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Correlates of Depressed Mood among Young Stimulant-Using Homeless Gay and Bisexual Men

Adeline Nyamathi, ANP, PhD, FAAN¹, Catherine M. Branson, MPH, PhD(c)¹, Faith E. Idemundia, BA¹, Cathy J. Reback, PhD², Steve Shoptaw, PhD³, Mary Marfisee, MD¹, Colleen Keenan, FNP, PhD¹, Farinaz Khalilifard, MA, LMFT¹, Yihang Liu, MD³, and Kartik Yadav, BScH, MSch¹

¹University of California, School of Nursing

²Friends Research Institute, Inc, University of California Los Angeles, Integrated Substance Abuse Programs, University of California Los Angeles, Semel Institute for Neuroscience and Human Behavior

³University of California, Los Angeles, David Geffen School of Medicine

Abstract

Homeless gay and bisexual (G/B) men are at risk for reporting suicide attempts and have high risk of depressed mood, defined as elevated level of depressive symptoms. This study describes baseline socio-demographic, cognitive, psychosocial and health- and drug-related correlates of depressed mood in 267 stimulant-using homeless G/B young men who entered a study designed to reduce drug use. G/B men without social support were 11 times more likely to experience depressed mood than their counterparts who had support while persons who reported severe body pain were almost 6 times more likely to report depressed mood than those without pain. Other factors that increased risk of depressed mood included being homeless in the last four months, injecting drugs, reporting poor or fair health status and high levels of internalized homophobia. This study is one of the first to draw a link between pain experienced and depressed mood in homeless young G/B men. Understanding the correlates of depressed mood among homeless G/B young men can help service providers design more targeted treatment plans and more appropriate referrals to ancillary care services.

Keywords

Homeless; gay and bisexual; young men; depressed mood; stimulant-using

Elevated levels of mental disorders and suicidality have been found in studies among gay and bisexual (G/B) men. In an extensive review and meta-analysis of publications on mental disorders, suicide, and deliberate self-harm behaviors among G/B men, King and colleagues (2008) found that G/B men had over a two-fold increase in suicide attempts compared to a heterosexual men and were at significantly higher risk for depression and anxiety disorders, suicidal ideation, substance misuse, and deliberate self-harm than their heterosexual peers. These trends are important to note; however, among the younger G/B subpopulation other challenges may be significant.

The transition from adolescence to adulthood is a difficult time for many young people. In particular, for G/B youth and young adults, physical, mental and social developmental changes compounded by the emergence of a sexual identity which deviates from the heterosexual norm (Saewyc et al., 2006; Williams, Connolly, Pepler, & Craig, 2003) may produce higher rates of emotional problems. Data suggest that G/B young people exhibit

more symptoms of depression, are more likely to seek inpatient treatment for emotional disturbances and report more suicide attempts than their heterosexual peers (Remafedi, 2002; Silenzio, Pena, Duberstein, Cerel, & Knox, 2007).

Homeless G/B young people often lead highly chaotic and dysfunctional lives, and are similarly isolated from school and community networks where they might find supportive adults and peers outside of their family. These young adults may suffer from exposure to high levels of family disorganization, ineffective parenting, and intolerable levels of maltreatment (Paradise et al., 2001; Tyler, 2008). Problems at home, such as interfamily conflict, poor communication, dysfunctional relationships, and physical/sexual abuse or neglect, are predictive of runaway episodes (Baker, McKay, Hans, Schlange, & Auville, 2003) and symptoms of anxiety and depression (Whitbeck, Hoyt, & Bao, 2000). These problems may stem from, or be exacerbated by, conflict related to sexual identity.

