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Predictors of Substance Abuse Treatment Need and Receipt Among Homeless Women

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Abstract

Many homeless women do not receive needed treatment for substance abuse. This study identified social network and other predisposing factors associated with perceived need for and receipt of substance abuse treatment among 273 homeless women who screened positive for past year substance abuse. Perceived treatment need was more likely among women with drug-using sex partners, a denser network, and an arrest history, but less likely for those with a minor child and longer history of homelessness. Receiving treatment was more likely among women who received informational support from their sex partners and who had an arrest history, but less likely among those who had a more street-based social network, had a minor child, considered themselves homeless, and recently needed mental health treatment. Treatment services researchers should attend more closely to social contextual factors, as well as the more traditional individual factors, to understand access and barriers to treatment.

Keywords

homeless; women; substance abuse; treatment; social network

1. Introduction

1.1 Scope of Unmet Need for Substance Abuse Treatment

The considerable unmet need for substance abuse treatment among homeless women is well-documented. Rates of substance use disorders range from 30–55% across studies (Forney et al., 2007; Kilbourne et al., 2002; Koegel et al., 1999; Smith et al., 1993) and are considerably higher than among low-income housed women (Wenzel et al., 2004). Yet many homeless women with substance abuse problems do not get treatment. For example, a study conducted in Los Angeles found that only 17% of homeless women with a substance use disorder in the past 6 months had received residential or outpatient treatment during the past 60 days (Koegel et al., 1999). Another study of homeless women and men in Houston reported that 28% of those with a probable substance use disorder accessed inpatient or residential treatment during the past year (Wenzel et al., 2001). Understanding and addressing barriers to treatment in this population is important given that untreated substance abuse may add to already compromised health functioning among homeless women and increase their risk for major health problems (Cheung and Hwang, 2004; Martens, 2001).

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1.2 Barriers to Substance Abuse Treatment

The barriers that homeless adults face in accessing health care in general include financial challenges such as lack of insurance or cost of care (Cousineau, 1997; Kushel et al., 2001; Robertson and Cousineau, 1986), not knowing where to go for a service, experiencing confusion, hassle or waiting to obtain care, and transportation issues (Gelberg et al., 2004; Lewis et al., 2003; Rosenheck and Lam, 1997; Wojtusik and White, 1998). The literature on barriers to substance abuse treatment in particular is more limited, but indicates that utilization is adversely affected by not having public health insurance or a prior history of treatment for substance problems (Wenzel et al., 2001), as well as competing priorities such as finding food and shelter (Gelberg et al., 2004; Gelberg et al., 1997). There are also unique issues affecting substance abuse treatment utilization for women (Lim et al., 2002), although this literature has not necessarily focused specifically on those who are homeless. For example, childcare responsibilities can pose a barrier to treatment for women (Kertesz et al., 2006; Tam et al., 2008). Women may also be more inclined than men to seek help for substance abuse problems in non-specialized service settings such as mental health care settings (Weisner and Schmidt, 1992), perhaps because women are less likely to view substance use as their main problem or have greater concern about stigmatization (Thom, 1986). These barriers to substance abuse treatment are likely relevant for homeless women as well.

1.3 The Potential Role of Social Contextual Factors

Participation in substance abuse treatment cannot be fully explained by the types of factors just discussed, raising the possibility that social contextual factors may play an important role (Sosin and Grossman, 2003; Wenzel et al., 1996). Indeed, the Gelberg-Andersen health services utilization model for vulnerable populations (Gelberg et al., 2000) includes social networks as a predisposing factor for medical care use. However, the potential influence of social networks in facilitating or hindering access to substance abuse treatment services for homeless adults has received very little empirical attention. Two studies have indicated that substance-using homeless adults who socialize or live with other substance users tend to have lower motivation to quit substance use (Nyamathi et al., 2004) and lower treatment utilization (Kertesz et al., 2006). Another study examined the role of social support, finding that homeless women who lack support are less likely to access treatment compared to those who receive social support from nonusers (Nyamathi et al., 2000). A fourth study reported that substance abuse treatment is less likely for homeless adults who are living with a partner (Wenzel et al., 2001), although this study did not explore the reasons why. Perhaps it is because these live-in partners are themselves often struggling with addiction problems (El-Bassel et al., 2001). We are not aware of any studies examining the potential influence of network structure in the decision to access medical care, although network density may be relevant if greater interconnectedness within one's network results in a stronger social safety net for the individual. Clearly, there is much to learn about how the composition and structure of social networks may influence an individual's perceived treatment needs and access to services.

