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Predictors of Substance Use Severity among Homeless Youth

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Abstract

Problem—This cross-sectional study identified a number of factors that were correlated with drug-use severity among homeless youth.

Method—To examine a commonly-used measure of substance-use severity, the TCU Drug Screen II, in a convenience sample of 156 homeless youth, ages 15–25 from a drop-in site in Santa Monica, California.

Findings—Higher drug-use severity scores were independently related to low levels of perceived health and maladaptive coping strategies.

Conclusions—The findings from this study are particularly relevant in that they support previous results showing that psychosocial variables are related to substance use behavior among young populations.

Keywords

Substance use; homeless youth; predictors

The transition to adulthood is, in general, a difficult phase—one riddled with physical, mental, and social changes (Park, Kim, Kim & Sung, 2007; Votta & Manion, 2004). Among homeless youth, this transition is made more difficult due to circumstances of poverty, lack of support, exposure to violence and crime, and resulting mental health issues. For many, substance use is perceived as “self medication” as a support to deal with mental illness, as a social connection to peers and as a coping strategy when living on the streets (Christiani, Hudson, Nyamathi, Mutere, & Sweat, 2008). Compared to their non-homeless counterparts, homeless youth use substances earlier and with greater frequency (Barczyk & Thompson, 2008; Meade, Slesnick & Tonigan, 2001; Nyamathi et al., 2007; Park et al., 2007). While knowledge about correlates of heightened substance use is crucial for understanding homeless youth’s substance use and associated risk behaviors for HIV (Human Immunodeficiency Virus) and hepatitis B (HBV) and C (HCV) virus, the literature contains little information about such correlates among homeless youth. The purpose of this study is to assess correlates of substance use among homeless youth. Understanding these factors can lead to the development of targeted intervention programs that assist youth in areas that facilitate or discourage ongoing substance use.

Although the literature on correlates of substance use among homeless youth is limited, sociodemographic information, peer and family influence, and childhood abuse have been identified as predictors of substance use among the general youth population (Martijn & Sharpe, 2006; Rew, Taylor-Seehafer, & Fitzgerald, 2001). Immutable factors, like race and

gender, can forecast the frequency of substance use. For example, findings on ethnic and racial group differences in substance use among youth have been fairly consistent since the 1970s (Galanter, 2005). Native American youth reportedly have the highest use of alcohol (Galanter, 2005), followed by the Caucasian majority (Adams & Berzonsky, 2005; Miller & Carroll, 2006; Thompson, Kost & Pollio, 2003; Tyler & Torres-Stone, 2003). Hispanic youth consume alcohol the next most frequently, followed by African Americans (Adams & Berzonsky, 2005; Galanter, 2005; Tyler & Torres-Stone, 2003); Asian American youth have the lowest rate of alcohol use (Adams & Berzonsky, 2005; Miller & Carroll, 2006). Furthermore, African Americans have the highest rates of illicit substance use (Miller & Carroll, 2006). While racial/ethnic differentiation can sometimes predict future substance use among housed youth (Adams & Berzonsky, 2005; Miller & Carroll, 2006), few studies elaborate on whether such differences are found when comparing various ethnic groups of homeless youth (Rew et al., 2001). In terms of gender, regardless of race or other determinants, males are more likely than females to use alcohol and other drugs (Adams & Berzonsky, 2005; Galea, Nandi, & Vlahov, 2004; Park et al., 2007).

Peer substance use and peer pressure often increase a youth's substance use (Kim, Zane & Hong, 2002; von Sydow, Lieb, Pfister, Hofler & Wittchen, 2002). Prevalent drug and alcohol use within the youth's social network strongly predicts self-reported substance use (Bousman et al., 2005; Galanter, 2005; Shaw, 2002). In fact, in a study of more than 2,000 high school students, social network characteristics were more responsible for explaining youth's alcohol use than familial situations (Galea et al., 2004). At the opposite end of the social spectrum, youth without any social network also report heavy illicit substance use (Galanter, 2005), as substance use can serve as a coping mechanism for issues related to loneliness and resulting depression (Torres & Gore-Felton, 2007).

