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## Parole Revocation Among Prison Inmates With Psychiatric and Substance Use Disorders

Jacques Baillargeon, Ph.D., Brie A. Williams, M.D., Jeff Mellow, Ph.D., Amy Jo Harzke, M.P.H., Steven K. Hoge, M.D., Gwen Baillargeon, M.S., and Robert B. Greifinger, M.D.

Dr. Baillargeon and Ms. Harzke are with the Department of Preventive Medicine and Ms. Baillargeon is with the Department of Correctional Managed Care, Community Health, University of Texas Medical Branch, 301 University Blvd., Galveston, TX 77555 (jbaillar@utmb.edu). Dr. Williams is with the Department of Medicine, University of California, San Francisco. Dr. Mellow is with the Department of Law, Police, Science, and Criminal Justice and Dr. Greifinger is with the Center for Research and Evaluation, John Jay College, City University of New York, New York, NY 10019. Dr. Hoge is in private practice, New York, NY, 10019

### Abstract

**Objective**—This retrospective cohort study examined the association between co-occurring serious mental illness and substance use disorders and parole revocation among inmates from the Texas Department of Criminal Justice, the nation's largest state prison system.

**Methods**—The study population included all 8,149 inmates who were released under parole supervision between September 1, 2006, and November 31, 2006. An electronic database was used to identify inmates whose parole was revoked within 12 months of their release. The independent risk of parole revocation attributable to psychiatric disorders, substance use disorders, and other covariates was assessed with logistic regression analysis.

**Results**—Parolees with a dual diagnosis of a major psychiatric disorder (major depressive disorder, bipolar disorder, schizophrenia, or other psychotic disorder) and a substance use disorder had a substantially increased risk of having their parole revoked because of either a technical violation (adjusted odds ratio [OR]=1.7, 95% confidence interval [CI]=1.4–2.4) or commission of a new criminal offense (OR=2.8, 95% CI=1.7–4.5) in the 12 months after their release. However, parolees with a diagnosis of either a major psychiatric disorder alone or a substance use disorder alone demonstrated no such increased risk.

**Conclusions**—These findings highlight the need for future investigations of specific social, behavioral, and other factors that underlie higher rates of parole revocation among individuals with co-occurring serious mental illness and substance use disorders.

Over the past four decades the widespread deinstitutionalization of persons with serious mental illness (1–3), the increase in drug-related arrests (4,5), and the reduction of community-based mental health care (1,2) have resulted in a substantial overrepresentation of persons with serious mental illness in the U.S. correctional system (1,2,6). Approximately 10% to 20% of U.S. prison inmates are estimated to have an axis I major mental disorder of thought or mood, such as major depressive disorder, bipolar disorder, or schizophrenia (7–12). Moreover, a majority of inmates with serious mental illness have a comorbid substance use disorder (7,12–15).

A number of investigations have examined predictors of recidivism among released inmates (16–19). Although results of these studies—conducted throughout a variety of criminal justice

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systems worldwide—exhibit substantial variability, several factors have consistently emerged as strong predictors of recidivism, including male gender (17,20–22), single marital status (17,20), history of criminal offense (18), and substance use disorders (20,21). Psychiatric disorders have been found to be less consistent predictors of criminal recidivism. A number of studies have shown that inmates with mental disorders exhibit reincarceration rates that are either comparable to (23,24) or lower than (21,25) rates for inmates without psychiatric disorders. However, a recent investigation of over 79,000 Texas prison inmates found that having a major psychiatric disorder was strongly associated with repeat incarcerations (26). This finding persisted for all four categories of major psychiatric disorders under study, including major depressive disorder, bipolar disorder, schizophrenia and schizoaffective disorder, and nonschizophrenic psychotic disorders.

