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Unmet Physical and Mental Healthcare Needs Among Stimulant-using Gay and Bisexual Homeless Men

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Abstract

Purpose—Homeless gay and bisexual (G/B) men evidence unmet physical and mental healthcare needs. To gain a greater understanding of predictors of unmet physical and mental healthcare needs, the purpose of this cross-sectional study was to understand correlates of baseline self-reported unmet physical and mental healthcare needs among stimulant-using homeless G/B men (N=422, 18-46 years of age).

Methods—A structured questionnaire was administered at baseline; data were collected from October 2009 to January 2013. The study was approved by the University of California Human Subjects' Protection committee and the Friends Research Institute Human Research Protection Committee.

Results—Logistic regression revealed that those who self-reported ever being married, being in fair or poor health and in moderate-to-very severe pain were more likely to experience unmet need for physical healthcare. Those who self-reported ever being married, being in fair or poor health and in moderate-to-very severe pain were more likely to experience unmet need for physical healthcare. In terms of unmet mental health needs, those who self-reported moderate-to-very severe pain and/or those reporting having sex while high were more likely to report unmet need for mental healthcare. In contrast, those reporting receiving social support from others were less likely to have an unmet mental healthcare need.

Conclusions—Research implications will be discussed as they relate to access to physical and/or mental healthcare needs among this vulnerable population.

Keywords

Gay/bisexual homeless men; unmet healthcare need; physical and mental healthcare

Introduction

Gay and bisexual (G/B) stimulant-using men experiencing homelessness are at high risk for unmet physical and mental healthcare needs, defined as wanting, but, not able to receive physical or mental healthcare. However, there is a paucity of data which focuses on G/B homeless men alone because lesbian, gay, bisexual, and transgender (LGBT) individuals experiencing homelessness are often grouped together. Further, even more limited data is available on unmet health needs among this group. While several studies have investigated unmet healthcare needs of homeless adults (Baggett, O'Connell, Singer, & Rigotti, 2010; Desai & Rosenheck, 2005), minimal research has focused upon these unmet needs among G/B homeless men.

Vulnerable/High-Risk Populations Reveal Increased Physical and Mental Health Sequelae

Homeless adults have a high level of morbidity (Hewett, Hiley, & Gray, 2011) and mortality (Baggett et al., 2013), oftentimes due to unmet physical and mental health needs. Across the nation, physical and mental healthcare needs have been documented among homeless adults (Brown, Kiely, Bharel, & Mitchell, 2012; Garibaldi, Conde-Martel, & O'Toole, 2005; Kertesz et al., 2013). In particular, addiction, mental illness, hypertension, and diabetes are significant issues among those experiencing homelessness (Kertesz et al., 2013). Further, in another sample of homeless adults, a large percentage reported depression (59.6%), hypertension (59.0%) and arthritis (44.9%); in the last year, 69.7% of homeless adults reported at least one emergency department visit (Brown et al., 2012). Among homeless or marginally housed, 40.4% of respondents had more than one ER visit (Kushel, Perry, Bangsberg, Clark, & Moss, 2002). Emergency department visits may be more frequently accessed among homeless populations due to victimization, arrests, mental and physical illness and substance abuse, etc (Kushel et al., 2002).

Perceptions of Social Support among Homeless Populations

One factor which may lead to unmet physical and mental health needs is the presence or lack of familial and social support. Social networks have been studied among homeless men on skid row (Green, Tucker, Golinelli, & Wenzel, 2013) and parenting an adult child who becomes homeless (Polgar, North, & Pollio, 2009) to name a few. Among homeless populations, perceptions of social support may be moderately high (Hwang et al., 2009). In fact, 62% perceived they had access to financial support; over half perceived access to instrumental support and 60% perceived access to emotional support (Hwang et al., 2009). It is apparent that support varies among the population; in fact, among young lesbian, gay, and bisexual (LGB) young adults, those reporting family rejection during adolescence, had

higher levels of depression and poorer health outcomes as compared with peers from families who had low levels of family rejection (Ryan, Huebner, Diaz, & Sanchez, 2009).

