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Correlates of Depressive Symptoms among Homeless Men on Parole

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Abstract

This study describes correlates of high levels of depressive symptoms among recently paroled men in Los Angeles who reside in a community substance abuse treatment program and report homelessness. Cross-sectional data were obtained from male residents who were released on parole within the last 30 days ($N=157$) to assess parental relationship, self-esteem, social support, coping behaviors, drug and alcohol use behaviors, depressive symptoms, and sociodemographic information. Results indicated that 40% of participants were classified as experiencing high levels of depressive symptoms (CES-D = 10). Results of a logistic regression analysis showed that the following were predictors of depressive symptoms ($p < .05$): physical abuse in childhood, non-residential alcohol treatment, violent behaviors, low self-esteem, and disengagement coping. Being Mexican-American, Mexican, American Indian, or Asian) and not displaying cognitive problems was inversely related to depressive symptoms in the final model ($B = -2.39, p < .05$). Findings support proper use of both prison and community assessment services to at-risk individuals eligible for parole to increase self-esteem and coping.

Keywords

Depressive symptoms; parolees; self-esteem; coping behaviors

In the United States (US), there are over 2.3 million people incarcerated in jails and prisons combined (Bureau of Justice Statistics, 2010). In addition, more than 5 million individuals are under community supervision for either probation (84%) or parole (16%; Bureau of Justice Statistics, 2010). California hosts nearly 15% of the entire paroled population in the country; the rate of individuals on parole to California's total state population is 323.2 per 100,000 (a California Department of Corrections and Rehabilitation [CDCR], 2009a; Bureau of Justice Statistics, 2010). Offenders who are granted parole face distinct reentry challenges as they may be unprepared to make independent decisions that will positively affect their well-being outside of an institutionalized setting (Taxman, 2004). Particularly for drug abusers who start the addiction recovery process in prison, re-entering society can be an experience akin to that of "immigrants [arriving] in a foreign land" (Gideon, 2009, p. 44), and is complicated by numerous contextual and psychological stressors (Sung & Richter, 2006).

There is a link between mental illness and parolee recidivism (Hiscoke, Langstrom, Ottosson, & Grann, 2003; Skeem & Loudon, 2006). Among parolees with mental illness, recidivism rates are significantly higher during the first year of parole than for those without psychiatric disorder (Messina, Burdon, Hagopian, & Prendergast, 2004), and were as high as 34% in a sample of parolees attending outpatient psychiatric clinics (Solomon, Draine, & Marcus, 2002). In a large retrospective cohort study ($N=79,211$), inmates with bipolar disorder were more than 3 times as likely as those without psychiatric comorbidities to be reincarcerated on multiple occasions (>4 times) within a 6-year period (Baillargeon, Binswanger, Penn, Williams, & Murray, 2009). This is particularly important in light of the fact that more than half of all individuals paroled in California are returning to prison within two years after release (CDCR, 2009b). In addition, two-thirds of individuals in the general population with depressive symptoms remain undiagnosed (Ani et al., 2008), suggesting that an even greater burden of depressive symptomatology exists among parolees. Therefore, understanding the correlates of depressive symptoms in this population will assist mental health providers, professionals within the criminal justice system, and policymakers to encourage screening and provide needed care to assist parolees with psychiatric comorbidities to successfully reintegrate into society.

Depression, Homelessness, and Substance Abuse Among Criminal Justice Populations

Depression is the leading cause of disability for individuals ages 15–44 in the U.S. (World Health Organization [WHO], 2008). In those over age 18, a total of 6.7% of the total U.S. population have a major depressive disorder in a given year, translating into just over 14 million adults who are living with major depression in the U.S. (Kessler, Chiu, Demler, & Walters, 2005; US Census Bureau, 2002). As of 2001, no studies had directly measured the numbers of persons with serious mental illness on parole (Lurigio, 2001). In 2004, one of the first studies examining depression in parolees found a 25% prevalence rate among Maryland parolees (Visher, La Vigne, & Travis, 2004). Thus, there remains a paucity of research on mental illness, and on depression in particular, in individuals on parole supervision.