Despite the substantial body of research on mental disorders and criminal recidivism, scarce information is available on the impact of psychiatric and substance use disorders among inmates released on parole (19). Every year approximately 500,000 inmates in the United States are released under parole supervision (27). Parolees with mental health and substance use disorders are frequently required to attend community-based treatment programs as a condition of their supervised release; this requirement provides correctional administrators with the leverage necessary to compel treatment participation and adherence. Former inmates who violate the conditions of their parole may face a number of sanctions that range from minor measures, such as increased drug testing, to more intermediate sanctions, such as confinement in a residential treatment program, to the most severe sanction: parole revocation and reincarceration in the prison system. Approximately 40% of parolees are returned to prison as a result of revocation each year (27). Understanding the extent to which parolees with serious psychiatric disorders and comorbid substance use disorders have an increased risk of violating conditions of parole or committing new criminal offenses is important for the fields of correctional and community psychiatry. In particular, such information may serve as the basis for the development of targeted interventions to reduce the rate of parole violations and new crimes among parolees with mental illness and addiction. The purpose of our study, therefore, was to examine the association of psychiatric and substance use disorders and parole revocation among inmates from the Texas Department of Criminal Justice (TDCJ), the largest state prison system in the United States (28).

## Methods

### Design and study sample

This retrospective cohort study was designed to determine whether there was an association between co-occurring serious mental illness and substance use disorders and the odds of reincarceration among parolees during the 12 months after release from prison. A secondary objective was to determine whether the risk of reincarceration increased among parolees who had either, but not both, of these disorders. The study sample was composed of 8,149 inmates who were released on parole from the TDCJ between September 1, 2006, and November 31, 2006. An additional 568 inmates (7%) who were released on parole during this period were excluded from the study because they did not have a substance abuse screening test score in their electronic medical record. Analyses using the Mantel-Haenszel chi square statistic showed that the excluded subgroup did not exhibit any statistically significant ( $p \leq .05$ ) differences in the demographic, clinical, or correctional characteristics compared with those included in the study.

### Measures

An electronic database containing all TDCJ incarceration records was used to identify members of the cohort who were reincarcerated in a TDCJ facility within 12 months of their release date

because their parole was revoked as a result of a technical violation of parole rules (for example, positive drug test results, not reporting to parole officer, failure to notify parole board of address change, or failure to participate in a mandated treatment program) (29,30) or a conviction for a new offense. The medical record component of the database was then used to identify the members of the cohort who were diagnosed as having a major psychiatric disorder in either of two broad categories: major mood disorders (major depressive disorder and all bipolar disorders) and all psychotic disorders (schizophrenia, schizoaffective disorder, delusional disorders, substance-induced psychosis, and psychotic disorder not otherwise specified). Because an inmate could not simultaneously have a diagnosis of a major mood disorder and a major psychotic disorder, these two broad diagnostic categories were mutually exclusive. Self-reported demographic data—including age, race and ethnicity, and gender—were also obtained from the database. Correctional characteristics (criminal offense classification and length of prison sentence) associated with the parolees' most recent imprisonment were also obtained from TDCJ electronic records. Criminal offense classification was based on National Crime Information Center uniform offense codes. Violent criminal offenses included homicide, kidnapping, sexual assault, robbery, assault, and terrorism. All other criminal offenses were classified as nonviolent. The two electronic data sets were linked using a common numeric identification variable. This study was reviewed and approved by the University of Texas Medical Branch Institutional Review Board.

### **Mental health evaluation**

All members of the study cohort underwent medical and psychiatric examinations at the time of their intake to prison. The combined evaluation lasted approximately 60 minutes and consisted of a detailed medical history and physical examination, a mental health screening, and a number of laboratory tests. The mental health screening was conducted in a standardized fashion across all prison sites by mental health nurses or mental health professionals and consisted of a standardized diagnostic interview that included an assessment for displayed symptoms of a psychiatric disorder, a history of mental health treatment, current suicidal ideation, prior suicidal gestures, displayed unusual behavior, affective distress, and unusual nature of criminal offense. The intake screening determined whether an inmate should be referred for a formal mental health evaluation. If a referral was made, the evaluation was conducted by master's-level mental health professionals and followed a *DSM-IV*-guided interview structure.

