

The Prevalence of Mental Illness Among Inmates in a Rural State

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A limited number of recent empirical studies suggest that inmates suffer from high rates of serious mental illness. Different explanations are offered depending on the type of institution: jail or prison. The literature is based largely on urban samples and does not offer comparisons of rates across types of institution within a single study. The present study examined a random sample of 213 jail and prison inmates in a rural state using the Diagnostic Interview Schedule (III-R). Among jail inmates there was little evidence of high rates of serious mental illness, suggesting the criminalization of mental illness may not be as evident in rural settings as urban areas. Among prison inmates, however, high rates of mental disorders were found, supporting previous findings in urban and rural jurisdictions. Implications of the findings are discussed in the context of a consolidated correctional system.

During the past two decades there has been growing attention to problems involving mentally ill inmates in jail and prison systems throughout North America. Lawsuits by inmates and advocacy groups have forced states, counties, and municipalities to expand mental health services and improve conditions. In a growing number of jurisdictions the courts have cited deliberate indifference to the mental health needs of inmates, resulting in judicially supervised expansion and improvements in clinical mental health programs (Cohen, 1988). There is lack of consensus as to why the number of mentally ill inmates is increasing; however, there is broad agreement that the problem appears to be worsening and the need for services growing (Jamelka, Trupin, & Chiles, 1989; Steadman, Monahan, Duffee, Hartstone, & Robbins, 1984; Teplin, 1990).

The problem of identifying and treating mentally ill inmates has occurred in a climate of punitive political attitudes and rhetoric, spawning retributive and mandatory sentences for criminals, many of whom represent relatively minor threats to the public (Gendreau & Ross, 1987; Pepper & Massaro, 1992). Changes in criminal

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justice policy during the past two decades are vividly represented by increases in the number of inmates in the United States. During the past decade, the total number of men and women in prisons and jails has more than doubled, and at the end of 1995 the inmate population stood at 1,585,000 (Gilliard & Beck, 1996). Rates of incarceration significantly exceed all other Western industrialized countries, as well as South Africa and the former Soviet Union (Mauer, 1991). This increase has been fueled by new sentencing laws, particularly those involving lengthy mandatory terms of incarceration and abolition of parole (Bureau of Justice Statistics, 1990). Recent trends, such as "Three Strikes and You're Out" statutes, reflect a growing intolerance of criminal behavior, regardless of mitigating psychological factors (McCorkle, 1993; Steffensmeier & Harer, 1993). Thus, as the hue and cry for more humane conditions has risen, lengthier sentences, reduced funding for services, overcrowding, and competing interests have exacerbated conditions of incarceration.

Much of the research on mentally ill inmates has focused on large systems, such as the Cook County jail (Abram & Teplin, 1991; Teplin, 1990), Michigan state prisons (Neighbors et al., 1987), and New York state prisons (Dvoskin & Steadman, 1989). The majority of subjects in these studies were men from inner-city areas. Far less attention has been paid to the prevalence of mental illness in inmate populations from rural jurisdictions. In the Epidemiological Catchment Area (ECA) study of mental illness in the general population, Robins et al. (1984) found prevalence rates of most mental disorders in urban areas higher than in rural/small areas; significant differences were reported for schizophrenia, antisocial personality, alcohol dependency, and drug dependency. The findings from the ECA study suggest that rates of mental illness among inmates in rural settings might also be lower than rates among inmates in the urban settings upon which most of the studies are based.

The literature on mentally ill inmates is based on studies conducted in two different types of penal institution: jails and prisons. Jails are detention facilities, usually managed by counties or municipalities, which hold men and women awaiting adjudication for alleged crimes. They also serve as short-term, local correctional centers for those serving short terms for misdemeanors. In contrast, prisons are generally state-operated institutions for adjudicated felons, whose crimes are usually more egregious and sentences longer. Explanations related to the contributing factors for inmate mental illness diverge in several important ways, according to these different incarcerative settings. The criminalization of mental illness is a jail-based hypothesis that individuals formerly identified and treated within mental health settings have been shunted into the criminal justice system as a result of declining availability of psychiatric hospital beds and more restrictive civil commitment processes (Abramson, 1972; Teplin, 1984). In contrast, mental illness in prisons has been associated with the actual effects of long-term confinement, such as helplessness, neglect and institutional abuse (Snow & Briar, 1990). It is epitomized by the Ganzer Syndrome, a state of confusion, clouded consciousness, and somatic conversion (Shorer, 1965).

