

A Survey of Mental Disability Among State Prison Inmates

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To obtain a comprehensive picture of the levels of mental disability in the general state prison population in New York State, the authors gathered data on a random sample of inmates using a survey instrument adapted from the state's level-of-care surveys of the psychiatric population. The sample consisted of 3,332 inmates in the general prison population (9.4 percent) and 352 inmates in prison mental health units. The survey results showed that 8 percent of the state's prison inmates have severe psychiatric or functional disabilities that clearly warrant some type of mental health intervention, and another 16 percent have significant mental disabilities that require periodic services. The specific nature and extent of these disabilities need to be assessed before appropriate services can be developed.

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"In the United States there is a paucity of empirical studies on the occurrence of mental disorders in prisons" (1). In the seven years since James and colleagues made this statement, there has been little change in the amount of available research, even though prison populations have burgeoned and cries for mental health services for inmate populations have become rampant.

James and associates' study of 246 Oklahoma prisoners found that 10 percent were severely or acutely disturbed and 35 percent required some mental health treatment. Since then the only U.S. prison data are from Collins and Schlenger's 1983 study (2) of North Carolina inmates. Their data are not terribly useful in estimating the types and volume of services that might be needed, however, because they represent lifetime prevalence rates and not current disability levels. In fact, to date the only reported point prevalence data for U.S. prisoners are those of James and others.

That service needs during the 1980s are intensifying is apparent simply by the exploding number of persons in U.S. prisons. In 1980 there were 329,821 inmates in state and federal prisons. By 1985 there were 503,601 (3), an increase of 52.7 percent in five years. What is evident nationally is even more stark in New York State, where our research was done. On January 1, 1980, New York's prisons contained 21,639 inmates (4). In May 1986, when we conducted the survey reported here, there were 36,144 inmates, an increase of 67 percent.

Because this influx of inmates has overwhelmed correctional systems and mental health staff providing services in prisons, more and more mental health services have been deemed essential to prison operations. Furthermore, in Michigan, Texas, and other states, court suits concerning constitutional requirements for minimally adequate inmate health (and mental health) services have mandated additional services. Just what types of services are needed, for how many inmates, and where to locate them are usually determined by some combination of outside experts' advice, fiscal constraints, and political contingencies.

Sound mental health program planning is rare in correctional settings. It is rare in large part because of the absence of even rudimentary, reliable, empirically based numbers on the amount and types of mental disability present among state prison inmates (5). That situation exists despite the fact that mentally ill prison inmates are the largest single class of mentally disordered offenders (6).

This article is the initial report of a 1986 statewide survey of 3,684 inmates in New York State prisons. The survey's primary purpose was to provide a comprehensive picture of the levels of mental disability among the current prison population from which service needs could be identified and programs planned and implemented.

Choosing a survey approach
What we would measure in the survey was guided by our ultimate need to estimate the mental health service requirements of the prison

population. There was also the practical matter of how to administer such a survey in a prison. At first we considered having psychiatrists conduct detailed diagnostic interviews with a sample of inmates. From these diagnostic interviews we could estimate the prevalence of psychiatric disorders in the population. This approach was clinically appealing. However, in the absence of corollary measures of dysfunctionality, behavioral disruptions, and multiple disabilities, it would have had minimal value in determining service needs. Moreover, psychiatrists' safety, confidentiality of inmate records, cost, and time constraints made diagnostic interviews impractical for the size of the sample we wished to assess.

We chose instead to use correctional counselors and mental health staff actually employed in the prisons to gather three kinds of information: physical health data, measures of psychiatric symptoms and functioning, and history of psychiatric problems and treatment. In addition, the basic survey data were supplemented with demographic and crime history information.

Although these data were not explicitly diagnostic in nature, they would allow us to estimate the extent of psychiatric disturbance in the prisons. We could place current pathology in the context of treatment actually provided, while controlling for physical health and other problems that might affect perceptions of mental disturbance. Moreover, we could examine relationships among criminal record data, dangerous behavior, psychopathology, and receipt of psychiatric services.

This approach offered the additional advantage of eliminating the logistic and security problems of face-to-face interviews with prisoners. It allowed us to rely on a greater number of surveyors, who could focus on their particular areas of skill. The physical health assessments would be completed by the health services personnel of

the New York State Department of Correctional Services. The behavioral ratings would be completed by corrections counselors. The psychiatric treatment history questions would be completed by mental health staff of the New York State Office of Mental Health (OMH).