Mental Health Support Needs among LGBT Persons

Unmet mental health needs are critical areas of concern among this vulnerable populations; in particular, in one study, over one third of lesbian, gay, bisexual and transgender (LGBT) persons reported a diagnosis of depression, 20.8% anxiety or panic attack, and 42.9% reported having an unmet mental health need (Burgess, Tran, Lee, & van Ryn, 2007). Further, men having sex with men (MSM) are at increased risk for major depression during adolescence and adulthood; bipolar disorder and generalized anxiety disorder (Centers for Disease Control and Prevention, 2010). Among methamphetamine-using MSM who are positive for human immunodeficiency virus (HIV), 67% had received a psychiatric diagnosis during their lifetime; the most common diagnoses were depression (81.2%), bipolar disorder (12.5%), and anxiety (6.3%) (Semple, Patterson, & Grant, 2002). LGBT homeless populations, in particular, are faced with social stigma in addition to the challenges with being homeless which may lead to psychological problems (Ray, 2006). In one sample of stimulant-using homeless G/B adults, a correlation was found between not having social support and depressed mood (Nyamathi, 2012). These factors may likewise impact the ability of disenfranchised populations to seek healthcare.

Substance Use and Risky Behaviors among those Experiencing Homelessness and Among Marginally Housed Populations

Homeless adults have high rates of amphetamine and methamphetamine use (Das-Douglas, Colfax, Moss, Bangsberg, & Hahn, 2008) contributing to unmet physical and mental health needs. Between 1996 to 2003, use of these drugs tripled among homeless and marginally-housed individuals (Das-Douglas et al., 2008). Former methamphetamine users may encounter prospective memory impairment (Rendell, Mazur, & Henry, 2009). Further, illegal drug use may increase the likelihood for risky sexual behaviors and infectious disease transmission (Centers for Disease Control and Prevention, 2013a). Unprotected anal intercourse, a risky sexual behavior is reported among men who have sex with men (MSM) (Centers for Disease Control and Prevention, 2014). Being homeless may be a risk factor for HIV transmission. Factors which affect HIV transmission may include injection drug use, unprotected sexual behavior, and substance abuse (National Coalition for the Homeless, 2009). Risky behaviors increase the likelihood of transmission of HIV (Centers for Disease Control and Prevention, 2014) and hepatitis infections (Centers for Disease Control and Prevention, 2013a; 2013b). Among G/B populations, 63% of new HIV infections were among G/B men (Centers for Disease Control and Prevention, 2014). While HIV rates vary based on sample, in one study of G/B homeless men, approximately 16.9% were HIV positive, 52.4% were hepatitis B virus positive and 29.2% were hepatitis C virus positive (Nyamathi et al., 2013). Among MSM who were homeless, 28.3% were HIV positive (Reback et al., 2010) which can influence physical and mental healthcare needs. In one study, among urban indigent adults in San Francisco (N=2508), data revealed that HIV seroprevalence was 10.5%; further, for MSM, risk factors for HIV seropositivity included sex trade, recent receptive anal sex and syphilis (Robertson et al., 2004). Body pain among

G/B homeless men is also a significant issue; in fact, in one sample 15.4% reported severe or very severe body pain (Nyamathi, 2012).

Healthcare Access and Utilization among Vulnerable/High-Risk Populations

Among homeless adults, access and utilization of health care resources are challenging oftentimes leading to unmet physical and mental healthcare needs. Traditional health care barriers for homeless populations may include lack of transportation and long wait times (Salem, Nyamathi, Idemundia, Slaughter, & Ames, 2013), along with being uninsured; in fact, 59.5% of a homeless population did not have health insurance coverage (Baggett et al., 2010). In one study of MSM, the majority reported received care from a physician (59%) and community/public health clinic (20%) and 22% reported not having any health insurance coverage (Kipke et al., 2007). Substance use may also be a significant issue as individuals may be less inclined to seek treatment while in active addiction; in fact, one study among homeless persons found that alcohol or drug use were not associated with health service use (Kushel et al., 2001).

Given the challenges understanding access to care issues among stimulant-using G/B homeless men, the purpose of this study was to assess the predictors of experiences with unmet physical and mental needs and discuss ways in which health care providers and service agencies can take on an action oriented approach. Our primary research question included: what are the predictors of unmet physical and mental healthcare needs of stimulant-using homeless gay and bisexual men? The findings of this study may be useful in planning future interventions for a subgroup of individuals experiencing homelessness who are at risk for unresolved healthcare problems.

Methods

Design

This cross-sectional study, which was part of a broader longitudinal randomized control trial (RCT) (Nyamathi et al., 2013), describes correlates of baseline unmet physical and mental health care needs of stimulant-using G/B homeless men in Hollywood, California. The longitudinal study was designed to assess the impact of two interventions on reduction of drug use, risky sexual behaviors and hepatitis A and B vaccination among G/B homeless men. Baseline data were collected from October 2009 to January 2013. The study was approved by the University of California Human Subjects' Protection committee and the Friends Research Institute Human Research Protection Committee.

