

Screening Prison Inmates for Mental Disorder: An Examination of the Relationship Between Mental Disorder and Prison Adjustment

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The rapidly expanding population of prison inmates has severely challenged the prison system's ability to effectively screen incoming inmates for mental disorders and mental health service needs. This study describes a comprehensive mental health screening of inmates at a maximum security prison, using a modified version of the Referral Decision Scale (RDS), a screening measure developed from the Diagnostic Interview Schedule. Modified items and adjusted cut-off scores were used in order to reduce the rate of false positives. Survey results indicate that this modified version of the RDS may be an effective screening measure for correctional settings. Subjects who were positive on the RDS were compared to negative subjects on a variety of offense and prison adjustment variables. Findings indicate that while subjects who were positive on the RDS experienced some initial adjustment problems within the prison, they were generally not found to be involved in an elevated rate of prison violence and were not more often remanded to disciplinary units than those subjects who were negative on the RDS.

Research estimates of the prevalence of mental disorder within correctional populations have consistently shown significantly higher rates of mental disorder in

jails and prison than in the general population.¹⁻⁶ Some studies have used less standardized interviews and measures,⁷⁻⁹ but more reliable estimates probably resulted from the application of highly standardized instruments such as the Diagnostic Interview Schedule (DIS), with random samples of incarcerated male inmates.^{10-14, 6}

Studies using the DIS estimate that 8 to 12 percent of the inmate population suffer from a serious mental disorder (schizo-

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phrenia, bipolar disorder, and major depression) at any given point in time.^{10, 11, 14} This finding represents a four- to sixfold increase over the estimates reported in the National Institute of Mental Health epidemiologic catchment area survey project.^{15, 16} The incident rate for schizophrenia has ranged from 1.4 percent¹¹ to 3.1 percent¹²; bipolar disorder has varied from 0.7 percent¹⁰ to 3.8 percent,¹⁴ and major depression has ranged from 3.5 percent¹⁰ to 5.1 percent.¹⁴

Other studies of the institutional adjustment of mentally disordered offenders report that they generally have a more complicated adaptation to the prison milieu as measured by rule violations and incidents of misconduct.¹⁹⁻²³ Mentally disordered offenders may be especially vulnerable to abuse by other offenders and may find themselves in greater need of protective segregation or isolation. They also may tend to accumulate disciplinary sanctions resulting from their disruptive behavior, placing them in higher security settings, limiting their access to privileges, programs, work release assignments, and early parole. These research findings highlight the need for early detection and treatment of mental disorder within the prison environment.

Recent legal decisions, beginning in 1976 with *Estelle v. Gamble*,²⁴ opened the door to a prisoner's constitutional right to treatment by establishing minimum standards of medical and mental health care within correctional facilities.^{25, 26} In 1980 *Ruiz v. Estelle*²⁷ established basic minimum constitutional requirements for a mental health treatment

program in the Texas prison system. Among the standards derived from this case was the requirement that the prisons systematically screen and evaluate inmates to identify those who are mentally disordered and in need of mental health treatment. A recent survey of the mental health service programs within the prison systems in the United States reported that nearly all 50 states provided some combination of intake mental health screening and/or mental health evaluations for newly admitted inmates.²⁸ Unfortunately, the prospect of screening inmates for mental disorder and treating those in need of mental health services has become a daunting and nearly impossible task in the present explosion of prison growth.

The goal of the present study was to conduct a comprehensive mental health screening of inmates at a maximum security prison. The screening measure employed was designed to select those inmates with the greatest likelihood of having a major mental disorder so that they could be referred for a more in-depth diagnostic evaluation. The data obtained in this survey can be used in the development of a more efficient and comprehensive system of mental health service delivery within the prison system. Our use of a reliable and accurate screening measure of mental disorder also allows us to examine the relationship between mental disorder and criminal history and prison adjustment, including levels of prison violence.