Ryan and colleagues (2009) found that sexual identity conflict was the primary cause of G/B young people leaving or being ejected from their home and that family rejection on the basis of sexual identity was strongly associated with a number of negative health outcomes, including a six-fold increase in depression (Ryan, Huebner, Diaz, & Sanchez, 2009). Family rejection and social stigma can also result in internalized homophobia which can contribute to increased depression and anxiety among G/B individuals (Igartua, Gill, & Montoro, 2003). G/B young people who experience family rejection on the basis of sexual identity are more than three times as likely to use illegal drugs (Ryan et al., 2009) compared to those not experiencing rejection. Moreover, homeless G/B young adults reporting family rejection during adolescence are over eight times more likely to report suicide attempts and six times more likely to report high levels of depression than peers with a strong family support system (Ryan et al., 2009). For homeless G/B young adults, compounded stressors of being homeless and a part of a sexual minority may produce emotional distress and an overwhelming sense of alienation from the mainstream society (Rosario, Schrimshaw, Hunter, & Gwadz, 2002).

Among G/B youth and young adults, the link between depression, alcohol and drug dependency is well established (Rohde, Noell, Ochs, & Seeley, 2001). Alcohol and other substance dependence is higher among G/B young adults than among their heterosexual counterparts (King et al., 2008). In fact homeless G/B youth and young adults are also more likely to use "hard drugs" such as amphetamines than their heterosexual peers (Noell & Ochs, 2001).

In this study, the Comprehensive Health Seeking and Coping Paradigm (CHSCP; (Nyamathi, 1989) served as the theoretical framework. This framework which originated from the Stress and Coping Model (Lazarus & Folkman, 1984) and the Health Seeking Paradigm (Schlotfeldt, 1981), and has been applied to investigations focusing on understanding HIV, hepatitis and TB risk and protective behaviors and health outcomes (Nyamathi, Christiani, Nahid, Gregerson, & Leake, 2006; Nyamathi et al., 2002; 2005; Nyamathi et al., 2002; Nyamathi, Dixon, Wiley, Christiani, & Lowe, 2006) among homeless, and impoverished adults. Identifying predictors of depressive symptoms will provide valuable information to those engaged in disease prevention and intervention efforts. The CHSCP is composed of a number of variables that guide data collection. These include socio-demographic factors, situational and personal factors, cognitive and social resources and coping responses. Situational factors that might be relevant to predictors of depressive symptoms (also defined as depressed mood in this paper) among G/B young adults include age and education. Situational factors include length of time homeless. Personal factors for this paper incorporate the perception of pain and health status and internalized homophobia. Social factors may include social support while cognitive factors

may include internalized homophobia and knowledge of HIV/AIDS and hepatitis. Coping responses include use of drugs and alcohol.

Given the increased vulnerability to depression among homeless and G/B young adults, it is important to explore correlates of depressed mood among those who experience the compound stigma of being homeless and gay or bisexual. Guided by the CHSCP, this paper describes the socio-demographic, personal, cognitive, social and coping response correlates of depressed mood in a sample of homeless, male, G/B young adults in Hollywood California.

Methods

Design

Baseline data were collected as part of a randomized clinical trial focused on assessing 267 stimulant-using gay and bisexual young men (aged 18–46) who were randomized into one of two programs designed to reduce stimulant use. The Human Subjects Protection Committees for the University of California, Los Angeles (UCLA) and the Friends Research Institute (FRI), a community drop-in site for G/B adults approved this study.

Sample and Setting

The sample consisted of 267 methamphetamine, cocaine and crack-using G/B young adults who frequented a community site in Hollywood, California. Eligibility criteria included: a) homelessness; b) gay or bisexual identity; c) age 18–46; d) stimulant use (methamphetamine and/or cocaine/crack use) within the last three months; and e) no self-reported participation in drug treatment in the previous 30 days. Urine testing was used to validate recent (within the previous 72 hours) stimulant use at screening. If the urine test was negative, hair analysis was conducted that could detect stimulant use within the previous 3 months. A homeless person was defined as any individual who spent the previous night in a public or private shelter, or on the streets (*Necessary Relief: The Stewart B. McKinney Homeless Assistance Act.*, 1988). In total 564 men were screened of which 267 met the eligibility criteria and were enrolled into the study. The 297 individuals who were not enrolled were rejected on the basis of negative hair test result, reported not to be gay or bisexual, over the age limit, no stimulant use in the last three months, were not homeless, and were in drug therapy for last 30 days.