Participants

A total of 451 G/B men were enrolled if positive for methamphetamine, amphetamine, or cocaine as confirmed by urine screening or by hair analysis. Additional eligibility criteria included: (a) age 18-46; (b) self-reported being homeless; (c) G/B identity; (d) used stimulants within the previous three months; and (e) no self-reported participation in drug treatment in the last 30 days. Exclusion criteria included: a) monolingual speakers of languages other than English or Spanish; and b) persons judged to be cognitively impaired by the research staff. Individuals self-reported being homeless, defined as an individual who

either lacked a fixed, regular, and adequate nighttime residence, and/or who has a primary nighttime residence that were in a supervised publicly or privately operated shelter which provided temporary shelter (Hoben, 1995). The majority of those not eligible for enrollment in the study did not meet the age criteria, did not self-report stimulant use, or did not identify themselves as being G/B. In total, 997 men were screened, of whom 657 were eligible. Of these, 206 did not return after providing their urine specimen; the sample for the study was 451 of whom 449 responded to questions. Another 29 transgender women were also excluded due to their small sample size; reducing the sample size to 422 participants.

Procedure

Trained research staff posted flyers announcing the study in the Hollywood, California area and presented information regarding the nature of the study. Among those who were interested, the research staff met with those who were interested to provide more detailed information regarding the study which included length of time, benefits, and risks associated with participating. Thereafter, an informed consent was completed and a two-minute screening was administered by trained staff to assess eligibility for the study. The screening assessed the following: demographic characteristics, homeless status, substance use and abuse using the Diagnostic and Statistical Manual of Mental Disorders, Text Revision (DSM-IV-TR) (Rosa, Ghitza, & Tai, 2012).

Stimulant use at baseline was confirmed by urinalysis screening or by hair analysis if the urine screening could not detect a stimulant metabolite. If participants were eligible for the study, a blood sample was tested for HBV and HCV and then a rapid HIV test was conducted. Research staff asked participants to return to receive results provided by the study nurse; after persons were deemed eligible; subsequently thereafter, a second informed consent was administered followed by a baseline assessment. Those who completed the screening received the following compensation: \$2.00 (screening), \$8.00 (blood testing) and a total of \$20.00 upon completion of the baseline questionnaire. Prior to the baseline interview, both groups were randomized and follow-up was conducted at four-and-eight months. Compensation for the four and eight follow-up assessments was \$30.00 and \$35.00.

Measures

A structured questionnaire was administered by trained research staff. Sociodemographic data assessed included age, race/ethnicity, education, relationship status, and having children. Length of time homeless was assessed how much time participants spent as homeless in months, weeks and days within the last four months.

Depressive symptomology was assessed using a short form (10-item) version of the Center for Epidemiologic Studies-Depression Scale (CES-D) (Radloff, 1977). The scale uses a four-point continuum designed to assess depressed mood. Scores on this CES-D range from 0–30, with higher scores indicating greater depressive symptomatology. Internal consistency for this scale was .82 in this homeless population.

Hepatitis B and C Virus and Human Immunodeficiency Virus (HIV) Seropositivity were assessed by Hepatitis B surface antibody and hepatitis C antibody, respectively, as

performed by enzyme immunoassay (EIA) with commercial kits. HIV status was assessed by a rapid HIV test, OraQuick ADVANCE Rapid HIV-1/2 antibody test by OraSure, based in Bethlehem, Pennsylvania.

Having sex while high was assessed by the Behavioral Questionnaire Amphetamine II (BQA; Stimulant Use Related Risk Behaviors) (Twitchell, Huber, Reback, & Shoptaw, 2002) which asked participants in the past 30 days if they ever have had any type of sex while high or feeling the effects of alcohol or any drugs. Having sex in past 30 days was assessed by asking participants if they had sex with anyone in the past 30 days.

Dependence on drugs was determined by the Diagnostic and Statistical Manual of Mental Disorders, Text Revision (DSM-IV-TR) which screens for methamphetamine, amphetamine and cocaine (Rosa et al., 2012). Examples of items included “have you used in the past 12 months” or “have you ever had withdrawal symptoms”(Rosa et al., 2012).

Injection drugs were assessed by the Behavioral Questionnaire Amphetamine II (BQA; Stimulant Use Related Risk Behaviors) (Twitchell et al., 2002) which asked participants if they ever injected any recreational or illegal drugs. Responses included “yes, within the last 30 days,” “yes, within the last 4 months” or “yes, more than 4 months ago” or “no or never.”

Social support was assessed by one item asking participants who they turn to for friendship and assistance. The responses included “primary drug or alcohol users”, “primarily non-users of drugs” or “alcohol and about equally divided between users/non users” and “none.”

Health insurance was assessed by asking participants if they received any kind of health insurance. Responses included “yes or no.”