Jails and prisons are distinct types of institutions serving divergent social and criminal justice functions. In highly populated states or cities, where most of the research on inmate mental illness has been conducted, they are administratively separate, making it difficult to compare rates in a single study using consistent methods. The literature is thus fragmented into either jail or prison studies with separate

sets of conclusions, exacerbated by common methodological problems (Teplin, 1983), resulting in two related, but unintegrated, bodies of research which provide little insight into one another.

Jails must provide custody for persons arrested and detained for crimes that are relatively trivial (e.g., trespassing), as well as for those that are serious (e.g., murder). As described by Briar (1983), "When traditional pathways of care are blocked, the local jail becomes the recycling station for some deinstitutionalized persons. Like the old asylums, the jail increasingly functions as the one place in town where troubled persons can be deposited by law enforcement officers and not turned away. As a result, jails are perhaps "our most enduring asylums" (p. 388). Steadman et al. (1984) found little evidence to support the direct correlational relationship suggested by criminalization theory. However, they note that jails are "frontline institutions...expected to bear the brunt of the initial impact of a large-scale social change such as mental patient deinstitutionalization" (p. 489). As noted by Roesch (1995), the high numbers of mentally ill inmates in jails reflects the failure of the mental health system to provide an adequate level of care for community clients.

Several studies used random design and standardized measures to address the prevalence of mental illness in jail settings (see Table 1). Consistently high rates were found across the samples. Excluding the study which did not use a standardized diagnostic interview (Guy, Platt, Zwerling, & Bullock, 1985), schizophrenia was in the range of 2-5%, depression 13-17%, dysthymia 9-11%, alcohol dependency 51-79%, drug dependent 32-64%, and antisocial personality disorder 49-64%. Although there is variability in rates described in these urban jail studies, there is a clear pattern of rates of serious mental illness that far exceed those found in the general population, providing support for the concerns expressed by Briar (1983), Steadman et al. (1984), and Roesch (1995).

In an overview of issues related to mental illness among prison inmates, Jamelka et al. (1989) concluded that prevalence rates for major psychiatric disorders have increased steadily. They noted that while facility surveys suggest that 6-8% of prisoners are designated as seriously mentally ill, clinical studies suggested between 10-15% of prison populations have a major thought disorder or mood disorder, requiring services "usually associated with severe or chronic mental illness" (pp. 483-484). This assessment is supported by a review of several studies selected on the basis of some type of random sampling and the use of objective, standardized instruments (see Table 2). The results indicate rates of schizophrenia/psychosis in the range of 3-9%, depression 5-27%, bipolar 4-7%, alcohol/drug dependency 25-66%, and antisocial personality disorder 35-57%. These far exceed the community samples reported in the Epidemiological Catchment Area studies (Robins et al., 1984).

Although rates of mental illness are consistently higher in both jails and prisons than the general population, the extant literature addresses these in isolation. There is little research examining ways in which dynamic variables might interact within the criminal justice and mental health systems, contributing to possible relationships affecting these rates. Factors related to the movement of mentally ill inmates into jails, and thence either back into the community or into the prison

Table 1. Jail Prevalence Studies (Since 1980)

Study	Sample	Procedure	Results
Bland, Newman, Dyck, & Orn (1990)	180 Edmonton (Alberta) provincial prisoners; random sample	Diagnostic Interview Schedule (DIS)	Schizophrenia (2%) Manic episode (4%) Depression (17%) Dysthymia (11%) Panic (7%) Obsess/compulsive (9%) Alcohol dependent (79%) Drug dependent (52%) Antisocial (57%)
Guy, Platt, Zwerling, & Bullock (1985)	486 Philadelphia pretrial detainees; every third admission	Structured Clinical Interview, MMPI, Rorschach	Schizophrenia (12%) Bipolar (3%) Depression (5%) Personality (9%) Alcohol dependent (25%)
Roesch (1995)	790 Vancouver detainees; consecutive admissions; every third admission	Diagnostic Interview Schedule (DIS)	Schizophrenia (5%) Affective disorders (10%) Dysthymia (7%) Anxiety disorders (41%) Alcohol dependent (78%) Drug dependent (64%) Antisocial (64%)
Teplin (1994)	748 Cook County Jail (Chicago) detainees; random sample	Diagnostic Interview Schedule (DIS)	Schizophrenia (5%) Depression (13%) Dysthymia (9%) Phobias (19%) Panic (2%) Obsess/compulsive (5%) Alcohol dependent (51%) Drug dependent (32%) Antisocial (49%)