Procedure

Participants enrolled as part of a clinical trial designed to reduce stimulant use and promote hepatitis/HIV prevention. The research staff was trained extensively prior to the onset of the study by the principal investigator, co-investigators and project director. Potential participants were a community-based sample recruited by current or former participants, in-service presentations at community-based organizations that serve the targeted population, or by responding to a flyer distributed in the community.

The research staff reviewed the informed consent form in a private location with potential participants who were interested in the study and administered a short screening assessment to confirm eligibility. The screener took approximately two minutes to complete and assessed demographic characteristics, homeless status, and substance use and dependency using the TCU Drug Screener (Simpson & Chatham, 1995). Eligible participants were asked to provide a blood sample to be tested for Hepatitis A Virus (HAV), Hepatitis B virus (HBV) and Hepatitis C Virus (HCV). The participants were asked to return after two days to receive their hepatitis test results from the study nurse, after a second informed consent for the full study was reviewed and signed. Once data on HBV status was collected, and data

relating to age (18–29 vs 30–46), race (white vs non-White, and drug status (abuse vs dependence) was entered, a computerized randomization table assigned enrolled participants into one of two treatment arms. Baseline assessment was administered by the research staff. Participants were compensated \$10 to complete the brief screening questionnaire and \$20 to complete the baseline assessment.

Measures

Socio-Demographic Information—A structured questionnaire was used to collect sociodemographic information including, age, birthdate, ethnicity, education, employment, relationship status, and history of homelessness.

Health Status—A self-reported one-item measure was used to measure health status which asked about general health, ranging from excellent to poor and dichotomized as fair/poor vs. good/excellent and bodily pain in the previous 4 months dichotomized as severe/very severe vs. none/very mild/mild/moderate (Stewart, Hays, & Ware, 1988).

Social Support—A 6-item scale used in the RAND Medical Outcomes Study (Sherbourne & Stewart, 1991) was used to measure social support. The items elicit information about how often respondents had friends, family or partners available to provide them love and affection, help with chores, etc. on a 5-point Likert scale ranging from “none of the time (1) to “all of the time” (5). The instrument has demonstrated high convergent and discriminant validity and internal consistency (Sherbourne & Stewart, 1991). The Cronbach’s alpha for this sample population was .88. Participants were considered as having received no social support if they answered “none of the time” for all 6 social support items. Social support was thus dichotomized as “None” versus “Any” as no social support was a significant factor for depressed mood in the preliminary analysis.

Hepatitis B Knowledge—A modified 17-item instrument was used in a prior Hepatitis B study (A. Nyamathi et al., 2010) to measure knowledge of and attitudes toward Hepatitis B. Items were measured on a five-point scale ranging from “definitely true” (1) “don’t know” (5). Cronbach’s reliability coefficient for the instrument in this population was .81 for the knowledge subscale and .92 for the attitude subscale.

HIV/AIDS Knowledge—A modified 21-item Centers for Disease Control (CDC) scale was used to measure knowledge of and attitudes toward HIV/AIDS (NCHS, 1989). Range was 0–21. Modifications to the CDC instrument have been detailed elsewhere (Leake, Nyamathi, & Gelberg, 1997). Internal consistency reliability for the overall HIV knowledge and attitude scale was .86 in this homeless population.

Drug Use and Related Problems—The Addiction Severity Index (ASI, (McLellan et al., 1992), a standardized clinical interview that assessed the client’s self-reported substance use. The author reveals excellent inter-rater and test-retest reliability, as well as discriminate and concurrent validity. Self-report of substance use utilized a 30-day report. A slightly modified version of the ASI has been used by Reback et al., (2010) with similar populations.

Sexual Behavior—The Behavioral Questionnaire (BQ) – Amphetamine (Chesney, Barrett, & Stall, 1998) was used to assess substance use in relation to sexual behavior. This scale has been validated with methamphetamine-using populations (Twitchell, Huber, Reback, & Shoptaw, 2002) and assesses specific sexual behaviors alone and accompanying substance use both with primary and other partners, relating to unprotected anal insertive sex and receptive anal sex, as well as number of sexual partners over the previous 30 days. The BQ-A has excellent overall reliability of .92 (Veniegas et al., 2002). In addition, participants

were asked if current or past sexual partners had injected drugs, traded sex for money or drugs, and had sex while incarcerated.