1.4 Goals of the Present Study

The first aim of this study was to extend previous work on homeless women's access to health services by examining whether the composition and structure of women's social networks predict their perceived need for and receipt of substance abuse treatment. We hypothesized that both perceived need and receipt of treatment would be less likely among homeless women with social networks that were less dense, more street-based, and contained a higher proportion of substance users. Conversely, we expected that perceived need and receipt of treatment would be more likely among women with a higher proportion of network members who provided them with advice or information to help them solve their

problems. In testing these hypotheses, we assessed network substance use and network support separately for relatives, sex partners, and others to examine whether certain types of relationships may be particularly influential. The second aim of this study was to examined these social network characteristics within the larger context of other predisposing factors that the Gelberg-Andersen health utilization model (Gelberg et al., 2000) has identified as potentially important: demographic characteristics, homelessness severity, criminal justice system involvement, and psychological distress. We hypothesized that perceived need and receipt of treatment would be less likely among women with minor children (but generally unrelated to other demographic factors) and those with greater homelessness severity. Receiving treatment was hypothesized to be less likely among women who had a recent mental health problem (given that both untreated mental health problems and entering the mental health treatment system may make it less likely that women access substance abuse treatment specifically), but more likely among women who had ever been arrested due to criminal justice treatment referrals to substance abuse treatment.

2. Materials and Methods

2.1 Participants

Women were recruited between June 2007 and March 2008 for a study examining the social context of alcohol use and HIV risk among women living in temporary shelter settings. Women were eligible if they were at least age 18 and had sexual intercourse with a male in the past 6 months. Individual computer-assisted face-to-face structured interviews, which lasted an average of 75 minutes, were conducted with 445 women by trained female interviewers. Women were paid $20 for their participation. The analytic sample for this study is restricted to 273 women who screened positive for past year drug abuse (i.e., a score of 3 or higher on the 10-item Drug Abuse Screening Test; Skinner, 1982) or past year alcohol abuse (i.e., a score of 8 or higher on the AUDIT; Babor et al., 2001; Saunders et al., 1993). See Table 1 for characteristics of the full and analytic samples. The study was approved by RAND's Institutional Review Board.

2.2 Study Design and Procedures

The study area was the central region of Los Angeles County, California. Women were sampled from a diverse array of temporary shelter settings in the area that served a majority of homeless residents (persons who would otherwise live in the streets or who sleep in shelters and have no place of their own to stay). We excluded facilities serving only minors or only men, domestic violence shelters, SRO and board-and-care hotels, facilities whose population was not majority homeless and whose average resident length of stay was more than one year. Women were drawn from 52 eligible facilities and selected by means of a stratified random sample, with shelters serving as sampling strata. A strict proportionate-to-size (PPS) stratified random sample would have been overly burdensome on the larger facilities. Thus, small departures were made from PPS and corrected with sampling weights. Although women were not initially screened for homelessness on an individual basis, 73% of them indicated that they currently did not have a regular place to stay and 90% indicated that they had previously stayed in a literal homeless setting because they had no regular place to stay.