A diagnosis of a psychiatric disorder established during this evaluation was based on *DSM-IV* criteria and recorded in the inmate's electronic medical record. All incoming inmates who had a major psychiatric disorder, such as major depressive disorder, bipolar disorder, schizophrenia, or another psychotic disorder, and inmates who reported a history of treatment with psychotropic medication or who appeared to require such treatment were subsequently referred to a staff psychiatrist or a psychiatric midlevel practitioner for further evaluation and treatment. Diagnoses that were made or confirmed by psychiatric providers were also based on *DSM-IV* criteria. Overall, approximately 20% of all TDCJ inmates are referred for psychiatric evaluation during their incarceration. All psychiatric diagnoses used in this study's analyses were ascertained from the index incarceration records.

### **Substance use disorder evaluation**

All incoming TDCJ inmates also were screened for a substance use disorder using the Texas Christian University Drug Screen II (TCUDS) (31–33). The TCUDS is based on *DSM* criteria and includes 19 items that examine diagnostic symptoms of drug abuse and dependence (including alcohol). Inmates with a composite score of >5 are considered to exhibit chemical dependency (30,32). In addition, the Addiction Severity Index (ASI) is used to retest inmates when their TCUDS score indicates little or no drug use but information such as self-admission,

record of offense, or other reports suggests a history of substance use. The ASI (34–36) uses a structured-interview format to examine several areas of functioning that are commonly affected by substance abuse. In comparison to other drug screening instruments, both the TCUDS and the ASI have been found to be highly reliable over time (37). Both instruments are reported to have high positive predictive values and high sensitivity, indicating a high degree of accuracy in excluding nondependent participants and an ability to identify a substantial proportion of substance-dependent participants (35). For this investigation, inmates with an indication of substance abuse or dependence on either the TCUDS or the ASI were classified as having a substance use disorder.

### Statistical analysis

All statistical analyses were performed using SAS, version 8. Logistic regression analysis was used to examine differences in parole revocation across the subgroups and to calculate adjusted prevalence odds ratios (ORs) and corresponding 95% confidence intervals (CIs). All logistic regression models were adjusted for age, gender, race and ethnicity, previous parole revocation, criminal offense classification, and duration of current sentence. Information on at least one of the aforementioned demographic or correctional variables was unavailable in <1% of the study population (N=80); inmates with missing data were excluded from the analysis.

### Results

Of the 8,149 inmates who were released on parole during the study period, the vast majority were male (88%), were younger than 50 years (84%), and had been incarcerated for a nonviolent offense (78%) (Table 1). Forty-eight percent had been reincarcerated for a parole revocation within the previous ten years. Overall, 8% of the study cohort (N=626) was diagnosed as having a major psychiatric disorder (major depressive disorder, bipolar disorder, schizophrenia, or other psychotic disorders). Two percent of the cohort had a major psychiatric disorder alone and 6% had a co-occurring substance use disorder. A majority (N=5,710, 70%) of the cohort was diagnosed as having a substance use disorder. Of these, 64% had a substance use disorder alone.

Table 2 shows the rates of parole revocation and odds of revocation by diagnostic groups. In comparison to the referent group (that is, inmates with neither a psychiatric nor a substance use disorder), the group with comorbid disorders exhibited nearly a twofold greater risk of revocation as a result of a parole violation (OR=1.7) and nearly a threefold greater risk for revocation as a result of a new offense (OR=2.8). The odds of revocation as a result of a parole violation were also higher for inmates in both major psychiatric subgroups if they had a comorbid substance use disorder: all major mood disorders (OR=1.5) and all psychotic disorders with (OR=1.9). For revocation as a result of a new offense, the increased risk was found only for inmates with a major mood disorder and a comorbid substance use disorder (OR=2.9). Our assessment of single disorders showed that neither inmates with a major psychiatric disorder alone nor those with a substance use disorder alone had a statistically significant increased risk of parole revocation as a result of a violation of parole rules or a new criminal offense. These null findings also applied for each of two specific subgroups of major psychiatric disorders.