The choice of an assessment instrument for this study was directed by the goals of the project, the available resources and the time frame established for

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sampling. The study's primary goal was to conduct a mental health screening of an inmate population to identify the pool of inmates most likely to be suffering from symptomatology associated with a major mental disorder. The instrument employed, therefore, did not necessarily have to provide a definitive diagnosis. It needed to function as a screening measure to determine whether there was a sufficiently high probability that an inmate had a serious mental disorder, so that a referral for a more in-depth diagnostic evaluation and/or treatment could be made. The present study did not seek to provide reliable estimates of the prevalence of mental disorder as did the studies reviewed^{6, 10, 11, 14} that used the DIS. A survey of this scope and magnitude would require staff training in the use of a structured interview schedule such as the DIS. The DIS requires between one to three hours to administer and would necessarily demand more time and cooperation from the subjects than a brief screening measure would. These demands are beyond the resources typically available to a prison, which must evaluate a large number of incoming inmates.

Teplin and Swartz¹ recently developed a screening measure, the Referral Decision Scale (RDS), that satisfactorily meets the requirements of brevity, use of non-mental health professionals, reliable administration, and objective scoring. The RDS is short, consisting of only 15 items tapping into three diagnostic categories: schizophrenia, major depression, and bipolar disorder. The instrument is a semistructured interview that can be administered and objectively scored by non-

clinical professionals. The RDS was empirically generated from diagnostic data collected by using the DIS, so it bears some resemblance to this widely used diagnostic research instrument.

Hart *et al.*²⁹ conducted an independent validation study of the RDS on a sample of 790 men admitted to an urban pretrial jail. They reported excellent interrater reliability coefficients for the RDS. When they validated the RDS against the DIS and the Brief Psychiatric Rating Scale (BPRS),^{30, 31} they found that the RDS made a large number of false-positive errors (overestimation of mental disorder) relative to both lifetime and contemporaneous assessments of mental disorder. Additional analyses reported that the overall predictive accuracy of the RDS was improved by raising the cut-off score recommended by Teplin and Swartz¹ on the Depression scale.

An elevated false-positive rate is not especially problematic for a screening measure which has the purpose of selecting a sample from a larger population with the greatest likelihood of being positive on a dimension or dimensions of interest. As discussed by Hart *et al.*,²⁹ "in general, the RDS had acceptable reliability and validity as a screening measure for serious mental disorder in a jail setting . . . In this context, the RDS could be used by non-clinical personnel to estimate the rates of major mental disorder among various types of offender groups, changes in prevalence rates over time, and so forth, in a rapid and cost-effective manner" (p 620). They caution against the use of RDS as a measure of the absolute, rather than relative, rates of major mental disorder.

der, because the test's false-positive prediction errors would overestimate the prevalence rates of mental disorder.

Based on available research to date, the RDS satisfies many of the more important psychometric properties for a screening measure. It has acceptable reliability and validity, can be quickly administered by nonclinical professionals, and can be objectively scored. There have been no studies that have used the RDS with sentenced offenders or prisoners. Thus, the RDS was selected as the screening measure employed in this survey project, representing the first time that it has been used on a sample of sentenced offenders.

Method

Participants The sample was obtained in a maximum security prison in Massachusetts. Data were collected within an approximate two-week period during February 1993. A total of 582 inmates were contacted for participation in the survey. This included all of the inmates in the prison at the time of the study, with the exception of those residing in administrative segregation or disciplinary units. Sixty-eight of the prisoners who were approached (11.7% of available prisoners) refused to participate and were not included in the survey. This left a total of 514 subjects in the survey. The average age of the participating subjects was 30.8 years, and the average length of incarceration was 3.97 years. Approximately 42.4 percent of the sample was African American, while 40.3 percent were white, and 15.6 percent were Hispanic. Most of the subjects had never married (75.9%), and approxi-

Table 1
Prior Psychiatric Treatment and Substance Abuse Variables for the Survey Sample

	% Endorsement
History of psychiatric hospitalization	16.5
Prior mental health treatment	21.6
Chronic self-mutilation	5.3
History of suicide attempt(s)	9.0
Drug abuse	50.8
cocaine	11.9
marijuana	10.7
heroin	8.2
multiple drug abuse	19.5
Alcohol abuse	39.5
Self-admitted alcohol problem	25.0
Presently requesting mental health treatment	18.1

mately one-third did not have a high school or general equivalency diploma. The majority of the sample had a history of prior crimes of violence (defined as murder, assault and battery, rape, or armed robbery), with 88 percent of the subjects having at least one prior conviction for a crime of violence. A total of 27 percent of the sample was serving a sentence for the crime of murder or manslaughter. A comparison of the demographic characteristics of the participants and the refusers failed to reveal any significant demographic or offense variable differences. Table 1 contains the substance abuse and psychiatric variables for the survey sample.