We used established procedures for conducting personal network interviews (McCarty, 2002; McCarty et al., 1997). First, we asked respondents to provide first names of 20 adults with whom they had contact sometime during the past year – either face-to-face, by phone, mail or e-mail (these network members are heretofore referred to as "alters"). Eliciting twenty alters has been shown to capture structural and compositional variability present in personal networks (McCarty et al., 2007). We used a general name generator (i.e., name

anyone) rather than a specific name generator (e.g., name family) to identify a greater diversity of network members. We constrained network size to be the same across respondents to maximize comparability of network structural measures across respondents (Mehra et al., 2001). Second, we asked a series of questions about each of the named alters, including their perceived drug and alcohol use, where the respondent met them (if not a relative), and whether they provided support to the respondent. Third, for each unique pair of network alters we asked how often they had contact with each other during the past year.

To reduce respondent burden, most of the questions asked in the second step were asked of 12 alters selected via a stratified probability sample from the 20 named alters. Questions in the third step were asked only for the 12 sampled alters (McCarty et al., 2007). A Monte Carlo simulation analysis conducted during a formative stage of this study supported that this reduction could be made without strongly biasing measures of network structure (Golinelli et al., in press). The alters were stratified into sex partners and non-sex partners, with sex partners sampled at a higher probability. We stratified by sex partners to accommodate additional goals of the project, which included obtaining an understanding of sexual risk behaviors among homeless women. Measures computed on the 12 out of 20 selected alters were weighted to account for differential sampling probabilities and thus to correct for potential bias.

2.3 Predictor Variables

Network composition: Risk and support—Network risk was assessed by asking respondents how likely it was that each alter: a) drank to the point of being high, drunk or buzzed; and b) used drugs like pot, crack or something else (1 = *unlikely*; 2 = *somewhat likely*; 3 = *very likely*). We calculated the percentage of relatives, sex partners, and others who were perceived to be “somewhat likely” or “very likely” to have engaged in each behavior. Respondents also identified where they had met each non-relative alter and we calculated the percentage of named alters whom the respondent had met on the streets. For network support we focused specifically on the provision of informational support. Respondents rated how often each alter gave them advice or information to help them solve a problem during the past 6 months (1 = *never* to 4 = *often*) (Sherbourne and Stewart, 1991). Three indicators of support were derived by calculating the mean level of support provided by relatives, sex partners and others.

Network structure: Density—Density is the degree of connection (ties) among alters in the network. It is an index varying between 0 and 1 that represents the proportion of ties in a network relative to the total number of possible ties.

Demographic characteristics—These variables included age, race/ethnicity (recoded as African American, Hispanic, or White/Other), education (high school graduate vs. not high school graduate), employment situation during most of the past 6 months (part- or full-time vs. unemployed), income during the past 30 days, marital status (married vs. unmarried), and currently living with minor child(ren) (yes, no).

Homelessness severity—Perceived homelessness was assessed by asking women whether they currently had a regular place to stay, like their own house, apartment or room, or the home of a family member or friend. Length of homelessness was assessed by presenting women with various types of homeless settings and asking the total length of time they had spent in these settings during the past 6 months. Responses were converted to the total number of months.

Incarceration history—Women indicated whether they had ever been arrested and booked. Those with an arrest history were asked how many nights, if any, they had spent in jail or prison during the past 6 months (women without an arrest history received a score of zero).

Mental health—We used a three-item screener for a past year diagnosis of depression (Rost et al., 1993). In addition, women were asked whether they thought that they needed treatment or counseling for mental health problems (not counting alcohol or drug use) during the past 6 months.

2.4 Outcome Variables

The two dichotomous outcome variables for these analyses were whether the respondent thought that she needed treatment or counseling for her alcohol or drug use during the past 6 months, and whether she had received treatment or counseling during the past 6 months for her use of alcohol or any other drug. For the latter, we asked women to not consider self-help groups (e.g., Alcoholics Anonymous, Narcotics Anonymous) or treatment for cigarette smoking.