### Discussion

Our study showed that among Texas prison inmates released under parole supervision, those with a dual diagnosis of a major psychiatric disorder and a substance use disorder were more likely than inmates with no psychiatric or substance use disorder to have their parole revoked. The likelihood of revocation was also higher each of the two major psychiatric subgroups (all major mood disorders and all psychotic disorders). Our analyses showed, however, that inmates

with single disorders—a major psychiatric disorder alone or a substance use disorder alone—did not have an increased risk of parole revocation.

There are a number of potential pathways whereby the risk of reincarceration may increase among parolees who are diagnosed as having co-occurring psychiatric and substance use disorders. As they reenter their home communities, most former inmates are faced with a variety of social and economic challenges, including finding housing and employment, reestablishing connections with family, managing finances, and accessing health care (38). Dealing with these challenges along with initiating and maintaining community-based treatment for both mental illness and a substance abuse problem may be exceedingly difficult (8,38). Parolees with these conditions may face increased hardship in gaining and keeping employment (39). Even those with occupational skills may face discrimination by prospective employers. Moreover, for parolees who do find employment, the presence of a psychiatric or substance use disorder may hinder their ability to complete successful job training, carry out daily work-related tasks, and interact with fellow employees.

Persons with co-occurring psychiatric and substance use disorders are reported to have a much poorer prognosis than those with a single disorder (8,40). In particular, comorbid psychiatric illness and substance abuse is associated with a higher degree of psychotic symptoms, criminal activity, and social isolation than either condition alone (40). Additionally, released inmates with dual diagnoses are reported to have higher rates of reincarceration than inmates with mental health conditions alone (41). In general, persons with comorbid psychiatric and substance use disorders exhibit poor adherence to community-based treatment. In a retrospective study that used data from the Healthcare for Communities survey, Watkins and colleagues (42) reported that the majority of persons with co-occurring disorders received neither mental health nor substance abuse treatment in the previous 12 months. Of those who do enroll in mental health or substance abuse programs, a substantial proportion exhibit poor long-term adherence to treatment regimens (40). These poor outcomes have been attributed in large part to the failure of traditional community-based programs to integrate substance abuse and mental health services into a single coordinated treatment approach (43,44). The primary disadvantage of the conventional approach to treating mental illness and substance abuse disorders via separate and parallel programs is that there is little capacity to individualize treatment for persons with co-occurring disorders (43,44). This shortcoming is particularly relevant for returning prisoners with comorbid disorders, who often have severe mental illness, have significant impairments in psychosocial functioning and cognitive function, and abuse multiple types of drugs (45).

To the best of our knowledge this is the first study to examine the association between psychiatric and substance use disorders and parole revocation in an entire state prison population. Although a handful of studies (21,23–26) have assessed recidivism among released inmates with mental illness, only one of these included an assessment of parole revocation (21). In a study of 72 Canadian parolees, Porporino and Motiuk (21) reported that compared with parolees without a major mental illness, parolees with such a condition were more likely to be reincarcerated for parole violations but less likely to be reincarcerated for committing a new criminal offense. It should be noted, however, that the study's small sample and narrow criteria for defining mental illness (that is, manic episode, schizophrenia, or schizophreniform disorder) limits its generalizability.

Our finding of increased reincarceration rates among parolees with comorbid severe mental illness and substance use disorders may be partly attributable to more frequent and focused surveillance by case managers and parole officers. In addition, it is possible that some case managers may have recommended parole revocation in an effort to obtain treatment for parolees with mental illness. Solomon and colleagues (16,46) reported that case managers

occasionally use reincarceration as a means of obtaining treatment for parolees with mental illness in need of psychiatric hospitalization but unwilling to sign a voluntary admission for hospitalization and ineligible for involuntary commitment because of restrictive admission criteria. Unfortunately, because data on specific parole programs were not available for analysis, we were unable to examine the extent to which this occurred in our study. The discretionary role of case managers and parole officers in parole revocation decisions merits further investigation.