Procedure Prison correction counselors served as interviewers for this survey. A 90-minute training session was conducted with the staff correctional counselors. During this training, the goals and purpose of the survey were presented, along with a brief review of the literature

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in this particular research area. The staff were then introduced to the survey instrument in a detailed presentation that reviewed the major sections of the survey instrument and each item within each section. They were instructed on how to score the instrument and were given examples of how to probe for more detailed information when administering the RDS section of the survey. Questions were encouraged and were answered during the training. The researchers attempted to clarify any points of confusion or uncertainty about the survey instrument.

The counselors were instructed to inform the inmates within their caseload that the prison administration was interested in learning more about the mental health needs of the inmate population in order to develop better methods to deliver mental health services. The inmates were told that their participation was voluntary. They were also told that their survey data would remain confidential and would not become part of their institutional record. If an inmate agreed to participate, the counselor administered the semistructured interview survey with the inmate. After conducting the survey, the counselor was instructed to review the inmates' prison record and fill out the appropriate information on the survey pertaining to his criminal history (i.e., prior sentences served, number of prior crimes of violence) and prison adjustment (i.e., number of disciplinary reports, number of assaults against others, number of times placed in a segregation unit). Criminal history and prison violence variable data were obtained from prison records.

Survey Instrument The survey mea-

sure employed in this study comprised five major sections: (1) demographic information, (2) criminal history, (3) prison adjustment, (4) psychiatric history, and (5) the RDS. The data were collected through a direct interview with the inmate and a review of his prison record. The RDS as developed by Teplin and Swartz¹ was used with some minor alterations to better fit this particular prison population (See Table 2 for a list of items on the modified RDS). Questions within the major depression and manic-depressive sections having to do with sexual activity were deleted and replaced by more generic questions about activity levels. Sexual contact among prison inmates is against institutional rules and can result in a disciplinary sanction for a rule infraction. Inasmuch as the correctional counselors who administered this scale are required to report all rule violations, we decided to replace these items.

Teplin and Swartz¹ included an item concerned with a history of prior psychiatric hospitalization on the depression and bipolar disorder scale in the original sample. The current sample did not report an extensive history of psychiatric hospitalization. Only 16.5 percent reported having had a prior psychiatric hospital admission. They reported that many of these hospital admissions were not directly due to their experiencing symptoms of mental disorder. Many of their admissions (8.9%) were for court-ordered pretrial evaluations or for substance abuse problems (4.3%). This raises serious doubts about the validity of this item as a predictor of diagnosis, since many, if not most, of the subjects in this sample re-

ported being hospitalized for reasons other than a mental disorder. The potentially poor ability of this test item to discriminate between the presence or absence of a mental disorder may account for the over-inflated false-positive rate reported by Hart *et al.*²⁹ Therefore, this item was administered to the sample but was deleted when the scales were scored.

The neurological impairment scale (see Table 2) was not part of the original RDS and was developed for the present study. The items that were included reflect the most common symptoms found in brain-impaired populations. The scale was devised as a screening measure to estimate the base rate of common neurologically based symptoms reported by a maximum-security prison population with a history of violent criminality.

Results

Prevalence Rates Based on the Screening Measure The percentage of item endorsement for each of the RDS scales was calculated and is presented in Table 2. The items with the greatest prevalence are from the neurological impairment scale: loss of consciousness (26.3%) and history of learning problems (23.3%). The most frequently endorsed item on the major depression scale was appetite disturbance (17.7%). However, all the items on this scale were endorsed by at least 12 percent of the inmates. The most frequently endorsed manic-depressive symptom was hyperactivity (16.3%). On the schizophrenia scale, a total of 15.8 percent of the inmates reported feeling watched. The high rate of endorsement for this paranoid symptom may have been