In contrast to the limited findings on parolees, there is a growing body of literature surrounding mental illness in inmates. A nationwide survey of healthcare in prisons revealed

that 14.8% of federal inmates, 25.5% of state inmates, and 25% of county jail inmates had at least 1 mental health diagnosis; among those who remain undiagnosed, numbers may be even higher (Wilper et al., 2009). Other estimates place the prevalence of mental illness among inmates to be between 20.6% and 53.7% (Zlotnick, Clarke, Friedmann, Roberts, & Melnick, 2008). A meta-analysis of 62 prison surveys concluded that about 1 in 7 prisoners in Western countries have psychotic illness or major depression, showing a burden of disease that is between 2 – 4 times that of the general population of the US or Britain (Fazel & Danesh, 2002). This is especially significant considering that those who have been incarcerated appear to have different psychosocial functioning, and different psychopathological and service use profiles than those with mental illness who are not incarcerated (Dumais, Cote, & Lesage, 2010). This indicates that psychiatric treatment for those who are mentally ill and have a history of incarceration must be tailored to address their unique needs.

Parolees who are homeless have even greater problems with incarceration. In a national survey of inmates ($N=6,953$), 15.3% reported at least one episode of homelessness in the year prior to incarceration—a number that is 7–11 times that of the general US population reporting homelessness (Greenberg & Rosenheck, 2008). These authors further contend that inmates reporting homelessness were more likely to have past criminal justice involvement, report mental illness and substance abuse, and report less education and previous unemployment. In those who have been incarcerated and have a history of mental illness, substance abuse is extremely common (Cuomo, Sarchiapone, Di Giannantonio, Mancini, & Roy, 2008; Kerridge, 2009; Pelissier & O'Neil, 2000).

Inmates with a history of substance abuse constitute a unique subgroup within the prison population, burdened by increased judiciary and psychiatric issues when compared with those who do not have a history of substance abuse (Cuomo et al., 2008). Specifically, those with history of substance abuse had multiple incarcerations (78.8%), more juvenile convictions (60.2%), more violent behaviors during detention (28.8%), a history of one or more suicide attempts (20.8%), and higher scores for childhood trauma, psychoticism, neuroticism, impulsivity, hostility, and suicidal ideation (Cuomo et al., 2008). Depressive symptoms are correlated with a co-occurring substance abuse disorder among inmates (Kerridge, 2009). In regard to parolees, those with a dual diagnosis of a major psychiatric disorder (major depressive disorder, bipolar disorder, schizophrenia, or other psychotic disorder) and a substance use disorder have a much higher risk of parole revocation (Baillargeon et al., 2009).

Social Support and Coping

Low levels of social support predict escalated depressive symptoms in patients with baseline depressive or anxiety disorders (van Beljouw, Verhaak, Cuijpers, van Marwijk, & Penninx, 2010) and also among injection drug users (IDUs; Risser, Cates, Rehman, & Risser, 2010). Little research has addressed the impact of social support and coping mechanisms for parolees with psychiatric comorbidities—and even less has focused on social support among parolees experiencing depressive symptoms. Recent research demonstrates that among male parolees, lack of social support has been associated with increased drug use, high-risk sexual practices and reincarceration (Seal, Eldridge, Kacanek, Binson, & MacGowan, 2007). In contrast, stable social support has been associated with increased health care access in HIV-positive formerly incarcerated men (Harzke, Ross, & Scott, 2006), and appears to buffer the relationship between polydrug use and depressive symptoms among HIV-positive drug users (Mizuno, Purcell, Dawson-Rose, & Parsons, 2003).

Lack of positive coping skills often leads to resumption of high-risk behaviors, including, IDU, and reincarceration (Haney, 2003; Marlow, 2007; Travis, Solomon, & Waul, 2001). Religious participation is cited in the literature as a positive way of coping for incarcerated individuals. Levitt and Loper (2009) revealed that 70.3% of inmates reported some participation in religious activities, and those who perceived high levels of support from religious participation reported lower levels of depression. Other measures of religiosity/spirituality showed significant improvements in depression (Boelens, Reeves, Replogle, & Koenig, 2009), better emotional health (Allen, Phillips, Roff, Cavanaugh, & Day, 2008), and improved psychological adjustment to prison (Clear & Sumter, 2002) among samples of inmates who reported prayer or other religious participation.

An individual's well-being and psychosocial outcomes may be related to peer attachments, although few studies have examined mental health in relation with gang membership in formerly incarcerated individuals. Gang membership is an important factor of adolescent peer relationships among those who have increased deviant behavior and substance use (Gatti, Tremblay, Vitaro, & McDuff 2005; Swahn, Bossarte, West, & Topalli, 2010). Gang membership is also correlated with higher levels of depression, anxiety, and violent behavior (Harper, Davidson, & Hosek, 2008).