Abuse within the family plays a significant role in predicting drug and alcohol use among youth. Families where relationships between parents and children are poor, where there is a sudden disruption in structure, or where other adverse conditions are present, often produce children with excessive alcohol and substance use (Adams & Berzonsky, 2005; Galea et al., 2004). Childhood abuse is one of the most serious risk factors for substance-using youth (Galanter, 2005; Park et al., 2007; Slesnick, Bartle-Haring, & Rashmi, 2006). In a recent study, the physical abuse rate of substance-using youth was six to 12 times higher than that of non-substance users (Park et al., 2007). Additionally, youth with alcohol abuse or dependence were 18–21 times more likely to have a history of sexual abuse than their counterparts without these alcohol problems (Park et al., 2007), underscoring the important link between victimization and substance use.

Among homeless males, when these gender-dictated obligations of being self-sufficient and employed are not met, their self-esteem is lowered (LaGory et al., 2001), frequently leading to risky behaviors (Christiani et al., 2008). In addition, social networks and peers also play a large role in determining a homeless youth's drug and alcohol use (Adams & Berzonsky, 2005; Galea et al., 2004; Shaw, 2002).

Criminal involvement and academic failure have also been cited as predictors of homeless youth's substance use (Barczyk & Thompson, 2008). However, the literature is inconsistent since schooling and the education domain have also been found to have only an indirect linkage to substance use (Kim et al., 2002). Such findings point to pain, trauma, and an inability to cope as predictors of drug and alcohol use (Slesnick, 2004). The difficult situations inherent in a homeless existence, including exposure to crime, victimization, a fluctuating family life, and impaired social networking, can have a great effect on a youth's drug and alcohol use (Slesnick, 2004).

Methods

This cross-sectional study used baseline data from a larger longitudinal study designed to pilot a two-group intervention with homeless youth in Santa Monica, California. The longitudinal study randomized enrolled youth into a three-session Art Messaging group vs. a three-session didactic Hepatitis Health Promotion program. The HAV/HBV vaccination series was offered to all youth. Baseline data were collected from February 2009 to July 2009, before participants received the intervention. The study and associated materials were approved by the Human Subject Protection Committee.

Participants and Setting

A convenience sample of 156 homeless youth who met eligibility criteria were enrolled in the study. Youth were recruited from a drop-in site in Santa Monica that served homeless youth. Eligibility criteria included being homeless, aged 15 – 25 years and actively engaged in substance use for the last six months.

Procedure

Data collection was preceded and informed by extensive formative work with a community advisory board (CAB) comprised of homeless youth, faculty of California Institute of the Arts, a staff representative of the drop-in site, and the study investigators and research staff. The CAB refined the semi-structured interview guide (SSIG), which directed the conduct of extensive focus groups (Nyamathi et al., under review) and led to the final design of the Art Messaging intervention.

The research staff, consisting of a nurse and outreach workers who were later joined by the CalArts faculty, were all trained extensively prior to the onset of the study. Research staff greeted homeless youth who responded to youth-designed flyers containing the IRB-approved advertisement. Interested youth were presented with details of the study. If they wished to participate, they were led to a private room in the site and a screening informed consent was read and discussed. Interested youth signed the screening consent and were administered a two-minute screener that assessed demographic characteristics, TCU Drug Screener (Simpson & Chatham, 1995) information, the location where the respondent spent the previous night, and eligibility for the hepatitis B vaccination. If eligible, a second informed consent was read and discussed and, if signed, the youth was enrolled in the study. A baseline questionnaire was then administered by the research staff. No youth screened as eligible refused to participate in the study. All participants were paid \$10 for completion of the screener and baseline questionnaire.

Measures

Socio-Demographic information, collected by a structured questionnaire, included age, gender, birthdate, ethnicity, education, work and partnership status, length of time homeless, religious belief, history of foster care, and history of incarceration. Length of time homeless was categorized as one year or more as a measure of chronic homelessness.

Health History included physical and mental health. Overall health was assessed using a self-reported one-item measure (Stewart, Hays, & Ware, 1988), asking about general health on a five-point Likert scale. Mental health was assessed by emotional well-being and depressive symptoms.