system, have not been systematically explored. To our knowledge no studies have been designed to explore the complexities of these relationships.

It was the purpose of the current study to explore rates of mental illness among jail and prison inmates in a rural state, and contrast these rates with prevalence rates reported in the literature among inmates in urban areas. It was predicted that rates across most diagnostic categories would be lower than those found in urban inmate samples, based on lower rates noted in the ECA population study (Robins et al., 1984). A secondary objective was to compare rates found among jail inmates and prison inmates in this rural state. No previous single study has concurrently sampled both jail and prison groups for comparative purposes.

METHOD

Participants

A stratified random sample of 213 inmates was drawn from a population of 875 inmates in a rural Northeastern state. One hundred eighteen subjects were

Table 2. Prison Prevalence Studies (Since 1980)

Study	Sample	Procedure	Results
Dvoskin & Steadman (1989)	3,684 New York state prisoners; mostly random sample	Three-part survey and interview format	Psychiatrically disabled: severely (5%) significantly (10%)
Herrman, McGorry, Mills, & Singh (1991)	158 male and 31 female Australian prisoners; random sample	Structured Clinical Interview for DSM-III-R (SCID)	Psychotic (3%) Depression (10%) Dysthymia (2%) Alcohol/drug abuse (69%)
James, Gregory, Jones, & Rundell (1980)	174 Oklahoma state prisoners; random sample	Brief Psychiatric Rating Scale standardized battery	Schizophrenia (5%) Alcohol dependent (25%) Personality disorder (35%)
Motiuk & Porporino (1991)	2812 Canadian prisoners; stratified random sample	Diagnostic Interview Schedule (DIS)	Psychotic (3%) Depression (5%) General anxiety (18%) Phobia (13%) Alcohol dependent (47%) Antisocial (57%)
Neighbors, Gunnings, Lipscomb, Broman, & Lepowski (1987)	1070 Michigan state prisoners; stratified random sample	Structured Clinical Interview (SCID)	Schizophrenia (6%) Psychosis (3) Depression (21%) Dysthymia (5%) Bipolar (7%) General anxiety (1%) Simple phobia (11%)
Chiles Von Cleve, Jemelka, & Trupin (1990)	109 Washington state prisoners; nonrandomized sample	Diagnostic Interview Schedule (DIS)	Schizophrenia (5%) Schizophreniform (2%) Depression (10%) Dysthymia (4%) Bipolar (4%) Alcohol dependent (66%) Drug dependent (61%) Antisocial (44%)
Walters, Mann, Miller, Hemphill, & Chlumsky (1988)	51 state prisoners; random sample	Psychiatric Diagnostic Interview (PDI)	Schizophrenia (5%) Primary affective disorder (7%)

incarcerated at three small state prisons and 95 subjects from three regional jails. All six facilities are managed and administered by the state corrections department. Inmates were identified through random number generation (stratified by facility). A total of 303 inmates were invited to participate in the study, and 213 completed the battery. Administrative problems (such as transfer), lack of monetary or other compensation, and other activities at the facilities were problems associated with inmate recruitment. Comparative analysis of available file material suggested no obvious differences between the subjects in the study and the refusers.

The sample consisted entirely of males with a median age of 32 years. Eighty-one percent were White, 9% Native American, 6% African American, and 4% "other." Fifty-two percent were never married, 33% were separated or divorced, 13% were married, and 2% were widowed. Most of the sample (66%) had no military experience; only 9% were war veterans. A majority (69%) were employed at the time of their arrest, and 62% had been fired from jobs at least once in their lives. Almost half the sample (47%) acknowledged supporting themselves through crime at one or more times in their lives.