It is noteworthy that our cohort of parolees demonstrated a substantially lower prevalence of major psychiatric disorders (8%) compared with TDCJ inmates who were issued an unsupervised release (11%) during the same three-month study period. A number of factors may underlie this disparity. Inmates with serious mental illness may be more likely to accumulate disciplinary sanctions while incarcerated, thereby reducing their opportunity for parole. These inmates may also be less likely to qualify for parole because of lack of available housing or limited mental health treatment options in the community.

The following limitations should be considered in interpreting our findings. First, because axis II disorders as well as relatively less severe axis I disorders, such as anxiety disorders, are not rigorously evaluated in the TDCJ—either during the initial mental health screening or subsequent medical encounters—we had to restrict our analyses to the more severe axis I disorders. Second, our findings are highly dependent on the reliability and validity of the screening measures, diagnoses of mental health professionals, and accuracy of data entry into the electronic medical record. However, the TDCJ policies of universal and standardized medical screening of all inmates at intake as well as standardized and validated data entry procedures minimize the likelihood of misclassification, misdiagnosis, and inaccurate data entry. Third, it should be noted that of the 626 inmates with psychiatric disorders, 475 (76%) had a comorbid substance use disorder. In view of this overlap, we elected to group the study cohort into four mutually exclusive categories: psychiatric disorder alone, substance use disorder alone, comorbid psychiatric and substance use disorders, and neither disorder. This analytic strategy relied on a single referent category and precluded our assessment of interaction effects. Additionally, it is possible that the rates of parole revocation varied across the geographic regions to which inmates returned after release. Unfortunately, we did not have access to such geographic data for the study presented here. It will be important for future investigations to examine such geographic patterns as well as their underlying correlates, including access to treatment, employment opportunities, and availability of transportation. Finally, given the retrospective nature of this study, we were unable to examine a number of important social and behavioral factors—including poverty, unemployment, and social support—that might mediate the association between psychiatric disorders and recidivism (47). Prospective evaluations of the role of such intermediate variables among paroled inmates are warranted.

Despite these limitations, this is the first study to examine the association between serious mental illness co-occurring with a substance use disorder and reincarceration after parole revocation within an entire state prison population. Because this investigation was carried out in the nation's largest state prison system (28), these findings have a high degree of statistical power and are likely to be generalizable to other prison systems in the United States.

## Conclusions

The results of our study highlight the need for future investigations of the social, economic, and behavioral determinants of parole revocation among individuals with co-occurring serious mental illness and substance use disorders. Developing a specific understanding of the pathways to parole revocation may ultimately help practitioners and policy makers formulate

effective and targeted intervention strategies. Given the substantial leverage that parole systems have to facilitate adherence to treatment regimens, such interventions have the potential to significantly improve mental health outcomes and reduce recidivism.