Health status was assessed by a one-item measure of general health status; responses range from excellent to poor and were dichotomized for analysis as “fair or poor” versus “good/very good/excellent.”

Bodily pain experienced in the previous 4 months was assessed and dichotomized as “moderate/severe/very severe” versus “none/very mild/mild” (Stewart, Hays, & Ware, 1988).

Preventive health seeking was assessed by asking participants if they would you seek preventive health care to prevent them from getting illnesses, health problems. Respondents had the opportunity to either indicate “yes or no.”

Going to a private medical doctor (MD) was assessed by asking participants during the last 4 months have they gone to a private medical doctor for the medical care.

Being hospitalized overnight was assessed by asking participants during the past 4 months have they stayed overnight in a hospital (not including an emergency room).

Access to emergency healthcare was assessed by asking participants if in the last month, have they gone to an emergency room, hospital-based clinic, and community clinic other

type of healthcare facility or nurse for medical care. Participants either responded “yes or no.”

Unmet physical and mental healthcare needs were assessed by asking participants two questions: (1) did they want treatment for a physical health problem in the last 4 months; and (2) did they want treatment for a mental health problem in the last 4 months. Responses included yes/no. For those who answered in the affirmative, they were then asked two questions. First, if they had received treatment (yes or no) for a physical health problem; and second, if they had received treatment for a mental health problem (yes or no).

Statistical Analyses

SAS Version 9.3 was used to analyze the data. Sample sociodemographic and other background characteristics have been represented by descriptive statistics, including means, standard deviations, frequencies and percentages. Unadjusted relationships between these characteristics and unmet needs for physical and mental healthcare were assessed using chi-square tests and two-sample t-tests, depending on underlying distributions. Characteristics that were associated with unmet needs for physical and mental healthcare were at the .15 level in the two logistic regression models. For the multivariable analyses, a backward selection approach was used and only variables with $p < 0.1$ were retained in the model. The final models were assessed for multicollinearity, which was not found to be a problem. The Hosmer-Lemeshow test verified goodness of fit (Hosmer & Lemeshow, 2000).

Results

Sociodemographic characteristics

The mean age of participants in this study was 34.38 (ages 18-46; SD 8.02); they were predominantly African American/Black (35.6%), White (36.5%), followed by Hispanic (14.7%) and mixed/other (13.3%). The majority reported having at least a GED/high school diploma (39.8%; data not shown), and a little less than one in four reported having a partner. More than one-third (32.5%) reported having one or more children. About one in five reported having health insurance (20.8%). The majority had been homeless in the last 4 months (96.2%), sought preventive health services (90.3%), and had sex in the past 30 days (70.4%; data not shown).

In terms of general health, 25.8% reported fair-or-poor health; nearly half (49.3%) were found to be HBV positive, almost one-third (30.6%) were positive for HCV and 15% were found to be HIV positive. Moderate-to-very severe bodily pain was reported by 38.9% of the study population. In total, 61.1% of G/B men reported receiving physical health treatment in the prior four months; over one-third (38.7%) visited the emergency room (ER) in the past six months (see Table 1).

Unadjusted Associations

Those who reported ever being married, reporting fair or poor health, and/or being in moderate to very severe pain were significantly more likely to report unmet needs for physical healthcare. Having gone to the emergency room (ER), having sex while high,

receiving social support from others, having sex in past 30 days, using injection drugs and being amphetamine dependent were not significantly associated with unmet physical health needs (see Table 2). Further, non-significant associations were found with race/ethnicity, having children, HIV positive status, going to a private MD, having any insurance, and being hospitalized overnight (data not shown).

In terms of unmet mental health needs, those reporting fair or poor health, moderate to very severe pain, having gone to the ER, having sex while high, sex in past 30 days, using injection drugs were significantly more likely to experience an unmet need for mental healthcare (see Table 2). Further, those who primarily had social support from others were also more likely to have an unmet mental healthcare need. Non-significant associations with unmet mental health needs were found with ever being married, being partnered, and being amphetamine dependent. Further, race/ethnicity, being HIV positive, going to a private MD, having any insurance, and being hospitalized overnight were also not significantly associated with unmet mental healthcare need (data not shown).

Adjusted Associations

Table 3 reports findings of logistic regression for unmet physical and mental healthcare needs. The proportion of the percent of the total sample experiencing unmet physical and mental health is represented in the percent column. Those who self-reported ever being married ($p<.05$), being in fair/poor health ($p<.05$) and in moderate-to-very severe pain ($p<.05$) were more likely to experience unmet need for physical healthcare.