Emotional Well Being was measured by the 5-item Mental Health Index (MHI-5) (Stewart et al., 1988) The MHI-5 has well-demonstrated reliability and validity, and has been shown to detect significant psychological disorders (Berwick et al., 1991). Our studies have

revealed good reliabilities of .74 to .85 (Nyamathi, Leake, Longshore, & Gelberg, 2001). Reliability for the emotional well-being scale in this sample was .83. Item scores were summed and then linearly transformed to a 0 to 100 range, with higher values indicating better emotional well-being. Poor emotional well-being was defined as a score of 66 or less (Rubenstein et al., 1989).

Depression was measured with the CES-D Depression Scale (CES-D) (Radloff, 1977). This 20-item scale measures depressive symptoms on a 4-point continuum. The CES-D has well-established reliability and validity. Among a homeless youth population, Cronbach's alphas for the measure were .87 and .90 for boys and girls, respectively (Whitbeck, Hoyt & Bao, 2000). In this study, reliability for the CES-D was .91. Item scores were summed, producing a scale with a potential range of 0–60, with higher scores indicating more depressive symptoms. Scores were dichotomized at the customary cutpoint of 16 (Radloff, 1977) for presentation in descriptive tables and as a measure of need for psychiatric evaluation.

Social Support was measured by an item that inquired about whether social support came primarily from drug or alcohol users, non-substance users, or equally from substance and non-substance users or whether there was no social support.

Substance-use severity was the outcome variable. It was measured by a continuous composite score formed by summing the number of affirmative responses to the first nine items of the Drug Screen II (Knight, Simpson, & Hiller, 2002). Respondents were asked to answer “yes” or “no” to queries about nine aspects of their substance use, including alcohol use, during the previous 12 months. This brief screening instrument has been used extensively by correctional treatment agencies and favorably reviewed (Knight, Simpson, & Morey, 2002).

Dangerous Sexual Encounters were assessed by an item asking respondents whether they had ever traded sex for money.

Coping with Recent Stressful Events was measured by 17 items taken from a more comprehensive set of 39 items, with seven subscales, designed to assess coping in the context of HIV/AIDS illness (Murphy, Rotheram-Borus, Marelich, 2003). Illness-related items and those judged to be less relevant to homeless youth were dropped and items were rated on a five-point Likert scale, with a range of 1) never to 5) always. For this study, the reduced Coping with Recent Stressful Events subscales were examined for internal consistency reliability, as measured by Cronbach's alpha. If a single item resulted in poor (< .50) (Waltz & Bausell, 1981) reliability for a subscale in this sample, that item was dropped. This procedure yielded four subscales with acceptable reliability: self-destructive escape, including reducing tension by drinking or smoking more than usual (alpha = .53); nondisclosure/avoidance, including keeping feelings to self and refusing to think about problems (alpha = .66); positive action, including thinking about what is really important and getting life together (alpha = .57); and passive problem-solving, including understanding sources of problem, seeking cheer from others, daydreaming and going over problems (alpha = .55). Mean-item scores were computed, giving sub-scale scores in the original metric.

Data Analysis

Unadjusted associations of drug-use severity with socio-demographic and mental and physical health measures were examined with two-sample t tests and analysis of variance, followed by Duncan's multiple range tests. Correlations between the coping strategies and severity of substance use were examined to explore the relationships between drug-use severity and coping strategies.

To determine the independent associations of socio-demographic and health characteristics and coping strategies with drug-use severity, all possible subsets linear regression analysis was performed. Gender, age, education and non-white race/ethnicity were forced into the models based on the youth drug-use literature and their relative ease of measurement. Other socio-demographic characteristics, as well as measures of health and coping, were candidates for inclusion in models if they were related to drug-use severity at the .15 level in unadjusted analyses. The .15 level was also used for retention. Age, education and measures of physical and mental health were used in their original continuous metric in the regression analyses. Selection of the best subset was based on Mallows' C_p . Analyses were conducted using SAS 9; the .05 level was used for significance.