Internalized Homophobia—Herek, (1998) Attitudes toward gay men scale was used to assess internalized homophobia. The 5-item assessment was used to assess responses to questions on feelings about being a man who has sex with a man. Answers were scored on a 5-point Likert scale from “disagree strongly” (1) to “agree strongly” (5). The questions were summarized to yield a scale score of 1 to 25, with higher scores indicating a higher degree of internalized homophobia and lower scores indicating greater acceptance of gay men. A man was considered to have a high level of internalized homophobia if his summary score was over 15, which indicated that on average he “agreed” or “agreed strongly” with the five internalized homophobia questions.

Depressed Mood—A short form version of the Center for Epidemiologic Studies-Depression Scale (CES-D) (Radloff, 1977) was used to assess depressed mood, a term used to replace depressive symptoms in this study. The short form CES-D is a 10-item scale that measures depressive symptoms on a 4-point continuum. The CES-D has well-established reliability and validity. Scores on the CES-D range from 0–30, with higher scores indicating greater depressive symptomatology. Internal consistency reliability for this scale was .82 in this homeless population. For purposes of this study, depressed mood was defined as having a CES-D score of at least 10 on this 10-item CES-D scale. This cut-point OF 10 has been used to identify persons in need of psychiatric evaluation for depression in previous work (Andresen, Malmgren, Carter, & Patrick, 1994).

Data Analysis

Summary statistics were performed to present to describe participants’ demographic and clinical characteristics as well as other independent variables. Due to the large number of variables we collected from the survey, model selection technique was applied to study the possible predictors of depression among the homeless gay men. Chi-square and paired t-tests were carried out to examine the bivariate correlates of depression. Stepwise multiple logistic regression analysis was then used to create a model of depression, including variables such as medical visit, HIV knowledge, education, general health status, body pain, homeless status, homophobia and social support, which were associated with depression at the 0.15 level in the preliminary analyses. This justification was based on the fact that frequently, two variables that are not significantly associated based on zero-order correlations will be significantly associated when another variable is controlled. While allowing the .15 allowed important correlates to be viewed, stepwise techniques used in the final model to reduce chance of spurious result. Covariates that were significant at the 0.05 level were retained in the final model. Multicollinearity was assessed and model fit was examined with the Hosmer-Lemeshow test. All statistical analyses were conducted using SAS, version 9.1.

Results

Sociodemographic Characteristics

This G/B young adult male population reported an average age of about 34 years (S.D. 8; range 18 to 46, was predominantly high school educated (74%) and was infrequently employed (8%) (See Table 1). The majority of the participants was White and reported being homeless for the entirety of the previous four months. Approximately one in every five of the participants met the criterion for internalized homophobia. Almost two-thirds of the participants (61.4%) reported a lifetime history of injecting recreational drugs. Of these, approximately one-third (31.4%) reported injecting heroin, other opiates or pain relieving drugs. Approximately two-thirds (60%) reported that they had been given information about

hepatitis prior to participating in the study. Just under over half (51%) of the participants were infected with HBV, 29% were infected with HCV, and 17% were infected with HIV. Co-infection rates between HIV and HCV were also high at 6%.

Few participants (8%) reported having no social support. Depressed mood was commonly reported in this population (62%). The level of HIV knowledge was moderate ($M = 16$, $SD = 3.9$), whereas HBV knowledge was lower ($M = 9.1$, $SD = 5.1$). In general one-fourth or fewer respondents reported good to excellent health (24%) and a mean of 1.2 visits for medical problems within the previous four months.