In terms of unmet mental healthcare needs, those who self-reported moderate-to-very severe pain ($p<.05$) were also more likely to express a need not being met, whereas those reporting receiving primary social support from others, including both drug users and non-users ($p<.05$) were less likely to have an unmet mental healthcare need. Further, those reporting having sex while high ($p<.05$) were more likely to report unmet need for mental healthcare.

Discussion

Factors associated with unmet physical and mental healthcare needs among G/B men between 18 to 46 years of age are poorly understood. Our findings revealed that those who self-reported ever being married, being in fair or poor health and in moderate to very severe pain were more likely to experience unmet need for physical healthcare. In terms of unmet mental healthcare needs, those who self-reported moderate to very severe pain were also more likely to express a need not being met, whereas those reporting receiving primary social support from others, were less likely to have an unmet mental healthcare need. Further, those reporting having sex while high were more likely to report unmet need for mental healthcare.

A little over a quarter of our sample was ever married; however, in our multivariate results, ever being married was significantly related to having an unmet physical healthcare need; this finding necessitates further exploration among this vulnerable population as the types and patterns of these relationships need to be explored and their association with unmet healthcare needs. Further, in our study, a significant relationship was found between fair or

poor health and unmet need for physical healthcare. Researchers have found that there were no significant differences between younger versus older homeless persons in reporting fair or poor health (Brown, Kimes, Guzman, & Kushel, 2010); further, in another sample, 49% of a general homeless population reported that their health was fair or poor (Wojtusik & White, 1998). Given these findings, it is important that health care providers assess patients' self-reported health rating and follow-up as it is correlated with unmet physical health needs.

Another findings in this study revealed that G/B homeless men in moderate to very severe pain were also more likely to report that their physical healthcare needs were not met. While data on G/B homeless adults is limited, in one study, over one-third reported grade IV chronic pain (Hwang et al., 2011) corroborating that pain is a significant issue among homeless populations. About two thirds (66.7%) of those with grade IV pain used alcohol in the past 3 months, followed by 48.1% who used marijuana and 31.5% who used cocaine and other stimulants; further, 29.6% reported unmet needs for pain management (Hwang et al., 2011). Interestingly, among homeless adults, 46% of participants have reported using street drugs to treat pain (Hwang et al., 2011). Understanding chronic pain among the G/B homeless adults is an area worthy of further research as it is plausible that individuals may be self-medicating in order to alleviate pain. Thus, future research should focus upon assessing chronic pain, ways of coping with chronic pain in an effort to improve coping; further, it is may be necessary to integrate pain management specialists and alternative ways of pain relief among this vulnerable population.

In this study, those reporting receiving primary social support from others, including drug users and non-drug users, were less likely to have an unmet mental healthcare need. In another study, perceptions of social support among homeless individuals was high as it relates to financial, instrumental, and emotional support; however, only 7% reported being accompanied to healthcare appointments by a family or friend (Hwang et al., 2009). Future research should integrate identifying social support sources and patterns in an effort to address mental healthcare needs among the population. Our findings further demonstrate that those who reported having sex while high were more likely to report unmet need for mental healthcare. Given the limited literature focused upon unmet mental healthcare needs among G/B adult men experiencing homelessness, it is challenging to identify if these findings are supported. However, it is imperative to identify sources of care and facilitate follow-up which may increase the propensity for mental healthcare needs being met.

Implications

Given the unique predisposing factors for homelessness and unmet physical and mental health needs among this subpopulation, research should focus upon facilitating care and working with providers to manage pain and depression in order to meet physical and mental healthcare needs. It is imperative to identify sources of care and facilitate follow-up which may increase the propensity for mental healthcare needs being met. Further, future research should identify evidence-based strategies to manage chronic pain, root causes of pain, and various ways of coping.

Limitations

Data reported herein are limited by self-report and as they were derived from a cross-sectional study; further, no causality inferences can be made. Moreover, the study used a convenience sample from one geographic area which limits the ability to extrapolate to a larger population. Further, as these analysis focuses on G/B homeless men; they cannot be generalized to other populations such as lesbian or transgender subpopulations. While data reported herein are limited to mostly dichotomous variables which may limit the variability, we still believe that this study can still provide formative data among G/B homeless men as it relates to unmet physical and unmet healthcare needs and provide insight into areas of future research. Further, HIV status was not significant in the final models; this finding warrants further investigation.

Conclusions

These findings shed light on the need for an action-oriented approach which involves healthcare providers working with multidisciplinary teams which may include paraprofessionals, social workers, nurses, policymakers in an effort to provide culturally sensitive care to manage pain and reduce risky behaviors. Further, the goal is to improve overall health status in order to meet both physical and mental healthcare needs. More specifically, both unmet physical and mental healthcare are high areas of need and necessitate developing research which encourages pain management, addressing mental well-being and identifying positive social support networks.