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## References

1. Kinsler PJ, Saxman A. Traumatized offenders: don't look now, but your jail's also your mental health center. *Journal of Trauma and Dissociation* 2007;8:81–95. [PubMed: 17804385]
2. Lamb HR, Bachrach LL. Some perspectives on deinstitutionalization. *Psychiatric Services* 2001;52:1039–1045. [PubMed: 11474048]
3. Rock M. Emerging issues with mentally ill offenders: causes and social consequences. *Administration and Policy in Mental Health* 2001;28:165–180. [PubMed: 11330013]
4. Boutwell A, Rich JD. HIV infection behind bars. *Clinical Infectious Diseases* 2004;38:1761–1763. [PubMed: 15227624]
5. Lurigio, AJ.; Swartz, JA. Changing the contours of the criminal justice system to meet the needs of persons with serious mental illness. In: Horney, J., editor. *Criminal Justice 2000: Policies, Processes, and Decisions of the Criminal Justice System*. Vol. 3. Washington, DC: Department of Justice; 2000.
6. James, DJ.; Glaze, LE. Pub no NCJ 213600. Washington, DC: US Department of Justice; 2006. *Mental Health Problems of Prison and Jail Inmates: Bureau of Justice Statistics Special Report*.
7. Beck, AJ.; Maruschak, LM. Pub no NCJ 188215. Washington, DC: US Department of Justice; 2001. *Mental Health Treatment in State Prisons, 2000: Bureau of Justice Statistics Special Report*.
8. Hoge, SK. Providing transition and outpatient services to mentally ill released from correctional institutions. In: Greifinger, RB., editor. *Public Health Behind Bars: From Prisons to Communities*. New York: Springer; 2007.
9. Pinta, E. The prevalence of serious mental disorders among US prisoners. In: Landsberg, G.; Smiley, A.; Kingston, NJ., editors. *Forensic Mental Health: Working With Offenders With Mental Illness*. Civic Research Institute; 2001.
10. Regier DA, Farmer ME, Rae DS, et al. Comorbidity of mental disorders with alcohol and other drug abuse: results from the Epidemiologic Catchment Area (ECA) study. *JAMA* 1990;264:2511–2518. [PubMed: 2232018]
11. Jemelka R, Trupin E, Chiles JA. The mentally ill in prisons: a review. *Hospital and Community Psychiatry* 1989;40:481–491. [PubMed: 2656483]
12. Robins, LN.; Regier, DA. *Psychiatric Disorders in America: The Epidemiologic Catchment Area Study*. New York: Free Press; 1991.
13. Abram KM, Teplin LA, McClelland GM. Comorbidity of severe psychiatric disorders and substance use disorders among women in jail. *American Journal of Psychiatry* 2003;160:1007–1010. [PubMed: 12727711]
14. Ditton, PM. Pub no NCJ 174463. Washington, DC: US Department of Justice; 1999. *Mental Health and Treatment of Inmates and Probationers: Bureau of Justice Statistics Special Report*.
15. Teplin LA. Psychiatric and substance abuse disorders among male urban jail detainees. *American Journal of Public Health* 1994;84:290–293. [PubMed: 8296957]
16. Solomon P, Draine J, Marcus SC. Predicting incarceration of clients of a psychiatric probation and parole service. *Psychiatric Services* 2002;53:50–56. [PubMed: 11773649]
17. Bonta J, Law M, Hanson K. The prediction of criminal and violent recidivism among mentally disordered offenders: a meta-analysis. *Psychological Bulletin* 1998;123:123–142. [PubMed: 9522681]