Table 2
Percentage of Item Endorsement for each of the RDS Scales

	% Endorsement
Major depression	
Appetite disturbance	17.7
Activity disturbance	14.6
Energy problems	14.2
Low self-esteem	12.2
Manic-depression	
Thoughts race	10.3
Grandiosity	9.5
Reduced sleep	10.3
Hyperactivity	16.3
Schizophrenia	
Feels watched	15.8
Feels followed	9.5
Feels poisoned	7.4
Thought insertion	4.5
Others know thoughts	4.2
Neurological impairment	
Learning problems	23.3
Seizure disorder	5.7
Memory problems	6.0
Loss of consciousness	26.3
Attention deficit	14.2

an artifact of the prison environment where many inmates are actually monitored very closely by correctional staff and other inmates. Other more malignant symptoms of schizophrenia, such as thought insertion (4.5%) and others knowing one's thoughts (4.2%), were endorsed much less frequently.

The determination of the appropriate cut-off score for each of the scales is a complicated problem. The number of positive symptoms within each diagnostic category that needs to be present in order for an inmate to be scored positively on the RDS had to be established. Teplin and Swartz,¹ in the original research project that developed the RDS, found that a cut-off score of two positive items for the

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major depression scale and schizophrenia scale and a cut-off score of three positive items for the manic-depressive scale yielded the most optimal sensitivity and specificity estimates in the data sample. These cut-off scores produced the best ratio of type I (false-positive) versus type II (false-negative) errors. Hart *et al.*²⁹ reported that a cut-off score of two positive items for the depression scale resulted in 39.3 percent of their sample being "screened in" as depressed; this is an unwieldy number of positive cases even for a screening measure. When the cut-off was adjusted to three positive items, the percentage of positive cases was reduced to a much more manageable 20.2 percent. Most researchers have reported a lower base rate of mental disorder within prison settings when compared with jail settings.³²⁻³⁴ A lower base rate of incidence suggests a higher cut-off should be used to avoid the unwanted effect of an extremely elevated false-positive rate.³⁵

For these reasons, a cut-off score of three was utilized for each of the diagnostic groups, including the schizophrenia scale. Table 3 shows the percentage of endorsement for the number of symptoms within each diagnostic category and compares the percentage of positive cases with the percentages reported by Hart *et al.*²⁹

When a cut-off of three positive symptoms is used for each diagnostic group the prevalence rate for major depression is 9.0 percent (N = 46). On the manic-depressive scale, 5.5 percent of the survey sample or a total of 28 subjects scored positively on at least three symptoms. On the schizophrenia scale, approximately

Table 3
Percentage of Positive Symptoms for Each of the Diagnostic Groups

Number of Positive Symptoms	Number of Inmates	%
Major depression		
0	363	70.8
1	62	12.1
2	42	8.2
3	26	5.1
4	20	3.9
Positive case	46	9.0
Hart <i>et al.</i> ^a		(20.2)
Manic-depression		
0	369	71.8
1	86	16.7
2	29	5.6
3	21	4.1
4	7	1.4
Positive case	28	5.5
Hart <i>et al.</i> ^a		(12.7)
Schizophrenia		
0	404	78.6
1	43	8.4
2	23	4.6
3	17	3.3
4	9	1.8
5	6	1.4
Positive case	33	6.5
Hart <i>et al.</i> ^a		(4.6)

^a Hart *et al.*²⁹ included item about prior psychiatric history on the depression and manic-depression scale.

6.5 percent or a total of 33 subjects score positively on three or more of the five symptoms. On the neurological impairment scale, almost 47.3 percent of the subjects report at least one symptom consistent with a neurological impairment. Twenty-three percent of the subjects report a history of a learning disability, and 14 percent report having received a diagnosis for attention deficit disorder as a child. A positive score of three or more was reported by 86 subjects, or 6.8 percent of the survey sample.

The Relationship of the RDS to Demographic, Crime, Substance Abuse, and Prison Adjustment and Violence Variables. Demographic Variables

Chi-square analyses using the demographic, crime, psychiatric, and substance abuse variables from Tables 1 and 2 were separately calculated for each of the three diagnostic groups. Each diagnostic group was independently compared with subjects who were not classified by the RDS as meeting the threshold criteria of three or more positive symptom scores for that specific scale. None of the demographic variables reached statistical significance, with the exception of marital status for the manic-depressive (bipolar disorder) group, whose members were more likely to be separated or divorced than those not classified as positive on the RDS ($\chi^2 = 10.88, p < .03$). History of violent crime and prior incarcerations did not reach statistical significance. Race almost reached statistical significance ($\chi^2 = 5.26, p < .072$), with a positive classification for a mental disorder. The trend was for black subjects to endorse psychiatric symptoms less frequently than white or Hispanic subjects. Hispanic subjects endorsed a greater number of psychotic symptoms.