References

- Baggett TP, Hwang SW, O'Connell JJ, Porneala BC, Stringfellow EJ, Orav EJ, Rigotti NA. Mortality among homeless adults in boston: Shifts in causes of death over a 15-year period. *JAMA Intern Med.* 2013; 173(3):189–195.10.1001/jamainternmed.2013.1604 [PubMed: 23318302]
- Baggett TP, O'Connell JJ, Singer DE, Rigotti NA. The unmet health care needs of homeless adults: A national study. *Am J Public Health.* 2010; 100(7):1326–1333.10.2105/ajph.2009.180109 [PubMed: 20466953]
- Brown RT, Kiely DK, Bharel M, Mitchell SL. Geriatric syndromes in older homeless adults. *J Gen Intern Med.* 2012; 27(1):16–22.10.1007/s11606-011-1848-9 [PubMed: 21879368]
- Brown RT, Kimes RV, Guzman D, Kushel M. Health care access and utilization in older versus younger homeless adults. *J Health Care Poor Underserved.* 2010; 21(3):1060–1070.10.1353/hpu.0.0344 [PubMed: 20693744]
- Burgess D, Tran A, Lee R, van Ryn M. Effects of perceived discrimination on mental health and mental health services utilization among gay, lesbian, bisexual and transgender persons. *J LGBT Health Res.* 2007; 3(4):1–14. [PubMed: 19042907]
- Centers for Disease Control and Prevention. Gay and bisexual men's mental health. 2010. Retrieved from <http://www.cdc.gov/msmhealth/mental-health.htm>
- Centers for Disease Control and Prevention. Hepatitis b and sexual health. Atlanta, GA: 2013a. p. 21-1115. Retrieved from <http://www.cdc.gov/hepatitis/HBV/PDFS/HEPBSexualHealth.pdf>
- Centers for Disease Control and Prevention. Hepatitis c information for the public. Atlanta, GA: 2013b. Retrieved from <http://www.cdc.gov/hepatitis/C/index.htm>
- Centers for Disease Control and Prevention. Hiv among gay and bisexual men. Atlanta, GA: 2014. Retrieved from http://www.cdc.gov/hiv/pdf/msm_fact_sheet_final_2014.pdf
- Das-Douglas M, Colfax G, Moss AR, Bangsberg DR, Hahn JA. Tripling of methamphetamine/amphetamine use among homeless and marginally housed persons, 1996-2003. *J Urban Health.* 2008; 85(2):239–249.10.1007/s11524-007-9249-4 [PubMed: 18163214]

