row area include short-term crisis resolution programs which deliver psychiatric services, medication and psychotherapy, a client-run wellness center that provides medication management and peer support groups, and general mental health services (individual, group and family therapy, case management, etc.), both on-site at service agencies and in single-room occupancy hotels (County of Los Angeles Department of

Mental Health 2011). Another limitation is that we do not know whether mental health services are sufficiently differentiated from substance abuse treatment or other services. Other services may be co-located with mental health services, which may help to explain the relationship found here between mental health service utilization and the use of drop-ins, substance abuse treatment, and medical/dental care. Further research is needed to understand the overlap between mental health service utilization and the use of other services among homeless men in the Skid Row area.

Because these data are cross-sectional, we cannot make causal inferences about the directionality of the observed relationships. Additionally, this population was part of a study of heterosexually active homeless men. While only 2.0 % of screened men were ineligible due to reporting only non-heterosexual sex, these findings may not be generalizable to exclusively non-heterosexual populations of men or to men who are not heterosexually active. Finally, our interviews screened for symptoms of PTSD and depression, but individuals may not be aware of their need for treatment; this may pose an unmeasured barrier to treatment utilization, as self-identification of mental health need has been associated with treatment among homeless persons (Koegel et al. 1999).

This study has identified important, and some unexpected, correlates of local mental health care utilization in this population. Although need for mental health services is prominent in understanding access, thus suggesting equity, the predisposing factor of race nevertheless also plays an important role in that African American homeless men are more likely to use services. While this finding is in many ways a refreshing counterpoint to the more typical legacy of race-based disparity that continues to affect health care access and quality in the United States (Simpson et al. 2007; Stockdale et al. 2008), further research is critical to understand how improved access to care can be had for all African Americans while also ensuring that all who need mental health care gain access to such care.

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