Results

Sociodemographic Characteristics

The mean age of the study participants was 21.2 years (SD: 2.4; range 15–25) and their mean level of education was 11.6 (SD: 1.8; range 3–16). The modal length of homelessness was one year. Substance use was endemic: only six participants said they had never used alcohol and only one reported never using marijuana. Almost two-thirds (65%) reported use of hallucinogens and over one-quarter (28%) reported injection drug use. As shown in Table 1, almost three-fourths (74%) of the homeless youths were male and almost four-fifths were under age 24, with similar numbers in each of the two categories 15–20 and 21–23. More than half were White (55%), with African-Americans (14%), Hispanics (12%) and persons of mixed (11%) or other (8%) race/ethnicity comprising the remainder. Sixty percent of the sample had completed high school or earned a GED. Social support from substance users was common: 39% of participants reported primary social support from drug and alcohol users and another 41% said they received social support from substance users and non-users equally. Fourteen percent reported having non-users of substances as their main source of social support and 7% said they had no social support. In terms of religious faith, the sample was close to being evenly divided: 55% reported having faith in God. More than 1 in 4 participants reported having been in foster care and 68% said they had been in juvenile hall, jail or prison.

Physical and Mental Health and Behavioral Characteristics

While nearly half the sample reported excellent to very good physical health, this was not the case for mental health. The mean emotional well-being score was 63.8 (SD: 22.4; range 0–100) and the mean CES-D score was 18.5 (SD: 12.3; range 0–53). Over half (53%) had CES-D scores of 16 or more. Drug-use severity was noteworthy, with a mean of 5.8 on the severity measure (SD: 2.7; range 0–9). A large majority (83%) reported currently smoking. Over 1 in 4 reported having had more than 20 lifetime partners and almost 1 in 5 reported 5 or more partners in the previous 6 months. Relatively few (14%) disclosed trading sex for money.

Relationships with Substance Use Severity

As displayed in Table 2, drug-use severity did not vary by gender, age, race/ethnicity, education, chronic homelessness or other background characteristics in unadjusted analyses. In terms of physical health, participants who rated their health as fair or poor had the highest mean drug-use severity, while those with excellent or very good health had the lowest severity. Persons with good health had intermediate scores, but they did not differ significantly from those with fair/poor health. Similarly, those with poor emotional well-being had greater drug-use severity scores than those with better emotional well-being and those with CES-D scores of 16 or higher had greater severity of than those with fewer depressive symptoms. Greater drug-use severity was also associated with reporting 5 or

more partners in the past 6 months and 20 or more lifetime partners. Although not shown in Table 2, drug-use severity was associated with non-disclosure/problem avoidance, self-destructive escape and depression/withdrawal coping ($r = .41, .48$ and $.29$, respectively; all $p < .001$). A weak association was found between drug-use severity and passive problem solving ($r = .15$; $p = .063$). No associations were found with coping by positive action, social support or spiritual hope.

Multivariate Relationships

In adjusted analysis, working and worse physical health were associated with greater severity of substance use (Table 3). Using negative strategies like self-destructive escape and non-disclosure to cope with problems had a strong relationship with drug-use severity. Depression/withdrawal, as represented by plans to harm self, had a weak relationship with severity of substance use. Controlling for other factors, most standard socio-demographic (age, gender, race/ethnicity and education) and mental health measures were not related to drug-use severity. The model r-square was 0.35.

Discussion

This study revealed that illegal drugs are commonly used by homeless youth, a finding consistent with other studies (Kerr et al., 2009; Merscham, Van Leeuwen, & McGuire, 2009). More importantly, this study identified a number of factors that were correlated with drug-use severity among homeless youth. In unadjusted analyses, we found an association between substance use severity and having multiple sex partners. Participants who reported having 5 or more partners in the last 6 months, and 20 or more lifetime partners, had significantly greater substance use severity scores compared with those who had fewer partners. Our findings support previous results showing that substance use severity is related to having multiple sex partners among college students (Rowe, Wang, Greenbaum, & Liddle, 2008), incarcerated adolescents (Bamidele, Asekun-Olarinmoye, Odu & Egbewale, 2007), and non-incarcerated adolescents (Brooks, Harris, Thrall, & Woods, 2002). Our findings are also consistent with those reported by Solorio and colleagues (2008), who showed that having multiple sex partners was a predictor of drug abuse among a sample of young, homeless males. This finding is of particular interest because, given the association between drug abuse and risky sexual behavior, interventions designed to reduce substance use among homeless youth are particularly noteworthy.