Childhood Experiences, Parental Attachment and Adult Mental Health

Adolescent self-concept is correlated to depressive symptoms in early adulthood (Park, 2003). Self-esteem is directly affected by parental attachment in children (Liable, Carlo, & Roesch, 2004), and adolescent self-esteem appears to play a limited role in the development of violent behavior (Boden, Fergusson, & Horwood, 2007). However, the relationship between self-esteem in adolescence and later mental health and substance abuse outcomes in adulthood is limited, demonstrating that the psychosocial context that fosters self-esteem may more clearly predict adult mental health outcomes (Boden, Fergusson, & Horwood, 2008).

Adverse childhood experiences, including physical, psychological, and sexual abuse, also impact children's mental health (Matsuura, Hashimoto, & Toichi, 2009). Children who have been maltreated show twice the amount of depressive symptoms than those who have not (Lansford et al., 2002). Parenting strategies and parental psychopathology also impact children's mental health (Vostanis et al., 2006). A growing body of research indicates that parental factors impact children's mental health and problem behavior, including parental alcoholism (Christoffersen & Soothill, 2003; Peiponen, Laukkanen, Korhonen, Hintikka, & Lehtonen, 2006; Rangarajan, 2008), parental substance abuse and violence (Hanson et al., 2006), and maternal depression (Peiponen et al., 2006).

Among adolescents entering the criminal justice system, mental illness plays a large role. For male youth, prevalence rates of mental illness in juvenile detention are as high as 60–70% (Golzar, Hunt, & Anoshiravani, 2006). As many as 45% of male youths in the juvenile detention system have experienced some form of abuse (Abrantes, Hoffman, & Anton, 2005). These effects carry through to adulthood. Childhood sexual abuse by a family member is associated with violent behaviors including homicide in adulthood (Brewer-Smyth & Burgess, 2008), poor adult psychological well-being (Roberts, O'Connor, Dunn, Golding, & the ALSPAC Study Team, 2004), and adult alcoholism and depression (Anda et al., 2002). Poor early parent-child relationships are correlated with adults' increased psychological distress (Mallers, Charles, Neupert, & Almeida, 2010). Adult children of alcoholics also report more depressive symptoms than those whose parents were not alcoholics (Anda et al., 2002; Kelley et al., 2010). The apparent intergenerational cycle of adverse childhood experiences, mental illness, alcoholism, substance use and criminal

justice involvement make understanding these issues of primary importance (Barreras, Drucker, & Rosenthal, 2005; Dube, Anda, Felitti, Edwards, & Croft, 2002, Wu, Schairer, Dellor, & Grella, 2010).

Depressed parolees are less likely to make use of effective coping strategies, hampering their re-integration into society. Understanding the correlates of depression among homeless parolees could improve planning for post-release services.

The Present Study

Parolees with depressive symptoms are less likely to make use of effective coping strategies, hampering their re-integration into society. Understanding the correlates of depressive symptoms among homeless parolees could improve planning for post-release services.

As part of a larger investigation, the purpose of this study is to determine the correlates of depressive symptoms for men ages 18–60 who have been released on parole within the last 30 days, who are participating in a residential substance abuse treatment program, and who report homelessness. Research questions include: 1) What is the profile of homeless men on parole at a community treatment center in Los Angeles, in relation to sociodemographics, substance abuse history, and psychological resources? and 2) What are the predictors of depressive symptoms among homeless men on parole in a model including sociodemographics, family/childhood history, *physical health, lifetime symptoms/problems, serious drug use, substance treatment, and psychosocial measures*?

Method

Sample

The convenience sample of 157 recently-released parolees were administered baseline assessments. Participants were recruited from a 187-bed residential drug treatment facility in southern California. They were eligible if they met the following criteria: a) released from prison within the last 30 days; b) had a history of drug use prior to their last entry into the prison system; c) age 18–60; d) entered the participating drug treatment program; e) labeled as homeless on their pre-release prison form; and f) willing to provide informed consent. Almost all (93%) of the men who met study criteria participated in the study and were paid \$20 for completion of the baseline assessment. Participants were excluded if they were monolingual speakers of languages other than English or Spanish; and were judged to be cognitively impaired by the research staff. The UCLA Human Subjects Protection Committee approved the study.

Instruments

Sociodemographic information was collected by a structured questionnaire that assessed 15 items relating to age, birthdate, race/ethnicity, education, marital status, number of parents in birth family, family SES, relationship status with parents, childhood abuse, country of birth, physical health, lifetime symptoms and problems not directly caused by alcohol or drug use, history of homelessness.

Parental and Family Relationships were assessed by a series of questions relating to: a) Relationship with Parents (one item measured on a 6-point Likert scale ranging from “Excellent Relationship” to “No Relationship”); b) Closeness of Family (measured on a 6-point Likert scale ranging from “Very Close” to “Don’t Know”); and c) Supportiveness of the Mother and/or the Father (measured on a 5-point Likert scale ranging from “Very Supportive” to “Not Around”).