- Desai MM, Rosenheck RA. Unmet need for medical care among homeless adults with serious mental illness. *Gen Hosp Psychiatry*. 2005; 27(6):418–425.10.1016/j.genhosppsych.2005.06.003 [PubMed: 16271656]
- Garibaldi B, Conde-Martel A, O'Toole TP. Self-reported comorbidities, perceived needs, and sources for usual care for older and younger homeless adults. *J Gen Intern Med*. 2005; 20(8):726–730.10.1111/j.1525-1497.2005.0142.x [PubMed: 16050882]
- Green HD Jr, Tucker JS, Golinelli D, Wenzel SL. Social networks, time homeless, and social support: A study of men on skid row. *Netw Sci (Camb Univ Press)*. 2013; 1(3):305–320.10.1017/nws.2013.18 [PubMed: 24466427]
- Hewett N, Hiley A, Gray J. Morbidity trends in the population of a specialised homeless primary care service. *Br J Gen Pract*. 2011; 61(584):200–202.10.3399/bjgp11X561203 [PubMed: 21375905]
- Hoben, J. Review of Stewart B McKinney homeless assistance programs administered by HUD. Washington, D.C.: 1995. Retrieved from <http://www.huduser.org/portal/publications/homeless/mckinney.html>
- Hosmer, DW.; Lemeshow, S. Applied logistic regression. New York: Wiley; 2000.
- Hwang SW, Kirst MJ, Chiu S, Tolomiczenko G, Kiss A, Cowan L, Levinson W. Multidimensional social support and the health of homeless individuals. *J Urban Health*. 2009; 86(5):791–803.10.1007/s11524-009-9388-x [PubMed: 19629703]
- Hwang SW, Wilkins E, Chambers C, Estrabillo E, Berends J, MacDonald A. Chronic pain among homeless persons: Characteristics, treatment, and barriers to management. *BMC Fam Pract*. 2011; 12:73.10.1186/1471-2296-12-73 [PubMed: 21740567]
- Kertesz SG, McNeil W, Cash JJ, Desmond R, McGwin G Jr, Kelly J, Baggett TP. Unmet need for medical care and safety net accessibility among Birmingham's homeless. *J Urban Health*. 2013; 91(1):33–45.10.1007/s11524-013-9801-3 [PubMed: 23620012]
- Kipke MD, Kubicek K, Weiss G, Wong C, Lopez D, Iverson E, Ford W. The health and health behaviors of young men who have sex with men. *J Adolesc Health*. 2007; 40(4):342–350.10.1016/j.jadohealth.2006.10.019 [PubMed: 17367727]
- Kushel MB, Perry S, Bangsberg D, Clark R, Moss AR. Emergency department use among the homeless and marginally housed: Results from a community-based study. *Am J Public Health*. 2002; 92(5):778–784. [PubMed: 11988447]
- Kushel MB, et al. Factors associated with the health care utilization of homeless persons. *JAMA*. 2001; 285(2):200–206. [PubMed: 11176814]
- National Coalition for the Homeless (NCH). Mental illness and homelessness. Washington, DC: National Coalition for the Homeless; 2009. Retrieved from http://www.nationalhomeless.org/factsheets/Mental_Illness.pdf
- Nyamathi A, Branson C, Idemundia F, Reback C, Shoptaw S, Marfisee M, Keenan C, Khalilifard F, Liu Y, Yadav K. Correlates of depressed mood among young stimulant-using homeless gay and bisexual men. *Issues in Mental Health Nursing*. 2012; 33:641–649. [PubMed: 23017039]
- Nyamathi A, Salem B, Reback CJ, Shoptaw S, Branson CM, Idemundia FE, Liu Y. Correlates of hepatitis B virus and HIV knowledge among gay and bisexual homeless young adults in Hollywood. *Am J Mens Health*. 2013; 7(1):18–26.10.1177/1557988312456068 [PubMed: 22879650]
- Polgar MF, North CS, Pollio DE. Parenting adults who become homeless: Variations in stress and social support. *Am J Orthopsychiatry*. 2009; 79(3):357–365.10.1037/a0017219 [PubMed: 19839673]
- Radloff L. The CES-D scale: A self-report depression scale for research in the general population. *Applied Psychological Measurements*. 1977; 1:385–401.
- Ray, N. An epidemic of homelessness: Lesbian, gay, bisexual and transgender youth. New York: National Gay and Lesbian Task Force Policy Institute; 2006.
- Reback CJ, Peck JA, Dierst-Davies R, Nuno M, Kamien JB, Amass L. Contingency management among homeless, out-of-treatment men who have sex with men. *J Subst Abuse Treat*. 2010; 39(3):255–263.10.1016/j.jsat.2010.06.007 [PubMed: 20667681]
- Rendell PG, Mazur M, Henry JD. Prospective memory impairment in former users of methamphetamine. *Psychopharmacology (Berl)*. 2009; 203(3):609–616.10.1007/s00213-008-1408-0 [PubMed: 19037633]

- Robertson MJ, Clark RA, Charlebois ED, Tulsy J, Long HL, Bangsberg DR, Moss AR. HIV seroprevalence among homeless and marginally housed adults in San Francisco. *Am J Public Health*. 2004; 94(7):1207–1217. [PubMed: 15226145]
- Rosa C, Ghitza U, Tai B. Selection and utilization of assessment instruments in substance abuse treatment trials: The national drug abuse treatment clinical trials network experience. *Subst Abuse Rehabil*. 2012; 3(1):81–89.10.2147/sar.s31836 [PubMed: 22904649]
- Ryan C, Huebner D, Diaz RM, Sanchez J. Family rejection as a predictor of negative health outcomes in white and latino lesbian, gay, and bisexual young adults. *Pediatrics*. 2009; 123(1):346–352.10.1542/peds.2007-3524 [PubMed: 19117902]
- Salem BE, Nyamathi A, Idemundia F, Slaughter R, Ames M. At a crossroads: Reentry challenges and healthcare needs among homeless female ex-offenders. *Journal of Forensic Nursing*. 2013; 9(1): 14–22.10.1097/JFN.0b013e31827a1e9d [PubMed: 24078800]
- Semple SJ, Patterson TL, Grant I. Motivations associated with methamphetamine use among hiv+ men who have sex with men. *J Subst Abuse Treat*. 2002; 22(3):149–156. [PubMed: 12039618]
- Stewart AL, Hays RD, Ware JE Jr. The mos short-form general health survey. Reliability and validity in a patient population. *Med Care*. 1988; 26(7):724–735. [PubMed: 3393032]
- Twitchell GR, Huber A, Reback CJ, Shoptaw S. Comparison of general and detailed hiv risk assessments among methamphetamine abusers. *AIDS and Behavior*. 2002; 6:153–162.
- Wojtusik L, White MC. Health status, needs, and health care barriers among the homeless. *J Health Care Poor Underserved*. 1998; 9(2):140–152. [PubMed: 10073199]