Another factor found to be correlated with drug-use severity among homeless youth was perceived health status. Our unadjusted results showed that those who rated their health as “fair” or “poor” had significantly higher drug-use severity scores than those who rated their health as “excellent” or “very good”. Moreover, regression modeling showed that worse perceived physical health was associated with greater severity of substance use when potential confounders were controlled. To our knowledge, this study is the first to demonstrate that perceived health status is related to substance use severity among homeless youth. However, other studies have shown that perceived health status is associated with substance use behavior in housed samples. For example, Pico (2007) found that, among adolescent boys, substance use and perceived poor health were highly associated. Chen & Stor (2006) also found that low levels of perceived health status were related to substance abuse among a sample of Tiawanese youths.

One explanation for this relationship is the fact that substance use is related to childhood trauma (Alemagno, Stephens, Shaffer-King, & Teasdale, 2009; Melzer-Lange, 1998); most specifically sexual abuse, physical abuse, or family dysfunction (Sansone, Whitecar, & Wiederman, 2009; Wu, Schairer, Dellor, & Grella, 2009). Prevalence of early abuse has been associated with health problems, such as obesity and impaired physical health, as well

as adverse health behaviors, such as cigarette smoking, alcohol abuse and substance abuse (Felitti et al., 1998; Jun et al., 2008; Romans, Belaise, Martin, Morris, & Raffi, 2002; Thomas, Hypponen, & Power, 2008; Widom, Marmorstein, & White, 2006). Adolescents engaged in heavier substance use may be aware of the toll it takes on their physical functioning. Whether such awareness could be used to motivate them to change their substance use behavior needs to be investigated. In addition, ongoing research is needed to further investigate the relationship of perceived health to drug-use severity among homeless youth.

Poor emotional well-being was found to be another correlate of drug-use severity in unadjusted analyses. Participants reporting poor emotional well-being had greater drug-use severity scores compared to those with better emotional well-being scores. Our study is consistent with other studies showing that some drugs, specifically methamphetamines, are known to cause brain damage and psychological problems (Krasnova & Cadet, 2009; Rodriguez, Pugliese, & Mahy, 2009), and that greater emotional distress is related to substance abuse among homeless adults (Stein, Dixon, & Nyamathi, 2008). Moreover, substance use has been related to low self-esteem among children (Kulig et al., 2005) and adolescents (Zamboanga, Schwartz, Jarvis, & Van Tyne, 2009). Suicidal ideation was higher among adolescents diagnosed with major depressive disorder (MDD) who also had high substance abuse-related impairment, compared to those with MDD and low substance abuse-related impairment (Goldstein et al., 2009). Among persons with schizophrenia who have co-morbid substance abuse, risk of violence--physical assault, robbery, sexual assault, arson, or intimidation--was significantly higher compared to persons with schizophrenia without substance abuse co-morbidity (Fazel, Langstrom, Hjern, Grann, & Lichtenstein, 2009). The implications of these findings are that interventions targeting improvement of drug-use behavior should improve mental health as well.

Higher depressive symptom scores were also positively associated with drug-use severity. This result is in accordance with findings reported by other investigators. A strong association has been found between depression and substance abuse among youths 12–17 years of age (Substance Abuse and Mental Health Services Administration, 2007), and among young adults between 18–25 years of age (Daniulaityte, Falck, Wang, & Carlson, 2009). It has been suggested that, in light of findings such as those reported in our study, interventions should include attention to psychological issues when managing substance abuse among homeless populations (Stein, Dixon, Nyamathi, 2008; Slesnick & Prestopnik, 2005).

In bivariate and multivariate analysis, maladaptive coping strategies were associated with drug-use severity. We found that substance use severity was associated with non-disclosure coping, self-destructive escape coping, and depression/withdrawal coping. Similarly, greater negative coping strategies were associated with greater substance abuse in a study of homeless adults (Stein, Dixon, & Nyamathi, 2008). Poor coping has been identified as a risk factor associated with adolescent use of tobacco, alcohol and other drugs (Kulig et al., 2005). It has been suggested that heroin is used as an emotional coping strategy among young adult substance abusers (Schindler, Thomasius, Petersen & Sack, 2009); heavy drinking has also been identified as a coping strategy among college-aged students (Moeller & Crocker, 2009). The association between maladaptive coping strategies and substance abuse highlights the importance of designing interventions seeking to improve coping among young homeless populations.