2.5 Data Analyses

The small departures we made from a strict proportionate-to-size random sampling technique and differential nonresponse rates required the use of design and nonresponse weights to represent the target population from the sample of respondents. All analyses incorporate these weights and account for the modest design effect that they induce, using the linearization method (Skinner, 1989). There is a small amount of missing data for some variables (generally <3%) which was accounted for largely by mean value imputation. For the main analyses, we first examined the bivariate associations of each predictor variable with the two outcomes of interest. Those predictor variables that were associated with a particular outcome at $p < .10$ were included in the multivariate model (Hosmer & Lemeshow, 1989).

3. Results

Within our analytic sample, 46% of women screened positive for drug abuse only, 12% screened positive for alcohol abuse only, and 42% screened positive for both problems. Perceived need for treatment and receipt of treatment were strongly related ($\chi^2 = 87.93$, $p < .001$); 16% of women who did not perceive a need for treatment reported receiving it, whereas 20% of women who perceived a need for treatment reported not receiving it. In total, 76% of women reported needing substance abuse treatment or counseling and 65% reported receiving such treatment or counseling during the past 6 months.

The first two columns of Table 2 show results from logistic regression models predicting whether homeless women who screened positive for a substance abuse problem perceived that they needed treatment during the past 6 months. Bivariate analyses indicated that perceiving a need for treatment was more likely among women with more drug-using sex partners, more relatives who drank heavily and used drugs, a denser social network, and an arrest history. However, perceived need for treatment was less likely for women who had a more street-based network (i.e., met more of their network members on the streets), lived with a minor child, perceived themselves as homeless, and had a longer history of homelessness during the past 6 months. A multivariate model that included each of these nine predictors indicated that perceiving a need for treatment was more likely among women with drug-using sex partners, a denser social network, and an arrest history, but less likely for those with a cohabitating minor child and a longer history of homelessness.

The final two columns of Table 2 show results from logistic regression models predicting whether homeless women with a recent substance abuse problem had received treatment during the past 6 months. Bivariate analyses indicated that women were more likely to receive treatment if they reported receiving greater informational support from their relatives and sex partners, as well as if they had a denser personal network, but were less likely to receive treatment if they had a more street-based social network. Women were also less likely to receive treatment if they were older, were African American (vs. non-Hispanic white), were living with a minor child, perceived themselves to be homeless, spent more time homeless in the past 6 months, had never been arrested, and needed mental health treatment in the past 6 months. A multivariate model that included all eleven of these variables indicated that receiving treatment was more likely among women who received informational support from their sex partners and who had an arrest history, but less likely among those with a more street-based social network, who lived with a minor child, who considered themselves homeless, and who needed mental health treatment. Women were less likely to receive substance abuse treatment if they were living with a minor child, perceived themselves as homeless, had never been arrested, needed mental health treatment in the past 6 months, had met more network members on the street, and did not receive support from their sex partners.

4. Discussion

This study found rates of substance abuse treatment that were considerably higher than those reported in other studies of homeless adults, which may be due to factors such as our longer reporting time frame (compared to Koegel et al., 1999) or inclusion of a wider range of treatment options (compared to Wenzel et al., 2001). It may also be due to our sample being comprised exclusively of women living in shelters, who may have more access to services or be more inclined to seek services compared to women living on the streets. Given that most women who screened positive for past year drug or alcohol abuse in this study reported receiving substance abuse treatment during the past 6 months, what factors differentiated these women from the third of the sample who did not access treatment services? Our results suggest that the social context in which these women live may play an important role both in terms of whether they perceive a need for treatment and whether they receive the treatment that they need.