Crime Variables Type of crime did not reach statistical significance for this survey sample. Nine offense types were examined, including murder 1, murder 2, manslaughter, attempted murder, rape, armed robbery, unarmed robbery, breaking and entering, and drug offense. Those subjects positive on one or more of the RDS categories were not more likely to be convicted of one these crimes than those subjects who were negative for all

of the RDS diagnostic categories. Victim type was subdivided into a vulnerable victim category, which included children, women, and victims over 65 years old. Analyses revealed that subjects positive for bipolar disorder ($\chi^2 = 8.20, p < .004$) and major depression ($\chi^2 = 8.72, p < .003$) were more likely to have selected a vulnerable victim than those who were negative for these disorders on the RDS. Similar results were not found for positive cases of schizophrenia on the RDS.

Substance Abuse Drug abuse problems were reported by approximately 50 percent of this sample and alcohol abuse problems by about 40 percent. These variables were measured through self-report. Alcohol abuse problems ($\chi^2 = 29, p < .000$) and drug abuse problems ($\chi^2 = 16.4, p < .0003$) had a significant relationship with a positive classification as mentally disordered, suggesting a high rate of comorbidity for mental disorders and substance abuse disorders within this sample.

The Relationship of the RDS to Prison Adjustment and Violence Variables The last set of analyses examined the relationship between the endorsement of psychiatric symptoms and offense variables and prison adjustment as measured by reports of institutional rule infractions and incidents of violence. Corrections counselors were asked to review the subject's prison record and report the length of incarceration, the number of incident reports the inmate received in his first 90 days of incarceration and in his most recent 90 days of incarceration, the number of assaults the inmate had committed against

Table 4
Relationship Between Positive Cases on the Schizophrenia Scale of the RDS and Prison Adjustment and Violence Variables

Status on Schizophrenia Scale of the RDS	Subjects with Eight or More Incident Reports	
	First 90 days	Last 90 days
Positive	4 (12.9%)	0 (0.0%)
Negative	6 (1.3%)	4 (0.9%)
	$\chi^2 = 6.47, p < .011$	$\chi^2 = \text{not significant}$
	No weapon possession	Weapon possession
Positive	18 (54.5%)	13 (45.5%)
Negative	330 (70.7%)	137 (29.3%)
	$\chi^2 = 3.78, p < .05$	

staff and other inmates, the number of reported incidents of weapon possession and weapon use during an assault, and the number of transfers to a disciplinary segregation unit. Inmates who scored positive on one or more of the RDS categories of schizophrenia, bipolar disorder, or major depression were compared with those inmates who scored positive for none of these diagnostic categories.

An estimate of the subject's initial and most recent level of overall prison adjustment was measured by calculating the total number of incident reports recorded for each of the subjects during his first 90 days of incarceration and his most recent 90 days of incarceration. Subjects who scored positive on the RDS for schizophrenia were involved in a significantly greater number of incident reports during their initial three months of incarceration than those who scored negative in the RDS schizophrenia category ($\chi^2 = 6.47, p < .011$). Interestingly, subjects who scored positive on the schizophrenia scale did not have a higher rate of incident reports than those who scored negative on this scale when the time frame focused on

the most recent 90 days. Their rate of institutional infractions was no different than the rest of the survey sample. These results are depicted in Table 4.

Violence estimates as measured by the number of assaults and incidents of weapon possession and weapon use were analyzed for each of the diagnostic groups. With the exception of weapon possession, none of these indices reached statistical significance for subjects who scored positive on the RDS. Those subjects who were positive for one or more of the RDS categories were more likely to have been reported having a weapon in their possession than those subjects who scored negative on the RDS ($\chi^2 = 4.76, p < .029$). Subjects scoring positive on the schizophrenia scale appeared to be the diagnostic group mostly clearly associated with weapon possession ($\chi^2 = 3.78, p < .05$). This analysis is also depicted in Table 4. Subjects who were positive for one or more of the RDS categories did not differ from subjects who were negative on the RDS in the amount of time served within the prison or in the number of

admissions or amount of time spent in a segregation or disciplinary unit.