Specifically, since non-disclosure coping was associated with greater substance use, a number of intervention strategies could be implemented and tested to determine if this high-risk chain of behavior could be changed. Teaching homeless youth coping skills for reaching

out for social support without feeling a loss of dignity may lessen feelings of isolation and, in turn, lessen substance use. In several studies, motivational interventions have been found to moderate substance use among adolescents (Marlatt et al., 1998; McCambridge & Strang, 2005; Sellman, Sullivan, Dore, Adamson & MacEwan, 2000). Such interventions aim to enhance an individual's motivation to make changes regarding substance use, and life situations that trigger use. The interventions often involve presenting information regarding an individual's frequency and amount of substance use and contrasting that to what would be considered non-problem use, so that adolescents see the discrepancy, and discuss the pros and cons of their behavior. If such motivational interventions for homeless youth also included assisting the youth to see that maladaptive coping strategies such as self-destructive escape, non-disclosure coping, and withdrawal are associated with severity of substance use, this information could build motivation to initiate changes among the youth.

Finally, multivariate analysis showed that working was associated with greater severity of substance use. This result is consistent with findings from other studies. Research has indicated that the more adolescents work, the more likely they are to smoke cigarettes, drink alcohol, and use drugs (Substance Abuse and Mental Health Services Administration, 2006). In a recent study, working for pay was found to be associated with substance use and delinquency among older adolescents (Ramchand et al., 2009). Thus, one possibility is that work resulted in more money to spend on drugs and other substances. Taken together, findings from this study suggest that physical (e.g., health), psychological (e.g., depression and mood) and environmental (e.g., work) factors should be considered when designing drug-use reduction interventions for homeless youth.

It is clear that the homeless youth in this sample have come to develop maladaptive coping styles. They would strongly benefit from problem solving and coping skills training. Even young children can be taught to learn such skills (e.g., Pedro-Carroll, Sutton, & Wyman, 1999; Stolberg & Mahler, 1994; Wolchik, Wilcox, Tein & Sandler, 2002). Such programs, in addition to improving skills acquisition and facilitating a transition towards more adaptive coping styles, may also serve to improve clinical symptomatology.

Limitations

The results of this study should be interpreted carefully, as we have analyzed cross-sectional data. Cross-sectional studies can be used to map relationships between variables; however, they cannot be used to establish causality or sequentiality (Zamboanga et al., 2009). Therefore, although we found that psychosocial variables (i.e., maladaptive coping strategies) are related to severity of substance use, we cannot categorically state that one causes the other. Our study also relied on self-reported data, which may be vulnerable to socially desirable responding, self-deception, or inaccurate recall (Moeller & Crocker, 2009), compromising the internal consistency of the study. However, in other studies of homeless groups, strong correlations have been found between self-report and objective measures of substance abuse (Nyamathi et al., 2001). Finally, the participants in our study were a group of homeless young people recruited from a drop-in site in Santa Monica, California. The sample was not randomly selected; consequently, caution should be used with respect to generalizing our results to the entire population of young, homeless substance users.

Conclusion

This study has identified several correlates of substance use severity among homeless youth. Higher drug-use severity scores were independently related to low levels of perceived health, maladaptive coping strategies, and having a job. The findings from this study are particularly relevant in that they support previous results showing that psychosocial

variables are related to substance use behavior among young populations. We believe the variables identified in this study can be used as guides to design interventions that address the psychosocial needs of young, homeless substance users.