Self-Esteem was measured using the revised Coopersmith (1967) 23-item Self-Esteem Inventory (SEI). The internal consistency of this scale with homeless males was .83 (Nyamathi et al., 1993; 1997); in the present study, it was .84. Additionally, parolees were asked how they had felt about themselves as teenagers on a 5-point Likert scale ranging from “liked yourself a great deal” to “disliked yourself a great deal.”

Social Support was measured by 18 items from the Medical Outcomes Study (MOS) Social Support Survey (Sherbourne & Stewart, 1991). These items contained 4 subscales: emotional support (8 items), tangible support (3 items), positive support (4 items) and affective support (3 items). Reliabilities for these subscales in this sample were .95, .86, .91 and .88, respectively.

Coping behaviors were measured by 12 items from Carver's (1997) Brief Cope and represent six separate subscales, with two items for each subscale. The items are rated on a 4-point Likert scale from “not at all” to “a lot.” Internal consistencies for these subscales in this study were .61 for self-blame coping, .66 for denial coping, .74 for disengagement coping, .76 for instrumental support coping, .80 for planning coping and .84 for religious coping.

Perceived health status was measured on a 5-point scale from “excellent” to “poor”, and a dichotomous item (any vs none) inquired about past six-month hospitalization. Health status was dichotomized at fair or poor versus better health.

Drug and alcohol use behaviors six months prior to the recent incarceration were measured by a modified Texas Christian University (TCU) Drug History form (Simpson & Chatham, 1995). This questionnaire has been tested with men and women with a history of drug addiction and homelessness. The modified form recorded the frequency of use of alcohol, tobacco and 7 drugs and selected combinations of drugs used by injection and orally during a six-month period before the last incarceration and also elicited information about lifetime use. Favorable results regarding the reliability and validity of data collected in this format have been reported by Anglin et al. (1996).

Depressive Symptoms were assessed with the 10-item short form of the Center for Epidemiological Studies Depression (CES-D) scale (Radloff, 1977), which has been validated for use in homeless populations (Nyamathi et al., 2006; 2008). The 10-item self-report instrument is designed to measure depressive symptoms in the general population (Andresen, Malmgren, Carter, & Patrick, 1994) and measures the frequency of a symptom in the past week on a 4-point response scale from 0 Rarely or none of the time (Less than 1 day) to 3 All of the time (5–7 days). Scale scores range from 0 to 30, with higher scores indicating greater symptom severity. Scale scores were dichotomized at a cutoff value of 10 (8 and 10 are frequently-used figures to suggest depressive symptoms). The internal reliability of the scale in this sample was .80. As the CES-D scale is not a diagnostic screener for depression, we refer to participants experiencing high level of depressive symptomatology if they reported a score of 10 or higher on the CES-D.

Procedure

A collaborative relationship was established with the director of the drug treatment program, which led to the submission and subsequent funding of the study. Data were collected between February to September, 2010. Trained research staff screened potential study participants who resided at the drug treatment site for eligibility criteria in a private area of the facility. Human Subject approved flyers were posted at the site and presentations were made at the treatment facility by trained staff.

After informed consent for the study had been discussed, read and signed for parolees who met the eligibility criteria, staff administered a brief two-minute structured questionnaire asking about socio-demographic characteristics and hepatitis-related information, and a detailed locator guide that elicited information about hangout places, family/friends addresses, etc. If parolees were eligible and interested in participating in the study continued, the research staff read and discussed the final informed consent. Subsequent to this, the baseline questionnaire was administered by a tablet PC, which allowed parolees to respond to questions in privacy.

Statistical Analysis

Frequencies and percents or means and standard deviations described the study variables. Unadjusted relationships between depression and sociodemographic characteristics, family/childhood measures, lifetime symptoms and problems, substance use and treatment characteristics and psycho-social measures were assessed with chi-square and two-sample t tests, depending on the underlying distributions of the potential correlates. Variables that were associated with depression at the .15 level in these analyses were then used as predictors of depression in a stepwise backward logistic regression analysis; the retention level was .10. To determine whether effects were consistent across race/ethnicity, potential interactions between race/ethnicity and variables in the final set of predictors were examined; an interaction between ethnicity, specifically Whites, African-Americans and non-Mexican or Mexican-American Latinos, and cognitive problems was observed. Four design variables were constructed to represent their interaction and the regression model was rerun with the inclusion of three of these variables. The reference group was Whites, African-Americans and Latinos of non-Mexican heritage who did not report cognitive difficulties. Predictors in the final model were checked for multicollinearity and the Hosmer-Lemeshow test was used to assess goodness of fit. The p value for the Hosmer-Lemeshow test was .538.