Approximately half the sample (47%) indicated that their natural parents were either separated or divorced. Twenty-eight percent stated they had been placed in foster care at one or more points in their lives. Approximately half (52%) had family members with arrest records, and 31% had family members who had been imprisoned.

Measures

The Diagnostic Interview Schedule, Version III-R (Robins, Helzer, Cottler, & Goldring, 1988) is a highly structured interview, designed to elicit responses that indicate the presence or absence of symptoms related to 30 psychiatric diagnoses. The DIS is a valid, reliable instrument which is commonly used in large scale studies involving psychiatric diagnoses. In contrast to conventional diagnostic interviews for use by clinicians, the DIS may be administered by trained interviewers who do not necessarily have masters or doctoral training. Interrater agreement between lay interviewers using the DIS and psychiatrists using the Physicians' Checklist has been found to range between .79 and .96 (Helzer et al., 1985). Because of the potential length of the interview, certain diagnostic sections were excluded: anorexia, bulimia, homosexuality, psychosexual dysfunction, somatization, somatic pain, tobacco dependence, transsexuality, and pathological gambling. This abbreviated version took between 1-3 hours to complete.

Procedure

Because facilities vary in size and function within the state corrections system, a stratified random selection design was utilized. As the interview teams prepared to interview at each facility, a random number generation for that facility was conducted from which the sample was drawn. Interviews were conducted by graduate and advanced undergraduate students from the state university who were pursuing either a major or minor in psychology. Every interviewer received extensive training in the administration of the DIS, and was required to meet competency criterion as part of the training protocol. Interviewers also observed a minimum of two interviews at the facilities prior to conducting the interviews themselves. Interviews were conducted individually in private rooms in the facilities, with visual access into the rooms for safety of the interviewers. For approximately one-fourth of the interviews, an observer from the interview team was present for purposes of interrater reliability. The entire process was supervised by a psychology associate extensively

trained and experienced in the administration and psychometric properties of the instrument.

RESULTS

Prevalence rates for mental disorders covered by the DIS-III-R are reported in Table 3. These results are drawn from the data aggregated across all six prison and jail facilities. The data are described along two continua: (a) narrow vs. wide diagnostic criteria, and (b) 6 month vs. lifetime occurrence. Narrow criteria utilize the DSM-III-R exclusionary criteria, whereas wide criteria do not. Exclusionary criteria generally preclude diagnoses which occur secondary to another mental or medical diagnosis. Six month diagnoses are those for which symptoms had occurred during the preceding 6 months, whereas lifetime diagnoses reference the occurrence of symptoms at any point during a subject's life. Because of institutionally-imposed limitations on certain behaviors in prison, 6 month diagnoses were seen as relatively meaningless in terms of alcohol dependence, antisocial personality disorder, and to a lesser extent, drug dependence. Diagnostic criteria assume some ability to engage in those behaviors upon which the disorders are based, such as criminal behavior or reckless disregard for safety, and it is largely the purpose of jails and prisons to prevent the expression of these behaviors. Therefore these diagnoses were only reported according to lifetime criteria.

Rates of schizophrenia were high compared to the general population data, ranging from 2.8% (narrow criteria/six months recency) to 6.6% (wide criteria/lifetime recency). An additional 5.6% met lifetime criteria for schizoaffective disorder. Collapsing bipolar, manic and major depressive disorders into a cluster of major affective disorders, it was found that 18% of all inmates in the study met narrow/six month criteria. Likewise when generalized anxiety, posttraumatic stress, obsessive compulsive, and panic disorders were collapsed into an anxiety disorder cluster, a total of 30% of all subjects met narrow/6-month criteria.

For purposes of alcohol and drug dependence diagnoses, moderate or severe criteria were required for a diagnosis. When a polysubstance abuse category was created, it was found that 56% of the sample met criteria for both alcohol dependence and drug dependence. Forty-seven percent of the sample met narrow/lifetime criteria for antisocial personality disorder.

Separate analyses were conducted to detect differences in diagnostic rates between subjects in prison settings and subjects in jail settings. These results were based on narrow criteria during the preceding 6 months, except for alcohol dependence, drug dependence, and antisocial personality disorder for which lifetime criteria were used (see Table 4). There was a trend toward higher rates in the prison settings in all diagnostic categories except alcohol dependence. Significant differences were found in posttraumatic stress disorder and schizoaffective disorder. Although the numbers in several of the diagnostic categories were low, the trend was consistent in the direction of higher rates in the prison settings than the jail settings.