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Table 1

Sample Characteristics (N = 156)

Characteristics	N	Percent
Gender:		
Male	115	73.7
Female	41	26.3
Age:		
15–20	63	40.4
21–23	60	38.5
24–25	33	21.2
Race/Ethnicity:		
African-American	21	13.5
White	86	55.1
Hispanic	19	12.2
Mixed	17	10.9
Other	13	8.3
Education:		
High School/GED	93	59.6
< 12 years	63	40.4
Working Full-Time or Part-Time:		
Yes	20	12.8
No	136	87.2
Intimate Partner:		
Yes	64	41.0
No	92	59.0
Homeless >= 1 year:		
Yes	79	50.6
No	77	49.4
Primary Support:		
Drug/Alc Users	60	38.5
Non-Users	21	13.5
Both Equally	64	41.0
No Help	11	7.0
Person of Faith:		
Yes	85	54.8
No	70	45.2
Juvenile Hall/Jail/Prison History		
Yes	106	68.4
No	49	31.6
Current Smoker:		
Yes	129	82.7
No	27	17.3

Characteristics	N	Percent
Foster Care History:		
Yes	44	28.2
No	112	71.8
Physical Health:		
Excellent/Very Good	72	46.2
Good	56	35.9
Fair/Poor	28	18.0
Poor Emotional Well Being ^a :		
Yes	72	46.2
No	84	53.8
Depressive Symptoms ^b		
Yes	82	52.6
No	74	47.4
Multiple Recent ^c Partners:		
Yes	28	18.0
No	128	82.1
≥ 20 Lifetime Partners:		
Yes	42	26.9
No	114	73.1
Ever Traded Sex for Money:		
Yes	21	13.6
No	134	86.4

^a Mental Health Index score < 66

^b CES-D score ≥ 16

^c past six months

Table 2

Associations of Severity of Drug Use with Socio-demographic, Health and Behavioral Characteristics (n = 156)

Characteristics	Mean TCU	Standard Deviation	P value ^a
Gender:			.381
Male	5.6	2.7	
Female	6.1	2.7	
Age:			.196
15–20	5.4	2.5	
21–23	5.8	2.9	
24–25	6.4	2.6	
Race/Ethnicity:			.437
African-American	4.9	3.0	
White	6.0	2.6	
Hispanic	6.1	2.5	
Mixed	5.5	2.8	
Other	5.2	2.7	
Education:			.190
High School/GED	6.0	2.6	
< 12 Years	5.4	2.8	
Working Full-Time or Part-Time			.112
Yes	5.2	2.8	
No	5.7	2.0	
Intimate Partner:			.972
Yes	5.8	2.7	
No	5.8	2.7	
Homeless >= 1 year			.778
Yes	5.7	2.9	
No	5.8	2.5	
Primary Social Support:			.108
Drug/Alc Users	6.3	2.8	
Non-Users	5.0	2.8	
Both Equally	5.7	2.4	
No Support	4.5	3.2	
Person of Faith:			.230
Yes	5.5	2.8	
No	6.0	2.6	
Juvenile Hall/Jail/Prison History:			.107
Yes	6.0	2.7	
No	5.2	2.6	
Current Smoker:			.615
Yes	5.8	2.7	

Characteristics	Mean TCU	Standard Deviation	P value ^a
No	5.5	2.4	
Foster Care History:			.985
Yes	5.8	2.8	
No	5.8	2.7	
Physical Health:			
Excellent/Very Good	5.0	2.7	
Good	6.1	2.7	
Fair/Poor	7.0	2.0	
Poor Emotional			.001
Well-Being:			
Yes	6.6	2.6	
No	5.0	2.5	
Depression ^c			.001
Yes	6.6	2.6	
No	4.8	2.5	
Five or More Recent ^d Partners			.001
Yes	7.3	1.8	
No	5.4	2.7	
≥ 20 Lifetime Partners:			.008
Yes	6.7	2.2	
No	5.4	2.8	
Ever Traded Sex for Money:			.031
Yes	7.0	2.6	
No	5.6	2.7	

^aTwo sample t test or analysis of variance

^bMental Health Index Score < 66

^cCES-D Score ≥ 16

^dPast 6 months

Table 3

Linear Regression Model for Drug-Use Severity (N = 156)

Characteristic	Beta	s.e.	P value
Male Gender	0.23	0.4	.600
Age	-0.08	0.1	.334
Non-White (vs. White)	-0.22	0.4	.567
Education	0.01	0.1	.912
Working	1.32	0.6	.023
Physical Health	0.48	0.2	.009
Non-Disclosure	0.48	0.2	.015
Self-Destructive Escape	0.76	0.2	.001
Depression/Withdrawal	0.42	0.2	.065