Discussion

This survey study addressed two major questions: (1) the clinical usefulness of a modified version of the RDS as a screening measure of mental disorder within a maximum security prison; and (2) an examination of the relationship among reported psychiatric symptoms and criminal offense, institutional adjustment, and violence.

First, the suggested modifications and adjusted cut-off scores for the RDS yielded a manageable rate of referrals for more comprehensive diagnostic evaluation. Within this survey sample of 514 inmates, approximately 46 (9%) of the population endorsed three or more symptoms of depression, 28 (5.5%) endorsed three or more symptoms of bipolar disorder, and 33 (6.5%) endorsed three or more symptoms of schizophrenia. If a cut-off score of three or more symptom endorsements is used as the criterion for inclusion, these are the percentages of inmates who would have been referred for further diagnostic examination. If comorbidity among these diagnostic categories is controlled, the actual number of referrals would probably be even lower. In our view, this rate of positive cases certainly appears manageable for a large prison institution that must provide mental health services to mentally disordered offenders during a time of rapidly expanding prison populations and dwindling human service resources.

The modified items on the RDS used in this survey and the elevation of the cut-

off score from 2 to 3 across the three diagnostic groups of major depression, bipolar disorder, and schizophrenia resulted in a reduction in the percentage of positive cases as reported by Hart *et al.*²⁹ Hart and his colleagues used independent criteria, which included the BPRS and the DIS. They report that the RDS made a large number of false-positive errors. The suggested changes used in this survey may have reduced the overall number of false-positive errors. Unfortunately, without independent measurement criteria, we are unable to determine the relative impact that these changes had on the ratio of false-positives or if the improved rate of false-positives, if they are present, appears at the expense of an inflated ratio of false-negative errors. The validity of this version of the RDS cannot be evaluated without the use of a criterion for measuring mental disorder with which the accuracy of the RDS can be compared.

A high number of survey subjects reported neurologically based problems. For instance, approximately one-quarter of the sample reported a history of loss of consciousness and learning disabilities. Fifteen percent report having carried the diagnosis of attention deficit hyperactivity disorder. These results are consistent with the suggested association that other researchers have made between neuropsychological deficits and central nervous system dysfunction and violence.³⁶⁻³⁸

Self-reported substance abuse problems were found in approximately one-half of the survey sample, which may have contributed to their reports of neuropsychological deficits and increased their relative risk for head injury. Sub-

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jects who were positive for a mental disorder on the RDS were also more likely to have a history of substance abuse, supporting the commonly found comorbidity between mental disorders and substance abuse disorders.^{16, 39, 40}

Offense type did not differ for positive RDS subjects from those survey subjects who were negative on the RDS. But when victim type was isolated, subjects who scored positive on the major depression scale and the bipolar scale had more often been convicted of a violent crime involving a vulnerable victim such as a woman, child, or elderly person. A similar association was not found for those who scored positive on the schizophrenia scale. More specific crime and victim data were not available, which complicated the interpretation of this finding. One possible explanation of why this association was not found among those subjects who scored positive on the schizophrenia scale may be that they are more cognitively disorganized and consequently less discriminating in their victim selection. The reason why subjects who scored positive on the depression and bipolar scales of the RDS were more likely to have selected a more vulnerable victim is not clear to us at this time. One possible explanation may be that these subjects commit crimes of violence against vulnerable family members, including spouses and children, in order to spare them (the family members) the suffering that the perpetrator is experiencing at the time of his violent behavior. This hypothesis needs further investigation before more definitive conclusions can be offered.

The clinical management of mentally disordered offenders within prison settings is a problem for which prison administrators must often invest increased levels of staff resources. The current survey's finding of an elevated rate of incident reports for subjects who rated positive on the schizophrenia scale during their first 90 days of incarceration is a ready-made argument for the use of a screening procedure to identify mentally disordered inmates before they enter the prison population. Mentally disordered inmates have often been described as having a disruptive effect in a prison milieu.^{17, 19-22} Early detection and identification of mentally disordered offenders before they enter the prison population can help decrease the number who receive behavioral sanctions and disciplinary actions that may be unfair to them as well as a strain on the prison staff.