Associations with Depressed Mood

Table 2 reports unadjusted correlates of depressed mood. Age, employment, partner status and number of children were not found to be significantly associated with symptoms of depression. HIV/HBV/HCV status and injection of recreational drugs were also not associated with depression symptoms. However, fewer visits to health care providers and being less knowledgeable about HIV were important correlates. Internalized homophobia was a significant correlate as well ($p = 0.015$). In addition, not having graduated from high school and not having social support also correlated with symptoms of depression. Additional significant correlates of depressed mood included fair/poor health status, having severe/very severe bodily pain, and having ever injected heroin, opiates or painkillers. In terms of environmental and psychosocial factors; having been homeless all the time for the previous four months was positively correlated with depressed mood.

Multivariate Results

The adjusted odds of reporting clinically relevant symptoms of depression were almost 11 times greater for persons who reported no social support and almost six times greater for those who reported severe or very severe body pain (Table 3). Being homeless all the time in the previous 4 months was positively associated with high depressive mood scores. Also, those who reported fair/poor health status and those whose responses indicated high levels of internalized homophobia were more likely also to report high levels of depressed mood. In addition, those who had ever injected of heroin, opiates, or painkiller were about 2 times more likely to report significant depression complaints than those who did not inject.

Discussion

Findings from this study revealed that G/B homeless young adult men who lacked social support were more likely to report high levels of depressed mood and among those who reported elevated levels of internalized homophobia, they were also more likely to report high levels of depressed mood. Further, participants who reported a history of injecting heroin, opiates, or painkillers and those homeless in the previous four months were more likely to have high levels of depressed mood. Understanding the correlates of depressed mood among G/B young adult men who are homeless can help service providers design more targeted treatment plans and provide more appropriate referrals to ancillary services.

A negative impact of lack of social support on the emotional state of individuals has been found previously, as absence of social support has been associated with more depressive symptoms among homeless young adults (Stein, Dixon, & Nyamathi, 2008), G/B youth (Doty, Willoughby, Lindahl, & Malik, 2010) and among other populations at high risk for poor mental health, such as methadone-maintained adults (Nyamathi, Hudson, Greengold & Leake, in press) and parolees (Marlow & Chesla, 2009; Nyamathi et al., 2011). In a recent qualitative study, Hudson et al. (2010) found that homeless young adults craved support from family, friends, and homeless peers and were constantly subjected to rejection and

discrimination from passersby and law enforcement. It is very likely that the homeless G/B young adults in this study had experienced similar social isolation combined with social stigma, and perhaps this is magnified when internalized homophobia is taken into account. Despite increasing mainstream exposure to homosexuality, G/B young adults, particularly when homeless, find themselves alone, and unable to share feelings when subjected to social taunts and attacks (Almeida, Johnson, Corliss, Molnar, & Azrael, 2009). Thus, by understanding the importance of social support in relation to depression, healthcare and service providers may need to consider avenues where social interaction can occur among G/B young people, such as group education activities.

While the participants were not asked directly about the social stigma, prejudice and discrimination often associated with minority sexual orientation, we did find that reports of high levels of internalized homophobia corresponded with other negative psychosocial complaints. This is consistent similar findings from a report of older, urban very poor MSM in Los Angeles (Shoptaw et al., 2009). We believe there is a link between depressed mood and internalized homophobia among G/B young men, as having higher levels of anxiety and depression, feeling downhearted and blue and having high levels of nervousness may lead G/B men to have negative attitudes towards their own homosexuality. Family and societal stigma may also contribute to depression in G/B men which could lead to internalized homophobia (Dudley, Rostosky, Korfhage, & Zimmerman, 2004). Study findings add to the literature specific to G/B homeless populations that are active stimulant users. While further research needs to be done with this specific subgroup, other researchers have found elevated rates of depression symptoms and diagnoses in G/B people (Cochran, Mays, & Sullivan, 2003; de Graaf, Sandfort, & ten Have, 2006; King et al., 2008; Mays & Cochran, 2001; McCabe, Bostwick, Hughes, West, & Boyd, 2010). Implications again exist for service providers to maintain G/B-friendly drop-in sites where young populations can gather and socialize and have the freedom to express themselves without concern about stigma or acceptance.