Results

Sociodemographic Characteristics

To assess the profile of homeless men on parole at a community treatment center, we determined the sociodemographic, characteristics, substance abuse history, and psychological resources of our sample. The all male sample reported a mean age of 41.9 years (SD: 10.1; range of 22–60; Table 1). Nearly half (47%) were African-American, just over one-quarter (26%) were Mexican American, and 15% were Caucasian. Slightly over one-third of the sample reported committing a serious violent crime in the past. A history of childhood sexual abuse was reported by 16% of the participants, while childhood physical abuse and verbal abuse was reported by 31% and 47%, respectively. Over 40% were in prison before the age of 21 and almost half reported belonging to a gang. Health status was very good or excellent for 44% of the sample; just over half (51%) reported a previous hospitalization for physical health. About 40% of the sample reported experiencing high level of depressive symptoms (CES-D = 10).

While data was not shown, the family SES ranged from middle class to poor for the overwhelming majority of parolees (93%); furthermore, the relationship with parents ranged from fair/average to no relationship for over half. Closeness of the family appeared better, with a range of “very close” to “at times very close” for about two-thirds of the sample. Feelings about self as a teenager ranged from “liked self a great deal” to “liked self moderately” for more than two-thirds of the sample (69%).

Substance Use

One of the eligibility criteria was that parolees had a history of substance use prior to their recent incarceration documented in their record. Among serious drugs ever used, the most prevalent were crack (91%), cocaine (65%), methamphetamine (49%) and hallucinogens (48%) (See Table 2). Approximately one-third reported prior residential treatment for alcohol use, and an additional 12% had participated in non-residential treatment for their alcohol use. Nearly one-quarter had also attended a non-residential program for drug use.

Psychological Resources

Self-esteem was rated slightly above the midpoint by the participants ($M = 14.1$; $SD 4.9$), while coping varied depending on the style of coping. More specifically, denial coping and disengagement coping were utilized less, while self-blame coping, planning, religious and instrumental support coping were utilized more frequently. In terms of support, participants reported moderate amounts of the four types of support examined.

Associations with Depressive Symptoms

In relation to assessing the predictors of depressive symptoms among our sample, we discovered that a number of sociodemographic variables were not associated with depression in this sample of men. These included age, education and having one or more children (Table 3). Race/ethnicity was significantly related to depression. In particular, Whites, African-Americans and Latinos with ethnic roots outside of Mexico were over-represented in the depressed group. A number of family/childhood variables were also associated with depression. These variables included low family SES, lack of family cohesion, poor relationship with parent(s) and abuse. Childhood abuse encompassed sexual, physical and verbal abuse. Moreover, poor self-esteem as a teenager was also related to current depression.

Physical health, as measured by general self-assessment and history of hospitalization, was also related to depression. As shown in Table 3, violent behaviors, hallucinations, binge drinking, and serious learning problems and cognitive difficulties were all strongly associated with depression in the sample.

In terms of psychosocial measures and resources, high level of depressive symptoms was related to self-esteem, as well as to emotion social support ($p = .007$) and positive interaction ($p = .03$). All of the coping variables except religious coping were also related to depressive symptoms; these included active, denial, blame, disengagement and instrumental coping. No associations with depressive symptoms were discovered for affection or tangible social support.

Multivariate Results

Two lifetime problems were important in logistic regression analysis for depression (Table 4). The first was violent behavior that the men reported as difficult to control; this measure had an overall positive association with depression. The second was cognitive difficulty, which interacted with race/ethnicity. Compared to African-Americans, Whites and Latinos of non-Mexican heritage without cognitive problems, men of Mexican-American, Mexican, Asian and other ethnicities who also reported no cognitive difficulties were less likely to be depressed. There was also a trend for African-Americans, Whites, and Latinos of non-Mexican heritage who reported cognitive problems to be more likely to have experienced high depressive symptoms than those of the same ethnicities without these problems. Physical abuse was the only family/childhood measure that remained significant when other correlates of depression were controlled. While substance use variables were not important themselves in the regression model, having participated in a non-residential alcohol

treatment program was a positive predictor of current depression. Two psycho-social variables were also in the model. Self-esteem was inversely related to depression, while disengagement coping had a direct relationship with depression.