18. Rabkin JG. Criminal behavior of discharged mental patients: a critical appraisal of the research. *Psychological Bulletin* 1979;86:1–27. [PubMed: 377350]
19. Skeem JL, Louden JE. Toward evidence-based practice for probationers and parolees mandated to mental health treatment. *Psychiatric Services* 2006;57:333–342. [PubMed: 16524990]
20. Gunn, JC.; Robertson, G.; Dell, S., et al. *Psychiatric Aspects of Imprisonment*. London: Academic Press; 1978.
21. Porporino FJ, Motiuk LL. The prison careers of mentally disordered offenders. *International Journal of Law and Psychiatry* 1995;18:29–44. [PubMed: 7759187]
22. Russo G. Follow-up of 91 mentally ill criminals discharged from the maximum security hospital in Barcelona PG. *International Journal of Law and Psychiatry* 1994;17:279–301. [PubMed: 7995687]
23. Feder L. A comparison of the community adjustment of mentally ill offenders with those from the general prison population. *Law and Human Behavior* 1991;15:477–493.
24. Lovell D, Gagliardi GJ, Peterson PD. Recidivism and use of services among persons with mental illness after release from prison. *Psychiatric Services* 2002;53:1290–1296. [PubMed: 12364677]
25. Teplin LA, Abram KM, McClelland GM. Does psychiatric disorder predict violent crime among released jail detainees? A six-year longitudinal study. *American Psychologist* 1994;49:335–342. [PubMed: 8203805]
26. Baillargeon J, Binswanger IA, Penn JV, et al. Psychiatric disorders and repeat incarcerations: the revolving prison door. *American Journal of Psychiatry* 2009;166:103–109. [PubMed: 19047321]
27. Glaze, LE.; Bonczar, TP. Pub no NCJ 220218. Washington, DC: US Department of Justice; 2007. *Probation and Parole in the United States, 2006: Bureau of Justice Statistics Bulletin*.
28. Washington, DC: Pew Center on the States; 2008. *One in 100: Behind Bars in America 2008*. Available at [www.pewcenteronthestates.org/report\\_detail.aspx?id=35904](http://www.pewcenteronthestates.org/report_detail.aspx?id=35904)
29. New York: Council of State Governments, Reentry Policy Council; 2005. *Report of the Re-entry Policy Council: Charting the Safe and Successful Return of Prisoners to the Community*. Available at [www.reentrypolicy.org/Report/About](http://www.reentrypolicy.org/Report/About)
30. Committee on Community Supervision and Desistance From Crime, Committee on Law and Justice, National Research Council of the National Academies. *Parole, Desistance From Crime, and Community Integration*. Washington, DC: National Academies Press; 2008.
31. Broome KM, Knight K, Joe GW, et al. Evaluating the drug-abusing probationer: clinical interview versus self-administered assessment. *Criminal Justice and Behavior* 1996;23:593–606.
32. Simpson, DD. *TCU Forms Manual: Improving Drug Abuse Treatment, Assessment, and Research (DATAR)*. Fort Worth: Texas Christian University; 1995.
33. Simpson, DD.; Knight, K.; Broome, KM. *TCU/CJ Forms Manual: Drug Dependence Screen and Initial Assessment*. Fort Worth: Texas Christian University; 1997.
34. McLellan AT, Kushner H, Metzgar D, et al. The fifth edition of the Addiction Severity Index. *Journal of Substance Abuse Treatment* 1992;9:199–213. [PubMed: 1334156]
35. McLellan AT, Luborsky L, Cacciola J, et al. New data from the Addiction Severity Index: reliability and validity in three centers. *Journal of Nervous and Mental Disease* 1985;173:412–423. [PubMed: 4009158]
36. McLellan AT, Luborsky L, Woody GE, et al. An improved diagnostic evaluation instrument for substance abuse patients: the Addiction Severity Index. *Journal of Nervous and Mental Disease* 1980;168:26–33. [PubMed: 7351540]
37. Peters RH, Greenbaum PE, Steinberg ML, et al. Effectiveness of screening instruments in detecting substance use disorders among prisoners. *Journal of Substance Abuse Treatment* 2000;18:349–358. [PubMed: 10812308]
38. Mallik-Kane, K.; Visher, CA. *Health and Prisoner Reentry: How Physical, Mental, and Substance Abuse Conditions Shape the Process of Reintegration*. Washington, DC: Urban Institute; 2008.
39. Solomon, AL.; Johnson, KD.; Travis, J., et al. *From Prison to Work: The Employment Dimensions of Prisoner Reentry*. Washington, DC: Urban Institute; 2004.
40. Osher FC, Drake RE. Reversing a history of unmet needs: approaches to care for persons with co-occurring addictive and mental disorders. *American Journal of Orthopsychiatry* 1996;66:4–11. [PubMed: 8720636]