Development of the survey instrument

The prison survey instrument was adapted from the OMH Level of Care Survey (7-9), a comprehensive review of physical and psychiatric problems of persons in residential treatment settings. It contains a variety of psychiatric, physical health, and functional scales and is administered every other year in the inpatient units of New York State's civil and forensic psychiatric centers. The survey serves as OMH's primary source of clinical data on its inpatient population and has been used throughout the United States and Canada in a variety of programs and treatment settings.

Working closely with the Department of Correctional Services, we extensively modified and pilot-tested the survey form for use in prisons. The most immediate changes were made in wording. The terms "patient" and "hospital" had to be changed to "inmate" and "prison." Certain questions were legally or administratively sensitive in the prison environment. For example, we could not ask if someone had actually abused drugs. Instead, we had to ask if the inmate was a suspected drug user.

The most drastic modification of the survey was to break it into three separate forms: one for physical health, one for behavioral and functional ratings, and one for psychiatric history. In New York state hospitals, conducting the survey is straightforward since all the staff and data necessary to complete the forms are located with the patients. In the prisons, however, health and psychiatric care are organizationally and physically separated. Moreover, certain kinds

of confidential data cannot be shared between mental health and prison staff.

Finally, we had to be sure that no inmates could be identified on the final data tapes. To accomplish this, we generated a pseudo-ID number for each sampled case. The pseudo-ID was placed on each of the three sections of the form, allowing matching in the data base. This procedure also enabled us to add demographic and crime history information from the Department of Correctional Services to our survey data.

Sampling design

For the survey, we sought a 10 percent sample of the general prison population. This percentage provided a sufficiently large number of inmates in the minimum-, medium-, and maximum-security levels to make population estimates. To achieve a 10 percent final sample, we selected 12 percent of the prison population at random. The oversampling was for expected sample degradation resulting from releases, deaths, certain transfers, cases out to court, and cases in mental health programs.

We also wanted to obtain a reasonable number of cases receiving mental health care in the prisons. From a mental health service perspective an inmate can fall into one of four categories: general population, those not receiving any active psychiatric care; outpatient, those who receive ambulatory care from OMH (patients receive what would be clinic care in a traditional psychiatric outpatient program); special housing, those actually segregated from the general prison population and put into mental health special housing (including short-term crisis services in satellite units as well as longer-stay, rehabilitative respite care in intermediate care units) for psychiatrically troubled inmates; and inpatients, those who are treated at Central New York Psychiatric Center, an extramural OMH forensic hospital that cares for the

most psychiatrically disturbed.

The general population category would be adequately covered, by definition, in the 10 percent sample of the general population. The 10 percent sample would also provide a statistically large enough sample of the outpatient group. For the group in mental health special housing, however, it was necessary to explicitly survey all patients in the group because there were only 360 such beds. A 10 percent sample would have been statistically unreliable. Finally, we did not survey the inmates in Central New York Psychiatric Center. They would be surveyed in the regular Level of Care Survey during the fall of 1986.

A survey return rate of 84 percent provided data on 3,332 general population cases representing 9.4 percent of all inmates. We also obtained data on 352 of the 360 inmates in prison mental health units (98 percent). To achieve an accurate representation of these cases in a population-adjusted data base, we had to weight the returned cases in proportion to their distribution in the actual census. Practically speaking, this meant we counted each non-mental-health case in the survey data base approximately ten times. Each mental health case was counted approximately once.

Scoring the level of disability

In our initial analyses we have focused on two interrelated measures: psychiatric disability and functional disability. Our psychiatric disability measure is based on an OMH-modified version of the Nurses Observation Scale for Inpatient Evaluation, or NOSIE (10).

The NOSIE is a widely accepted behavioral rating scale that is relatively sensitive to psychiatric disturbance. It comprises several major subscales that rate agitation, manifest psychopathology (hallucinations, delusions), depression, personal neatness, social interaction, and disorientation/confusion. In addition, the NOSIE summary

score provides an overall level of psychiatric disability.

We modified the scale slightly in 1980 to improve its sensitivity to affective disorders and to include more of the kinds of problems identified by our own psychiatric center personnel. We now call the scale PSYSUM (for psychiatric summary). Table 1 lists the seven subscales and their scoring ranges.

Although diagnoses cannot be made on the basis of the PSYSUM (or NOSIE) subscale scores, there are good associations with diagnostic classes. For example, schizophrenic patients score significantly worse on the manifest psychotic subscale, and affective disorder patients do worse on the depression subscale.

To measure functional disability we employed the Community Activity Dysfunction Scale (CADS) (6). This scale records the rater's perception of a patient's ability to carry out particular adult role behaviors; ratings on the scale range from 1, indicating definitely able to perform a specific task (for example, keep cell neat or engage in work assignments), to 5, indicating definitely unable to perform a task. In the prison survey the wording of some CADS items had to be modified for use in prisons.