Discussion

In 2002, Anda et al. described the childhood antecedents of depression and alcoholism in a large adult sample. They discovered an independent, graded association between the number of adverse childhood experiences (such as physical, sexual, or psychological abuse) reported and the risk of alcoholism and depression. In this study, we examined both childhood factors and current factors to provide a broader picture of the correlates of depression in homeless parolees.

Consistent with the literature, we revealed high level of depressive symptoms to be prevalent among homeless parolees. These participants suffered from depressive symptoms at a rate of 40%, roughly six times that of the general U.S. population (Kessler, Chiu, Demler, & Walters, 2005; US Census Bureau, 2002). Moreover, these parolees were also confronted by a host of socio-economic as well as physical adversities, such as poverty, serious illness (requiring hospitalization), fractured family relations, and abusive childhoods. As expected, substance abuse went hand in hand with depressive symptoms in this population. Serious drug use was pervasive and over half reported binge drinking.

Other factors strongly associated with depressive symptoms included violent behaviors, hallucinations, serious learning problems and cognitive difficulties. Many psychosocial factors measured in this group of homeless parolees were significantly related to their depressive symptoms - self-esteem, emotional support, positive interaction, and ineffective coping skills such as denial, blame, and disengagement. In this study, a lack of social support, along with a disengaged coping style, are associated with depressive symptoms in this study. Logistic regression analyses revealed predictors of depressive symptoms including childhood physical abuse, non-residential alcohol treatment, violent behaviors, low self-esteem and disengagement coping. However, being Mexican-American, Mexican, American, Indian, Asian and of another race ethnicity without cognitive problems was inversely related to depressive symptoms.

The high level of depressive symptoms among substance-abusing parolees is perhaps not surprising. Since the late 1950s, the deinstitutionalization movement in mental health services has shifted emphasis from state-funded mental institutions to community-based programs (Petersilia, 2003). However, the movement, while more humane in some aspects than institutionalization, has also left many people with mental illnesses, without adequate treatment or proper supervision for medications and other services. As a result, prisons are now increasingly used as the default venue to warehouse persons with mental illnesses as many state-funded mental institutions were closed (Petersilia, 2003).

All prison inmates, except for the few on death row and with life sentences, will eventually be paroled back into the community. The implications for correctional agencies are serious, as people with mental disorders are released into the community from a highly structured environment but expected to make independent decisions and adjust to a different life (Taxman, 2004). According to Petersilia (2003), the majority of parole agencies in the country are not prepared to deal with large number of clients with mental disorders. Unless parolees exhibit explicit psychiatric symptoms or their offenses were determined to have been caused by mental illness, mental health problems among parolees are either ignored or underserved (Lurigio, 2001).

Many parolees quickly revert back to old behaviors that lead to re-arrest, as their reentry process is complicated by numerous contextual and psychological stressors (Sung & Richter, 2006). This is particularly notable in California. With a prison population of 164,000 and another 108,000 parolees in the community, the state of California spends more on its correctional system than any other state in the nation (CDCR, 2009a). However, community reentry efforts in California have for decades seen little success. Roughly 40% of parolees are returned to prison within 12 months of release, and the rate of reincarceration increases to 70% within three years after release (Zhang, Roberts, & McCollister, 2009; Zhang, Roberts, & Callanan, 2006).

Unfortunately, as discussed earlier, little research has been done regarding mental illness on parole populations (Skeem & Louden, 2006) or the prison population in general (Petersilia, 2003: 37). Such lack of basic knowledge hinders clinical intervention in community corrections and other reentry efforts, because mental health problems, substance abuse, and criminal activities are well known to correlate strongly with one another (Forrester, Chiu, Dove, & Parrott, 2010; Sacks et al., 2009; Shinkfield, Graffam, & Meneilly, 2009).

To make matter worse, the use of illicit drugs, such as those identified in this study, is also known to correlate significantly with violent behaviors and homelessness (Cartier, Farabee, & Prendergast, 2006; Darke, Torok, Kaye, Ross, & McKetin, 2010; Felson & Staff, 2010). It is therefore important, from a policy-making perspective, to recognize the complexity and challenges confronting community reentry programs as parolees face multiple obstacles to recovery and reintegration. Proper assessment and identification of these clinical and social obstacles will enable health care and social service providers to explore and deploy effective interventions.

Limitations

There are several limitations in this study that warrant cautions when interpreting the findings. First, the study sample is relatively small and based on convenience sampling, which limits the generalizability of the findings. Second, participants were recruited from a residential drug treatment facility, which may have magnified the prevalence and severity of depression and other psychosocial adversities. Although in concordance with existing literature, the findings of the high rates of depressive symptoms and other comorbidities perhaps were unique to this population and may reflect at best an exaggeration of the challenges facing certain segments of the correctional population in California. In other words, one would expect to find high rates of depressive symptoms and other mental health problems among homeless and substance abusing parolees.