Table 3. Prevalence of Mental Disorders Among Rural Jail and Prison Inmates

DSM-III-R disorder	Narrow criteria (6 months)			Narrow criteria (lifetime)			Wide criteria (6 months)			Wide criteria (lifetime)		
	(%)	(n)	SE	(%)	(n)	SE	(%)	(n)	SE	(%)	(n)	SE
Schizophrenia	2.8	(6)	1.1	3.8	(8)	1.3	5.2	(11)	1.5	6.6	(14)	1.7
Schizoaffective				5.6	(12)	1.6						
Bipolar	5.2	(11)	1.5	5.6	(12)	1.6						
Manic episode	2.8	(6)	1.1	7.5	(16)	1.8	3.7	(8)	1.3	10.8	(23)	2.1
Major depression	10.3	(22)	2.1	15.5	(33)	2.5	16.0	(34)	2.5	25.4	(54)	3.0
Dysthymia	4.7	(10)	1.5	9.9	(21)	2.0	9.4	(20)	2.0	18.3	(39)	2.6
Generalized anxiety	3.8	(8)	1.3	5.6	(12)	1.6	5.6	(12)	1.6	11.3	(24)	2.2
Posttraumatic stress	21.1	(45)	2.8	32.5	(69)	3.2						
Obsessive compulsive	0.5	(1)	0.5	1.4	(3)	0.8	6.6	(14)	1.7	12.2	(26)	2.2
Obsessions only	5.7	(12)	1.6	8.9	(19)	2.0						
Compulsions only	0.5	(1)	0.5	2.3	(5)	1.0						
Panic	4.7	(10)	1.5	8.5	(18)	1.9						
Alcohol dependence				78.9	(168)	2.8				83.0	(176)	2.6
Drug dependence				60.6	(129)	3.3				68.9	(146)	3.2
Antisocial personality				46.9	(99)	3.4				55.4	(117)	3.4

Table 4. Comparison of Rates of Mental Disorders: Rural Prison and Jail Inmates

DSM-II-R disorder ^a	Prison rates (n = 118)			Jail rates (n = 95)		
	(%)	(n)	SE	(%)	(n)	SE
Schizophrenia	3.4	(4)	1.7	2.1	(2)	1.5
Schizoaffective	9.3*	(11)	2.7	1.1	(1)	1.1
Bipolar	6.8	(8)	2.3	3.2	(3)	1.8
Manic episode	5.1**	(6)	2.0	0.0	(0)	0.0
Major depression	11.9	(14)	3.0	8.4	(8)	2.8
Dysthymia	6.8	(8)	2.3	2.1	(2)	1.5
Generalized anxiety	5.1	(6)	2.0	2.1	(2)	1.5
Posttraumatic stress	27.1**	(32)	4.1	13.7	(13)	3.5
Panic	5.1	(6)	2.0	4.2	(4)	2.1
Alcohol dependence	76.3	(90)	3.9	82.1	(78)	3.9
Drug dependence	63.6	(75)	4.4	56.8	(54)	5.1
Antisocial personality	50.8	(60)	4.6	41.1	(39)	5.0

^aRates are based on DIS-III-R narrow/6-month criteria, except alcohol dependence, drug dependence and antisocial personality disorder, which are narrow/lifetime criteria.

* $p < .01$.

** $p < .05$.

DISCUSSION

The literature on the prevalence of mental illness among inmates suggests high rates in all diagnostic categories for prison and jail inmates. Although explanations for these findings vary according to type of institution, there is consistency in reported rates of schizophrenia, major affective disorder, anxiety disorders, personality disorders, alcohol dependence, and drug dependence. The current findings support results of other studies involving prison inmates, but are inconsistent with studies of urban jail inmates. Whereas high rates across diagnostic categories were found in the rural prisons, there were only slight increases in the rates of mental illness in rural jails over rates reported in the rural ECA community sample. They are substantially lower than rates reported in urban jail studies (e.g., Bland et al., 1990; Roesch, 1995; Teplin, 1994). The exceptions to this are the diagnoses of alcohol and drug dependence and antisocial personality.