The increased level of incident reports for mentally disordered offenders moderated over time, becoming increasingly like the reports for those who were rated negative on the RDS schizophrenia scale. Three possible explanations may account for their adaptation over time. First, those inmates who were initially slow in their adjustment to the institutional rules might eventually have been able to learn more appropriate behavior and therefore received less disciplinary reports. Second, correctional officers may have adopted a differential response pattern to mentally disordered offenders and exercised a more lenient threshold of intervention toward their disruptive behavior. Third, a clinical intervention may have been introduced, such as mental health treat-

ment, especially medication, or a movement to a less stressful unit within the prison.

Despite their early problems with adjustment, this group of inmates was not sanctioned to serve time in disciplinary units more frequently than non-mentally disordered inmates, and they did not serve a longer period of time within the prison. This probably means that they were not generally deprived of early release or transfers to lower security settings because of their increased display of psychiatric symptoms. The ability of these inmates to achieve a more gradual adaptation is contrary to other research findings, which generally report that mentally disordered offenders are subjected to more critical perceptions by correctional staff⁴¹ and experience harsher treatment²⁰ than non-mentally disordered offenders.

Further research is needed on the use of the RDS within correctional settings. Future studies need to focus on the diagnostic accuracy of the RDS and evaluations of its ratio of false-positives and false-negatives. The instrument requires further validation in other correctional settings, including among populations of female inmates and pretrial detainees.

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References

1. Teplin LA, Swartz J: Screening for severe mental disorder in jails: the development of

the Referral Decision Scale. *Law Hum Behav* 13:1-18, 1989

2. Halleck S: The Mentally Disordered Offender. Publication no. (ADM) 86-1471. Rockville, MD: National Institute of Mental Health, 1986
3. Jemelka R, Trupin E, Chiles JA: The mentally ill in prisons: a review. *Hosp Community Psychiatry* 40:481-91, 1989
4. Monahan J: Mental disorder and violent behavior: perceptions and evidence. *Am Psychol* 47:511-21, 1992
5. Roth L: Correctional psychiatry, in *Modern Legal Medicine, Psychiatry, and Forensic Science*. Edited by Curran W, McGarry A, Petty, C. Philadelphia: Davis, 1980
6. Teplin L: The prevalence of severe mental disorder among male urban jail detainees: comparison with the Epidemiologic Catchment Area program. *Am J Public Health* 80: 663-9, 1990
7. James JF, Gregory RK, Jones RK, Rundell OH: Psychiatric morbidity in prisons. *Hosp and Community Psychiatry* 11:674-7, 1980
8. Steadman HJ, Fabisiak S, Dvoskin J, Holohean, EJ: A survey of mental disability among state prison inmates. *Hosp and Community Psychiatry* 38:1086-90, 1987
9. Steadman HJ, Holohean EJ, Dvoskin J: Estimating mental health needs and service utilization among prison inmates. *Bull Am Acad Psychiatry Law* 19:297-307, 1991
10. California Department of Corrections, Office of Health Care Services: Current Description, Evaluation, and Recommendations for the Treatment of Mentally Disordered Criminal Offenders. Sacramento: Author, 1989
11. Collins JJ, Schlenger WE: The prevalence of psychiatric disorders among admissions to prison. Presented at the 35th Annual Meeting of the American Society of Criminology, Denver, CO, 1983
12. Cote G, Hodgins S: The prevalence of major mental disorders among homicide offenders. *Int J Law Psychiatry* 15:89-99, 1992
13. Hodgins S, Cote G: Prevalence of mental disorders among penitentiary inmates in Quebec. *Can Ment Health March*:1-4, 1990
14. Neighbors H, Williams D, Gunnings T, Lipscomb W, Broman C, Lepkowski J: The Prevalence of Mental Disorder in Michigan Prisons. Lansing, MI: Michigan Department of Corrections, 1987
15. Regier DA, Boyd JH, Burke JD, *et al*: One-month prevalence of mental disorders in the United States. *Arch Gen Psychiatry* 45:977-86, 1988