41. Hartwell SW. Comparison of offenders with mental illness only and offenders with dual diagnoses. *Psychiatric Services* 2004;55:145–150. [PubMed: 14762238]
42. Watkins KE, Burnam A, Kung FY, et al. A national survey of care for persons with co-occurring mental and substance use disorders. *Psychiatric Services* 2001;52:1062–1068. [PubMed: 11474052]
43. Drake RE, Mueser KT, Clark RE, et al. The course, treatment, and outcome of substance disorder in persons with severe mental illness. *American Journal of Orthopsychiatry* 1996;66:42–51. [PubMed: 8720640]
44. Mueser, KT.; Drake, RE.; Miles, KM. The course and treatment of substance use disorder in persons with severe mental illness. In: Onken, LS.; Blaine, JD.; Genser, S., et al., editors. *Treatment of Drug-Dependent Individuals With Comorbid Mental Disorders: NIDA Research Monograph 172*. Rockville, Md: US Department of Health and Human Services; 1997.
45. Peters, RH.; Hills, HA. *Intervention Strategies for Offenders With Co-occurring Disorders: What Works*. Delmar, NY: National GAINS Center for People with Co-occurring Disorders in the Criminal Justice System; 1997.
46. Solomon P, Draine J. Issues in serving the forensic client. *Social Work* 1995;40:25–33. [PubMed: 7863370]
47. Draine J, Salzer MS, Culhane DP, et al. Role of social disadvantage in crime, joblessness, and homelessness among persons with serious mental illness. *Psychiatric Services* 2002;53:565–573. [PubMed: 11986504]

Table 1

Demographic and correctional characteristics of inmates paroled from the Texas Department of Criminal Justice, by gender

Variable	Total (N=8,149)		Males (N=7,174)		Females (N=975)	
	N	%	N	%	N	%
Race or ethnicity						
Non-Hispanic Caucasian	3,209	39	2,729	38	480	49
Hispanic Caucasian	1,804	22	1,633	23	171	18
African American	3,136	39	2,812	39	324	33
Age (years)						
16-29	2,211	27	1,995	28	216	22
30-49	4,784	59	4,106	57	658	68
{glet; ≥}50	1,174	14	1,073	15	101	10
Current criminal offense						
Nonviolent	6,375	78	5,561	78	814	83
Violent nonsexual	1,616	20	1,458	20	158	17
Violent sexual	158	2	155	2	3	0
Parole violation in the past 10 years						
Yes	3,905	48	3,562	50	343	35
No	4,244	52	3,612	50	632	65
Duration of current sentence (years)						
<2	6,341	78	5,507	77	834	86
{glet; ≥}2	1,808	22	1,667	23	141	14
Presence of a major psychiatric disorder or substance use disorder						
No disorder (psychiatric or substance use)	2,288	28	2,036	28	252	26
Psychiatric disorder alone	151	2	123	2	111	11
Substance use disorder alone	5,235	64	4,651	65	584	60
Comorbid psychiatric and substance use disorder	475	6	364	5	28	3

**Table 2**  
 Risk of parole revocation within 12 months of release among inmates paroled from the Texas Department of Criminal Justice, by psychiatric disorder and substance use disorder

Disorder category	Reason for revocation					
	Parole violation			New offense		
	N	%	OR <sup>a</sup> CI	N	%	OR <sup>a</sup> CI
No disorder (reference)	373	16		59	3	
Substance use disorder alone	955	18	1.2 1.0–1.3	133	3	1.1 .8–1.5
Any major psychiatric disorder alone	31	21	1.3 .8–1.9	7	5	2.3 1.0–5.5
Major mood disorder alone	25	25	1.6 1.0–2.5	4	4	1.8 .7–5.1
Psychotic disorder alone	6	12	.7 .3–1.4	3	6	2.6 .8–8.2
Any major psychiatric disorder and a substance use disorders	117	25	1.7 1.4–2.4	475	6	2.8 1.7–4.5
Major mood and substance use disorders	72	22	1.5 1.1–1.8	20	6	2.9 1.8–4.7
Psychotic and substance use disorders	45	30	1.9 1.4–2.7	7	5	2.0 1.0–4.4

<sup>a</sup>Odds ratios were adjusted for gender, age, race and ethnicity, previous parole violation, criminal offense classification, and duration of current sentence.