Findings demonstrated that G/B young homeless men who reported injecting heroin, opiates or pain killers were more likely to report experiencing a depressed mood. In previous work with a similar population, 75% met the Beck Depression Inventory criteria for mood disorder and 33% met criteria for major depressive disorder; however, amphetamine/methamphetamine injection was significantly associated with depression rather than opioid injection (Reback, Kamien, & Amass, 2007). The relationship between injecting opioids and depression has also been identified in other populations, such as needle exchange clients and older adults (Rosen, Morse, & Reynolds, 2011; Volkow, 2004).

Injection use often reflects an advanced state of drug dependency (Marshall, Friedman, Stall, & Thompson, 2009), which may be more emotionally distressing among G/B young adults. Furthermore, the fact that homelessness was associated with depression is not surprising as homelessness represents a state characterized by a confluence of stressors. Homeless G/B young adults may well fear for their safety, not know where their next meal is coming from and be exposed to the elements. Clearly, they are also more vulnerable to violence and victimization simply by being more visible (Gwadz et al., 2009).

In another study with homeless young adults, mental health issues were the most commonly reported health concern and some young homeless adults reported using illegal drugs as an attempt to alleviate the symptoms of feeling depressed or hearing voices (Nyamathi et al., 2007). While a longitudinal study is required to assess the causation of comorbid conditions, other studies have highlighted the link between depression, alcohol and drug dependency (Bazargan-Hejazi, Bazargan, Gaines, & Jemanez, 2008; Chen et al., 2010; Gratz et al., 2004), and the fact that adolescents with substance abuse and comorbid psychiatric disorders

have poorer drug treatment outcomes than youths with only substance abuse disorders (Riggs, 2003). Therefore ongoing investigation of causes of depression and its identification and treatment can be also considered a tool in the prevention of continued drug and alcohol addiction and dependence.

An equally important relationship was identified between the health status of the young homeless G/B young adults in this study and depressed mood. As such, depressed mood was associated with having experienced severe body pain within the previous four months and was inversely associated with good to excellent health status. This association between severe bodily pain and depressed mood is novel as no other studies have found this relationship. This finding helps to advance the understanding of the link between health status, and in particular pain experienced and level of depressed mood. Our findings also suggest that participants who wanted to get treatment for mental health were less likely to report having a depressed mood. Healthcare providers who work with a population who suffer from numerous and often severe physical and mental health problems are a vital link in providing services and treating these health issues to improve the health outcomes of those most vulnerable.

Access to care for this population is often challenging. Acting as a link or facilitator to more intensive social and health resources is critical (Christiani, Hudson, Nyamathi, Mutere, & Sweat, 2008). Traditional barriers to care faced by these young adults include concerns regarding confidentiality, the cost of services, lack of insurance, lack of transportation, cultural issues including homophobia, spiritual and discrimination, distrust of healthcare providers, feeling embarrassed to ask for healthcare, and distrust of social workers and police (Christiani et al., 2008; Solorio et al., 2008). Another study found a marked difference in the amount of respect and consideration homeless people receive from health care delivery systems in comparison to the general population (Martins, 2008), an inequity that has been found to result in homeless persons being less likely to seek health care (Wen, Hudak, & Hwang, 2007).

Limitations

While this study reported unique findings relative to the mental health of G/B young adults, this study had several limitations. First, the participants were exclusively homeless G/B young men, so our ability to generalize to G/B older men or to women is limited. Second, all study participants were selected from an area surrounding the research site; whether these participants differ from those further from this site or in other cities is unknown. Moreover, most of the data are self-reported and a clinical screener for depression was not used. Finally, it was not possible to assess the direction of influence between mental health and substance use. Thus, longitudinal studies are needed to examine such influences.

Conclusions

This study is one of the first to assess the impact of severe body pain and depressed mood among G/B homeless young adults. These findings advance our understanding of the link between pain experienced and experiencing a depressed mood. Moreover, the desire of many participants to access mental health treatment and the relationship to lower odds of depressed mood provides useful information for practice and the provision of services for these vulnerable young adults. Future investigations will be critical to prospectively assess the impact of identifying and providing services for stimulant-using homeless G/B young adults who report high depressed mood in terms of both ongoing mental health and substance use issues.