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16. Robins LN, Regier DA: *Psychiatric Disorders in America: The Epidemiologic Catchment Area Study*. New York: Free Press, 1991
17. Adams K: The disciplinary experiences of mentally disordered inmates. *Crim Just Behav* 13:297-316, 1986
18. Gibbs JJ: Symptoms of psychopathology among jail prisoners: the effects of exposure to the jail environment. *Crim Just Behav* 14: 288-310, 1987
19. McShane MD: The bus stop revisited: discipline and psychiatric patients in prison. *J Psychiatry Law*, Fall:413-33, 1989
20. Morgan DW, Edwards AC, Faulkner, LR: The adaptation to prison by individuals with schizophrenia. *Bull Am Acad Psychiatry Law* 21:427-33, 1993
21. Toch H, Adams K: Pathology and disruptiveness among prison inmates. *Res Crime Delinquency* 23:7-21, 1986
22. Toch H, Adams K: The prison as dumping ground: mainlining disturbed offenders. *J Psychiatry Law* Winter:539-53, 1987
23. Toch H, Adams K, Green L: Ethnicity, disruptiveness, and emotional disorder among prison inmates. *Crim Just Behav* 14:93-109, 1987
24. *Estelle v. Gamble*, 429 US 97 (1976)
25. Cohen F: The legal context for mental health services, in *Mental Illness in America's Prisons*. Edited by Steadman HJ, Cocozza JJ. Seattle, WA: The National Coalition for the Mentally Ill in the Criminal Justice System, pp 24-59, 1993
26. Cohen F, Dvoskin J: Inmates with mental disorders: a guide law and practice. *Ment Physical Disabil Law Rep* 16:339-46, 1992
27. *Ruiz v. Estelle*, 503 F Supp 1265, 1323 (SD Tex 1980)
28. Metzner JL, Miller RD, Kliensasser D: Mental health screening and evaluation within prisons. *Bull Am Acad Psychiatry Law* 22:451-7, 1994
29. Hart SD, Roesch R, Corrado RR, Cox DN: The Referral Decision Scale: A validation study. *Law Hum Behav* 17:611-23, 1993
30. Overall JE, Gorham DR: The Brief Psychiatric Rating Scale. *Psychol Rep* 10:799-812, 1962
31. Lukoff D, Liberman RP, Nuechterlein KH: Symptom monitoring in the rehabilitation of schizophrenic patients. *Schizophr Bull* 12: 578-602, 1986
32. Guy E, Platt JJ, Zwerling I, Bullock S: Mental health status of prisoners in an urban jail. *Crim Just Behav* 12:29-53, 1985
33. Lamb H, Grant R: The mentally ill in an urban county jail. *Arch Gen Psychiatry* 39:17-22, 1982
34. Teplin LA: The criminalization of the mentally ill: speculation in a search of data. *Psychol Bull* 94:54-97, 1983
35. Meehl PE: *Psychodiagnostics: Selected Papers*. New York: WW Norton, 1977
36. Bryant ET, Scott ML, Golden CJ: Neuropsychological deficits, learning disabilities, and violent behavior. *J Consult Clin Psychol* 52: 323-4, 1984
37. Adams JJ, Meloy JR, Moritz MA: Neuropsychological deficits and violent behavior in incarcerated schizophrenics. *J Nerv Ment Dis* 179:253-7, 1990
38. Lewis DO, Pincus JH, Feldman M, *et al*: Psychiatric, neurological, and psychoeducational characteristics of 15 death row inmates in the United States. *Am J Psychiatry* 143: 838-45, 1986
39. Swanson JW, Holzer CE, Ganju VK, Jono RT: Violence and psychiatric disorder in the community: evidence from the Epidemiologic Catchment Area surveys. *Hosp Community Psychiatry* 41:761-70, 1990
40. Swanson J: Mental Disorder, substance abuse, and community violence: an epidemiological approach, in *Violence and Mental Disorder*. Edited by Monahan J, Steadman HJ. Chicago: University of Chicago Press, 1990
41. Kropp PR, Cox DN, Roesch R, Eaves D: The perceptions of correctional officers toward the mentally disordered offenders. *Int J Law Psychiatry* 12:181-8, 1989