In addition, the findings are based upon self-report data and two of the subscales of coping had relatively low reliability (Cronbach's $\alpha = .61$ for self-blame coping and $.66$ for denial coping). However, the disengagement coping style, which was in the final model for depression, was more reliable at $.74$ and therefore can be interpreted with greater confidence. Although these results demonstrate the correlates of depressive symptoms among men on parole, cross-sectional data cannot determine the causes of depression in this sample. Finally, we do not claim that all of those with depressive symptoms might necessarily meet criteria for a DSM-IV diagnosis of depression, although certainly it is known that depression remains under-diagnosed in the general population (Ani et al., 2008).

Conclusion

Despite the limitations, findings in this study provide further evidence on two major challenges confronting correctional agencies across the nation in their reentry efforts: (a) proper assessment of mental health problems among prison inmates to be released into the

community; and (b) provision of appropriate services. High level of depressive symptoms, as indicated in this study sample, may be common in the general parolee population. This leads to the question of how these ex-prison inmates, already facing insurmountable psychosocial and economic adversities, may cope with their mental health problems. Illicit drugs and alcohol are likely to become their obvious choice of “self-medication.” Thus, mental health implications are critical. The persistently high rates of recidivism in California suggest that extensive screening and treatment of parolees with mental illnesses should be an integral part of community reentry programs. This will ensure the mobilization of necessary health services to stabilize and treat a sizeable number of released inmates to decrease the risk of recidivism. It is also important for healthcare providers and other correctional service agencies to become aware of the widespread mental health challenges in the correctional population and devise interventions that target the underlying causes.

Understanding that fractured, dysfunctional families are an important component in the etiology of alcoholism, substance abuse, and depression could be critical to the diagnosis and treatment of depression in a homeless, parolee population. In addition, a better understanding of the factors that lead to high level of depressive symptoms can assist in primary prevention efforts. As children, the homeless parolees in this study often grew up in extremely dysfunctional family relationships. That, combined with cognitive problems, social isolation, and poor coping styles is correlated with the high level of depressive symptoms and substance abuse revealed in this sample. Clearly, our study findings support the need for a multifaceted system for primary prevention in childhood and intervention and provision of treatment for homeless parolees with comorbid psychiatric disorders.

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Table 1

Sample Characteristics

Measure:	Mean	(SD)
Demographic:		
Age	41.9	(10.1)
Education	11.6	(1.9)
Race/Ethnicity:	N	%
African American	73	46.5
White	24	15.3
Mexican American ^a	41	26.1
Asian/Pacific Islander	3	1.9
Other Hispanic	5	3.2
Other	9	5.7
American Indian	2	1.3
Health Status:		
Excellent	28	18.2
Very Good	39	25.3
Good	50	32.5
Fair	30	19.5
Poor	7	4.6
Any Hospitalization for Physical Health	80	51.0
Any Children	99	63.9
Depressive Symptoms	63	40.1
Family/Childhood:		
Relationship w/Parents:		
Excellent	35	22.3
Good	42	26.8
Fair/Average	43	27.4
Poor	20	12.7
Very Poor	10	6.4
No Relationship	7	4.5
Childhood Physical Abuse	48	30.6
Childhood Sexual Abuse	25	15.9
Childhood Verbal Abuse	74	47.1
Lifetime Symptoms/Problems ^b		
Violent Behaviors	54	34.4
Hallucinations	26	16.6
Serious Learning Difficulties	69	44.0
Cognitive Difficulties	30	19.1

^aIncludes two Mexican nationals b Not directly resulting from alcohol/or drug use

Table 2**Substance Use, Substance Treatment and Psychosocial Resources**

	N	%
Serious Drugs^a:		
Ever Used Crack	142	90.5
Ever Used Cocaine	99	64.7
Ever Used Hallucinogens	75	47.8
Ever Used Methamphetamine	75	49.0
Ever Used Heroin	60	38.2
	Mean	SD
Substance Use Treatment		
Any Residential Treatment for Alcohol Use	54	34.4
Any Non-Residential Treatment for Alcohol Use	18	11.5
Any Residential Treatment for Drug Use	106	67.5
Any Non Residential Treatment for Drug Use	38	24.2
Psychosocial Resources (range)		
Self-Esteem (0–23)	14.1	4.9
Emotional Support (8–40)	26.6	9.2
Tangible Support (3–15)	9.7	3.7
Positive Interaction Support (4–20)	13.5	4.7
Affection Support (3–15)	10.1	3.8
Active Coping (1–4)	3.1	0.9
Planning Coping (1–4)	3.1	0.9
Denial Coping (1–4)	1.9	0.9
Blame Coping (1–4)	2.7	1.0
Disengagement Coping (1–4)	1.9	0.9
Instrumental Support Coping (1–4)	2.9	1.0
Religious Coping (1–4)	2.9	1.1