Table 1
Baseline Sample Characteristics among Stimulant Using Gay and Bisexual Homeless Men
(N=422)

Measure	Mean	SD Range
Age	34.38	8.02 (18-46)
Depressed Mood ^d	12.87	6.5 (0-30)
Race/ethnicity	<i>N</i>	%
African American/Black	150	35.55
White	154	36.49
Hispanic	62	14.69
Mixed & Other	56	13.27
Relationship status		
Partner (yes)	99	23.46
Never married	305	74.21
Children (yes)	137	32.46
HBV positive	208	49.29
HCV positive	129	30.57
HIV positive	61	14.77
Wants treatment for a physical problem	182	43.23
Wants treatment for mental problem	161	38.24
Gets treatment for physical problem *	113	61.08
Gets to access treatment for mental problem *	98	59.76
Preventive health seeking (yes)	381	90.28
Went to a private MD	56	13.33
Measure	<i>N</i>	%
Hospitalized Overnight	60	14.25
Gone to ER in past 6 months	163	38.72
Sex while high	251	59.62
Amphetamine dependent	150	36.76
Injection drugs (yes within the last 4 months)	194	45.97
Social Support		
Drug users	88	21.26
Non drug users	109	26.33
Both	188	45.41
None	29	7.00
Health Insurance	87	20.81
Health Status		
Excellent/Very good/Good	313	74.34
Fair	93	22.22
Poor	15	3.56
Bodily Pain		

Measure	Mean	SD Range
None/Very Mild/Mild	258	61.15
Moderate	87	20.62
Severe	55	13.03
Very severe	22	5.21

* The frequency is among those who wanted treatment, applying to both physical and mental.

^aBased on the 10-item CES-D Questionnaire.

Table 2
Unmet Need for Physical and Mental Healthcare among Stimulant Using G/B Homeless Men (n=420)

Measure	Unmet Physical Healthcare Need			Unmet Mental Healthcare Need		
	N	%	p	N	%	p
Ever Married			.015			.773
Yes	25	24.0		14	13.3	
No	42	13.8		44	14.5	
Fair or Poor Health			.009			.013
Yes	26	24.3		24	22.4	
No	42	13.5		39	12.5	
Moderate to Very Severe Pain			.004			.001
Yes	37	22.7		36	22.0	
No	31	12.1		27	10.6	
Partnered			.055			.097
Yes	22	22.5		20	20.2	
No	46	14.3		43	13.4	
Went to ER^a			.950			.017
Yes	26	16.1		33	20.3	
No	42	16.3		30	11.7	
Sex While High^a			.155			.010
Yes	46	18.3		47	18.7	
No	22	13.1		16	9.5	
Social Support			.319			.004
Drug users	15	17.1		19	21.6	
Non-drug users	12	11.0		15	13.8	
Both	36	19.4		18	9.7	
No One	5	17.2		9	31.0	
Sex in Past 30 Days			.141			.048
Yes	53	17.9		51	17.2	
No	15	12.1		12	9.7	

Measure	Unmet Physical Healthcare Need			Unmet Mental Healthcare Need		
	<i>N</i>	%	<i>p</i>	<i>N</i>	%	<i>p</i>
Injection Drugs^b			.984			.044
Yes	31	16.2		36	18.9	
No	37	16.2		27	11.8	
Amphetamine Dependent			.173			.387
Yes	19	12.8		25	16.8	
No	46	17.9		35	13.6	

^a in past 30 days

^b in past four months;

* The proportion of the percent of the total sample experiencing unmet physical and mental health is represented in the percent column.

Logistic Regression Models for Unmet Needs for Physical and Mental Healthcare among Stimulant Using G/B Homeless Men**Table 3**

Measure	Unmet Physical Healthcare Need (n=409)			Unmet Mental Healthcare Need (n=411)		
	Coeff.	s.e.	p	Coeff.	s.e.	p
Ever Married	0.57	0.29	0.05			
Partnered				0.57	0.33	.084
Fair or Poor Health	0.79	0.29	.007			
Moderate to Severe Pain	0.59	0.28	.035	0.69	0.30	.023
Support from others (users and non-users)	0.53	0.28	.056	-0.76	0.31	.015
Went to ER in past 4 months				0.49	0.30	0.10
Depressive symptomology				0.04	0.02	.080
Sex while high				0.73	0.34	.031

Standard Error = S.E.