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Table 1

Sample Characteristics (N=267)

Measure	Mean	(SD)
Age	33.9	(8.0)
Number of Children	0.3	(0.5)
Medical Visits in Past 6 Months	1.2	(6.4)
HIV knowledge	16.2	(3.9)
HBV knowledge	9.1	(5.1)
Measure	<i>N</i>	%
Partner (Yes)	61	22.9
High School Graduated (Yes)	198	74.2
Working (Yes)	22	8.3
General Health Status (Good/Excellent)	63	23.6
Severe/Very severe bodily pain in Past 6 Mos (Yes)	41	15.4
Being Homeless in the Past 4 Months (Yes)	204	76.4
MSM in the Past 4 Months (Yes)	162	60.7
Ever Been Given Info about Hepatitis (Yes)	159	60.0
Ever Injected of Recreational/Illegal Drugs (Yes)	164	61.4
Ever Injected of Heroin/Opiates/Painkiller (Yes)	85	31.4
Social Support (None)	20	7.5
Internalized Homophobia (Yes)	61	22.9
HIV+ (Yes)	40	16.4
HBV+ (Yes)	125	51.2
Measure	Mean	(SD)
HCV+ (Yes)	77	29.4
Depression * (Yes)	166	62.2

*
CES-D>+10

Table 2

Bivariate Correlates for Depressed Mood (N=267)

	Depressed Mood					
	No			Yes		
	Mean	Std		Mean	Std	p-value
Age	33.9	8.4	34.0	7.8	0.394	
Number of Children	0.3	0.4	0.3	0.5	0.665	
Medical Visits in the Past 6 Months	1.5	9.9	1.0	2.8	0.000	
HIV knowledge	16.4	3.4	16.1	4.2	0.018	
HBV knowledge	9.5	4.8	8.9	5.2	0.428	
Measure	N	%	N	%	p-value	
Partner (Yes)	20	19.8	41	24.7	0.355	
High School Graduated (Yes)	82	81.2	116	69.9	0.041	
Working (Yes)	7	6.9	15	9.0	0.544	
General Health Status (Fair/Poor)	10	9.9	53	31.9	0.000	
Severe bodily pain in Past 6 Months (Yes)	4	4.0	37	22.3	0.000	
Being Homeless for the Past 4 Months (Yes)	67	66.3	137	82.5	0.003	
MSM in the Past 4 Months (Yes)	65	64.4	97	58.4	0.337	
Ever Been Given Info about Hepatitis (Yes)	66	65.4	93	56.4	0.147	
Homophobia (Yes)	15	14.9	46	27.7	0.015	
Ever Injected of Recreational/Illegal Drugs (Yes)	58	57.4	106	63.9	0.295	
Ever Injected of Heroin/Opiates/Painkiller (Yes)	24	23.8	61	36.8	0.027	
HIV (+)	16	16.5	29	17.6	0.823	
HBV (+)	53	55.8	74	48.4	0.256	
HCV (+)	10	9.9	53	31.9	0.634	
Social Support (None)	1	1	19	11.5	0.002	

Table 3

Adjusted Logistic Regression Model for Depressed Mood (N=267)

Measure	Adjusted Odd Ratio (95% C.I.)	p-value
Age	0.984 (0.950–1.019)	0.368
Partner (Yes)	1.722 (0.875–3.386)	0.115
Bodily pain (Severe/Very Severe)	5.741 (1.877–17.563)	0.002
General Health Status (Fair/Poor)	3.312 (1.507–7.279)	0.003
Being homeless for the past 4 months (Yes)	2.017 (1.058–3.847)	0.033
Ever Injected of Heroin/Opiates/Painkiller (Yes)	1.932 (1.026–3.640)	0.042
Social Support (None)	10.900 (1.362–87.361)	0.024
Homophobia (Yes)	2.046 (1.007–4.159)	0.048