^a four subjects declined to answer questions about use of individual drugs

Table 3

Associations of Selected Variables with Depression

Measure	Depression				p value ^a
	Yes		No		
	Mean	(SD)	Mean	(SD)	
Sociodemographic					
Age	42.0	(9.5)	41.8	(10.6)	.889
Education	11.4	(2.2)	11.7	(1.5)	.386
Race/Ethnicity:	N	%	N	%	p value
White/AA/Other Latino	48	76.2	54	57.5	.016
Any Children	41	65.1	58	63.0	.796
Family/Childhood					
Low-income Family	19	30.2	15	16.0	.034
Poor Relationship w/parents	17	27.0	13	13.8	.040
Not Close Family	31	49.2	27	28.7	.009
Childhood Sexual Abuse	20	31.8	5	5.3	.001
Childhood Physical Abuse	33	52.4	15	16.0	.001
Childhood Verbal Abuse	42	66.7	32	34.0	.001
Childhood Problems	39	61.9	26	27.7	.001
Poor Self-Esteem as Teen	31	49.2	18	19.2	.001
Physical Health					
Fair/Poor Health	24	38.7	13	14.1	.001
Any Hospitalization for Physical Health	40	63.5	40	42.6	.010
Lifetime Symptoms/Problems ^c					
Violent Behaviors	36	57.1	18	19.2	.001
Hallucinations	21	33.3	5	5.3	.001
Serious Learning Difficulties	20	31.8	10	10.6	.001
Cognitive Difficulties ^d	44	69.8	25	26.6	.001
Serious Drug Use Ever ^e					
Cocaine	44	73.3	55	59.1	.073

Measure	Depression				p value ^a
	Yes		No		
	Mean	(SD)	Mean	(SD)	
Methamphetamine	35	58.3	40	43.0	.064
Hallucinogens	36	60.0	39	41.9	.029
Binge Alcohol Use	31	51.7	30	32.3	.017
Substance Treatment					
Any Nonresidential Alcohol Treatment	15	23.8	3	3.2	.001
Psychosocial Measures					
Self-Esteem	11.0	4.9	16.1	3.8	.001
Social Support:					
Emotion	3.0	1.0	3.5	1.2	.007
Affection	3.2	1.2	3.5	1.3	.210
Tangible	3.1	1.1	3.4	1.3	.112
Positive Interaction	3.1	1.1	3.5	1.2	.030
Coping:					
Active	3.0	0.8	3.2	0.7	.035
Denial	2.3	0.9	1.7	0.9	.001
Blame	3.0	1.0	2.5	1.0	.001
Disengagement	2.4	0.9	1.6	0.8	.001
Instrumental Support	2.5	0.9	3.1	0.9	.001
Religious	2.7	1.1	3.0	1.1	.151

^aBased on chi-square or two sample t tests

^bIncludes 5 Latinos from non-Mexican backgrounds

^cNot directly resulting from alcohol or drug use

^dTrouble understanding, concentrating or remembering

^eFour participants did not answer questions about use of individual drugs

Table 4

Logistic Regression Results for Depression (N=157)

Measure	B	s.e.	95% CI	p value
Physical Abuse in Childhood	1.87	1.3	0.79, 2.95	.001
Non-Residential Alcohol Treatment	2.79	0.9	1.01, 4.57	.002
Violent Behaviors	1.08	0.5	0.04, 2.13	.042
Self-Esteem	-0.19	0.1	-0.33, -0.06	.005
Disengagement Coping	0.84	0.3	0.26, 1.41	.004
AA/White with Cognitive Problems ^a	1.08	0.6	-0.06, 2.23	.064
Other Ethnic with Cognitive Problems ^b	0.84	0.7	-0.58, 2.28	.252
Other Ethnic without Cognitive Problems ^c	-2.39	1.1	-4.51 -0.28	.029

^a includes 5 "other" Latinos with cognitive problems^b Includes Mexican-Americans, Mexicans, American Indians, Asians and men of other races/ethnicities with cognitive problems^c Includes Mexican-Americans, Mexicans, American Indians, Asians and men of other races/ethnicities without cognitive problems