Given that drug and alcohol use by network members predicts women's own use of these substances (Wenzel et al., 2009), one might expect that these behaviors by network members may be relevant to women's perceived need for treatment and access to treatment. However, similar to previous research on injection drug users (Lloyd et al., 2005), we found little evidence that this was the case after adjusting for other predisposing factors. More relevant to treatment engagement was the extent to which women were enmeshed in a street culture: those who met a higher proportion of their network on the street were less likely to have recently received treatment. Having a street-based network may be indicative of disaffiliation – the lack of supportive ties that some have suggested play a key role in preventing homeless adults from obtaining needed treatment (Zerger, 2002). In a similar vein, low network density for a substance-abusing woman may indicate that she is compartmentalizing her network by keeping the people with whom she drinks or uses drugs away from other members of her network. If this is the case, then the network members who might be in the best position to encourage her to seek treatment may not be fully aware of the extent of her substance abuse problems, or there may be less opportunity for a coordinated effort among these members to encourage her to seek treatment. Together, these results suggest that providing opportunities for homeless women to disengage from the street culture and form a stronger, more cohesive social support system (including with

individuals who are currently in drug treatment; Davey et al., 2007) may facilitate women's treatment entry and increase the likelihood of eventual cessation of use (Latkin et al., 1999).

Our results also suggest that sex partners play a unique role among the members of homeless women's social networks in influencing their perceived need and receipt of treatment, but the nature of their influence is complex. Often the sex partners of homeless women are heavy alcohol and/or drug users (Tucker et al., 2006) and this was true for half of the sex partners identified by the substance-using women in this study. Having a higher proportion of substance-using sex partners increased the likelihood that women perceived a need for treatment. However, sex partners were not necessarily a barrier to accessing treatment for homeless women, as prior research has suggested (Wenzel et al., 2001). Rather, women were more likely to seek treatment if they had partners who provided them with advice and information. The challenge for substance-abusing women in recovery is that these support providers sometimes also enable women's substance use (Falkin and Strauss, 2003), so it may be necessary to engage these partners in the treatment process to maximize women's treatment outcomes (Powers et al., 2008). It may be worthwhile for future research to evaluate the efficacy of behavioral couple therapy for homeless women and their partners.

In terms of individual characteristics, our results confirm previous studies showing that demographic characteristics are generally unrelated to accessing treatment. The exception involved living with minor children, which posed a significant barrier to receiving substance abuse treatment in this and other studies (Kertesz et al., 2006; Tam et al., 2008). Although the percentage of treatment facilities providing childcare services has increased over the years, such facilities are still in the minority (Grella and Greenwell, 2004). Perceived treatment need and treatment receipt were less likely among women with a more severe history of homelessness, but more likely among women who had been arrested. The latter finding is perhaps not surprising given that the criminal justice system is increasingly a conduit into substance abuse treatment for women (Grella, 2009). In terms of mental health, perceived need for mental health treatment in the past 6 months was negatively associated with receiving substance abuse treatment during this same period. It may be that this variable is a proxy for existing mental health problems, which may pose a barrier to accessing substance abuse treatment. This seems unlikely, however, given that probable depression was not a barrier to accessing treatment. Rather, it may be the case that homeless women access mental health treatment for their substance abuse-related problems, as previous research has suggested (Weisner and Schmidt, 1992), or that the lack of integration of mental health and substance abuse services makes it difficult for homeless women to access both types of treatment simultaneously.

Strengths of this study include a rigorous sampling design, relatively large sample, examination of both treatment need and receipt of treatment, and focus on a range of social network characteristics and other predisposing factors. However, our exclusive focus on sheltered women in Los Angeles County may limit the generalizability of our results to homeless women in other types of living arrangements or geographic areas. Focusing on sexually active women in this study may further limit the generalizability of the results. It may be the case, for instance, that a woman's decision to seek treatment is more heavily influenced by her relatives and platonic friends if she does not have a sex partners who is giving her advice. In addition, we did not collect information on enabling factors associated with health services utilization such as barriers to health care, health insurance and regular source of care. Thus, it is possible that some of our results might have changed if these enabling factors had been included in our models. Finally, the information we collected on substance abuse and substance abuse treatment receipt has several notable limitations. We used screeners rather than more comprehensive diagnostic instruments to determine past year substance abuse, and the measure of treatment receipt did not allow for an examination

of similarities and differences in the predictors of distinct types of treatment. We also relied solely on women's self-reports; although there is some evidence for the reliability and validity of self-reports of substance abuse treatment services (e.g., Cacciola et al., 2008), obtaining corroborating evidence would have strengthened this study.