The existing literature is based largely on prison and jail inmates in urban settings. It was predicted that rates of mental illness among inmates in rural settings would be lower, based on ECA data (Robins et al., 1984). Current results do not support this. Consistent with the findings of Motiuk and Porporino (1991), rates of mental illness do not appear to significantly differ whether an offender is incarcerated in an urban or rural prison setting. However, the current data do support the expectation that rural demographics may play an important role in distinguishing rural jail inmates from their urban counterparts.

Previous studies were based on samples drawn from either jail or prison settings. Direct comparisons across type of institution in a single study has not been undertaken, primarily due to methodological problems associated with interfacility comparisons. The current data were collected in a rural state where jail and prisons

are consolidated under one state corrections department with consistent policies pertaining to mentally ill inmates, thus permitting direct comparisons. It was found that inmates in the jails were far less likely than prison inmates to have a history of prior psychiatric hospitalization [$\chi^2(1,213) = 7.45, p < .01$] as well as lower rates of current mental illness. This may reflect the ability of consolidated correctional systems to operate in a more integrated fashion than traditional models, permitting lower risk mentally ill offenders to be expeditiously returned to the community, while more serious inmates with mental illness are treated in secure prison units. The state in which this study was conducted promoted a policy of cooperation between the state corrections and mental health departments with a particular emphasis on the diversion of mentally ill misdemeanants from jails to mental health facilities and programs. These data offer some support for this policy.

In their multistate study of the relationship between deinstitutionalization and increased prison populations, Steadman et al. (1984) suggested that jails, rather than prisons, were most likely to experience increases in mentally ill inmates. Teplin (1984) observed "arrest is often the only disposition available to the officer in situations where persons are not sufficiently disturbed to be hospitalized, yet are too public in their deviance to be ignored" (p. 800). Given the higher rates of mental illness and substance abuse in urban settings, particularly evident among the homeless, it is possible that these individuals are more prone to confrontation with the authorities, arrest, and detention. While this may be indicative of the criminalization of mental illness in urban areas, the data from this study do not support a similar process in rural areas.

Several limitations were noted in this study. Unlike large institutions where subject recruitment is aided by a steady flow of new admissions through a reception area, the facilities in this study were small and decentralized. The population and recruitment limitations led to a pool of subjects in which the reliable detection of low incidence diagnoses was difficult. Since a larger number of subjects is desirable for the comparison of diagnostic rates across prisons and jails, the current findings should be replicated. Additionally, in exploring the causes and implications of rural jail rates that were lower than urban settings, a complete description of the psychiatric histories of the subjects would further clarify whether the rural inmates differ from urban inmates in their use of mental health services prior to incarceration, and to what extent these services might divert misdemeanor offenders from jail settings. Current findings that jail inmates had significantly lower rates of prior hospitalization than prison inmates in a consolidated correctional system are an important, albeit preliminary, indication that rural communities may not experience the flow of mentally ill inmates into their jails that is commonly found in urban areas. It is possible, of course, that these findings may not generalize to other rural states with different social policies. It is also possible that it is primarily the lower base rate of mental illness in rural communities, rather than the benefits of a consolidated correctional system, which accounts for the lower prevalence of mental illness in jails. Finally, reliability concerns related to length of stay data in this study made a closer analysis of prisonization effects untenable.

This study indicates that prisons in rural areas are affected by the growing problem of mental illness among inmates. In an era of dwindling funding for social

services, rural states will be faced with increasing economic, legal, and ethical responsibility for addressing the needs and challenges of inmates with serious mental health needs. In the current political climate, support and funding for necessary services may be difficult to obtain. This presages a potentially serious shortfall in the delivery of mental health treatment to this growing population. In the absence of social, legal, and political change, our correctional institutions may indeed be, as described by Briar (1983), "our most enduring asylums" (p. 388).

ACKNOWLEDGMENTS

The authors thank Harold Leitenberg, William Butler, and three anonymous reviewers for their helpful comments on earlier versions of this paper. The authors also thank the research assistants who assisted in the collection of data and the Vermont Department of Corrections for its support of this research.

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