There is growing evidence that addressing the problem of drug and alcohol abuse among sheltered homeless women requires a focus on the social context of their lives. Not only is the composition of homeless women's social networks related to their own substance use (Wenzel et al., 2009), but it appears to influence their perceived need for substance abuse treatment and whether they access treatment services. Results suggest that helping these women strengthen their ties with non-street-based peers, and involving supportive partners in the recovery process, are two approaches that may help facilitate access to substance abuse treatment in this population. Further research is needed, however, to understand the extent to which these findings generalize to homeless women who are living on the street, as well as how they may translate into network-based interventions to facilitate treatment access in this population.

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Table 1

Descriptive Statistics for Main Study Variables: Full Sample and Analytic Sample of Homeless Women [a]

Variable	Full Sample (*N* = 445)	Analytic Sample (*N* = 273)
Demographic Characteristics		
Age (mean, SD)	36.56 (12.13)	35.94 (11.20)
Black (%)	40.17	33.54
Hispanic (%)	22.77	24.08
Non-Hispanic white (%)	25.86	32.22
Asian (%)	1.38	0.73
Other (%)	9.82	9.42
High school graduate (%)	66.85	60.51
Employed, past 6 months (%)	25.84	19.64
Income, past month (mean, SD)	571.94 (751.72)	450.35 (795.09)
Living with any children under age 18 (%)	30.93	19.25
Currently married (%)	15.38	10.73
Homelessness severity		
Currently perceives self as homeless (%)	73.15	67.24
Months spent homeless, past 6 months (mean, SD)	3.73 (2.43)	2.98 (2.55)
Legal History		
Ever arrested (%)	65.75	80.36
Nights spent in jail, past 6 months (mean, SD)	8.41 (26.99)	11.54 (30.93)
Mental Health		
Past year diagnosis of depression (%)	55.33	60.52
Needed mental health treatment, past 6 months (%)	60.50	63.68
Network Risk		
Percent alters met on the street (mean, SD)	3.39 (10.30)	4.31 (12.64)
Percent relatives drink heavily (mean, SD)	24.86 (32.42)	27.71 (34.72)
Percent sex partners drink heavily (mean, SD)	39.69 (42.92)	46.98 (41.55)
Percent others drink heavily (mean, SD)	32.62 (30.29)	37.08 (29.80)
Percent relatives use drugs (mean, SD)	17.10 (28.65)	22.03 (32.61)
Percent sex partners use drugs (mean, SD)	38.66 (42.68)	49.66 (42.19)
Percent others use drugs (mean, SD)	29.67 (33.90)	39.05 (34.86)
Network Support		
Informational support from relatives (mean, SD)	1.99 (1.35)	2.11 (1.35)
Informational support from sex partners (mean, SD)	2.39 (1.36)	2.44 (1.18)
Informational support from others (mean, SD)	2.13 (0.88)	2.14 (0.81)
Network Structure		
Overall density (mean, SD)	0.30 (0.21)	0.30 (0.19)
Substance Abuse Treatment		
Perceived need for treatment, past 6 months (%)	52.75	76.47
Receipt of treatment, past 6 months (%)	43.90	64.85

[a]The analytic sample includes women who screened positive for drug or alcohol abuse in the past year, based on DAST-10 and AUDIT scores, respectively.

Table 2

Logistic Regression Analyses Predicting Substance Use Treatment Need and Receipt Among Homeless Women (N = 273)

	Perceived Need for Treatment				Received Treatment			
	Bivariate		Multivariate		Bivariate		Multivariate	
Variable	OR	(95% CI)	OR	(95% CI)	OR	(95% CI)	(OR)	(95% CI)
Demographic Characteristics								
Age	0.98	(0.95, 1.01)			0.99	(0.94, 0.99)*	0.97	(0.94, 1.01)
Black (vs. other)	0.67	(0.33, 1.37)			0.53	(0.29, 0.99)*	0.69	(0.33, 1.45)
Hispanic (vs. other)	1.02	(0.47, 2.21)			1.50	(0.75, 3.03)	1.42	(0.61, 3.31)
High school graduate	1.27	(0.68, 2.37)			1.21	(0.70, 2.09)		
Employed, past 6 months	0.83	(0.39, 1.77)			0.99	(0.50, 1.99)		
Income, past 30 days	1.00	(1.00, 1.00)			1.00	(1.00, 1.00)		
Living with minor child(ren)	0.36	(0.18, 0.99)**	0.32	(0.15, 0.71)**	0.40	(0.22, 0.76)**	0.39	(0.18, 0.83)*
Currently married	0.46	(0.19, 1.14)	0.85	(0.26, 2.81)	0.56	(0.25, 1.30)		
Homelessness severity								
Perceives self as homeless	0.38	(0.19, 0.78)**	0.71	(0.28, 1.84)	0.20	(0.10, 0.40)***	0.34	(0.14, 0.82)*
Months homeless, past 6 months	0.84	(0.74, 0.95)**	0.85	(0.73, 0.99)*	0.81	(0.72, 0.90)***	0.89	(0.76, 1.03)
Legal History								
Ever arrested	2.49	(1.23, 5.03)*	2.70	(1.23, 5.94)*	3.16	(1.64, 6.08)***	4.07	(1.75, 9.47)**
Nights spent in jail, past 6 months	1.00	(0.99, 1.01)			1.01	(1.00, 1.03)		
Mental Health (MH)								
Probable depression, past 12 months	0.92	(0.49, 1.73)			0.78	(0.45, 1.37)		
Needed MH treatment, past 6 months	1.06	(0.56, 2.01)			0.42	(0.22, 0.78)**	0.41	(0.20, 0.85)*
Network Risk								
Alters met on the street	0.97	(0.94, 1.00)*	0.98	(0.95, 1.01)	0.96	(0.93, 0.98)**	0.96	(0.94, 0.99)**
Relatives who drink heavily	1.01	(1.00, 1.03)**	1.01	(1.00, 1.03)	1.00	(1.00, 1.01)		
Partners who drink heavily	1.00	(0.99, 1.01)			1.00	(0.99, 1.01)		
Others who drink heavily	1.01	(1.00, 1.02)			1.01	(1.00, 1.02)		
Relatives who use drugs	1.01	(1.00, 1.02)*	1.00	(0.99, 1.02)	1.00	(0.99, 1.01)		
Partners who use drugs	1.01	(1.01, 1.02)**	1.01	(1.00, 1.02)*	1.01	(1.00, 1.01)		

	Perceived Need for Treatment				Received Treatment			
	Bivariate		Multivariate		Bivariate		Multivariate	
Variable	**OR**	**(95% CI)**	**OR**	**(95% CI)**	**OR**	**(95% CI)**	**(OR)**	**(95% CI)**
Others who use drugs	1.01	(1.00, 1.02)	1.00	(0.99, 1.02)	1.01	(1.00, 1.02)		
Network Support								
Support from relatives	1.24	(0.96, 1.60)			1.39	(1.11, 1.74)**	1.10	(0.85, 1.43)
Support from partners	1.12	(0.82, 1.51)			1.33	(1.04, 1.70)*	1.45	(1.10, 1.92)**
Support from others	1.33	(0.92, 1.91)			1.24	(0.88, 1.74)		
Network Structure								
Overall density	14.86	(1.87, 118.01)*	14.80	(1.84, 119.15)*	9.16	(1.50, 56.02)*	4.54	(0.63, 32.73)

* $p < .05$.

** $p < .01$.

*** $p < .001$.