On both measures, PSYSUM and CADS, each inmate was classified into one of three groups: little or no disability, significant disability,

and severe disability. The severe disability group included all persons who scored two or more standard deviations above the mean group score. By definition, therefore, the PSYSUM scores of inmates in the severe disability category differ statistically at the .05 level from the rest of the prison sample. Significant disability was indicated for those scoring between one and two standard deviations above the group mean.

As an external measure of the validity of our prison version of the Level of Care Survey, we compared the inmate disability scores with other samples from which there were data available on the PSYSUM composite score. As shown in Figure 1, the scoring system produced the expected results. The minimum PSYSUM score for the severe disability group was equal to the mean score of long-stay state hospital inpatients. So the disability level of the "best-functioning" inmate in the severe disability group is equivalent to that of the average long-stay patient in New York State mental hospitals as measured in our October 1984 systemwide Level of Care Survey.

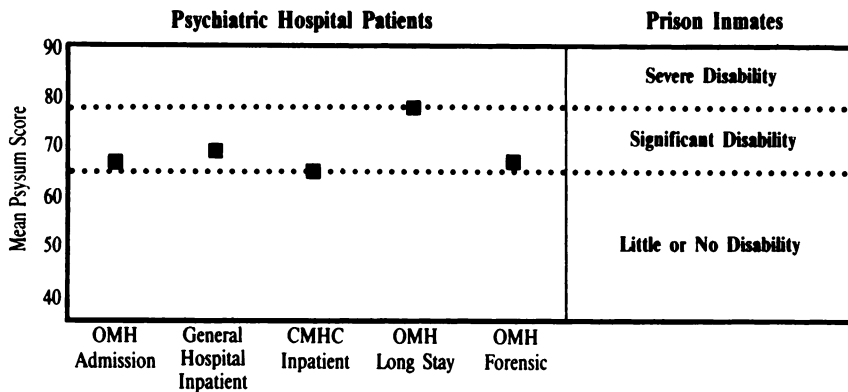
Mean PSYSUM scores for OMH admission units and forensic patients in 1984 are also shown in Figure 1 along with two New York City general hospital inpatient units and a range of clients of New

Table 1
PSYSUM subscale scores, by disability group

Subscale	Score range	Psychiatric disability		
		Little or none	Significant	Severe
Psychiatric symptom	6-30	6.314	8.450	13.086
Depression	4-20	4.430	5.611	7.951
Confusion	5-25	5.954	9.077	13.276
Disruptive-agitated-irritable	7-35	10.437	16.458	21.951
Social affect and interest	5-25	15.492	19.329	19.049
Personal appearance and neatness	4-20	7.055	10.918	12.576
Steals or hoards things	1-5	1.137	1.564	1.745
Psychiatric factors composite score (PSYSUM)	32-160	50.818	71.408	89.634

Figure 1

Mean PSYSUM scores of selected groups of psychiatric hospital patients and disability levels of prison inmates in New York State



York State community mental health centers in 1982.

It should be noted that this prison survey represents, to our knowledge, the first time the PSYSUM score has been calculated for a putatively nonpsychiatric population. Yet in the absence of a real, general population (that is, normal individuals not in jail or hospitals), any inference of normalcy for the prison general population must be guarded.

Results

The scores on the total PSYSUM scale and its individual subscales are shown in Table 1. The interscale reliability is immediately evident. Inmates grouped in the severe psychiatric disability category based on their composite PSYSUM score were also the most impaired on six of the seven subscales. In fact, on all seven subscales the significant disability scores are higher than the little or no disability scores.

This same pattern is apparent on the CADS functional disability scale reported in Table 2. There is a consistent rank ordering on all items, in which those in the significant disability category had higher scores than those with little or no disability, and those with severe disability had the highest scores.

The distribution of disability is reported in Figure 2. A total of 5 percent (N=1,854) of the 36,144 New York State prison inmates

had severe psychiatric disability, and 6 percent (N=2,161) had severe functional disability. The significant disability levels included 10 percent (N=3,627) on the psychiatric disability dimension and 13 percent (N=4,571) for functional disability.

Obviously, those inmates with psychiatric or functional disabilities overlap greatly. Figure 3 portrays these overlaps. A total of 8 percent (N=2,974) of the prison population had very substantial psychiatric and functional disabilities that clearly would warrant some type of mental health ser-

vice. In addition, 16 percent of the inmates (N=5,782) had significant psychiatric and functional disabilities; many of these inmates also required periodic mental health services. Thus nearly one-quarter of New York's prison inmates have substantial impairments to functioning in the general prison population.

Discussion

Knowing that 8 percent of New York's prison inmates have severe mental disabilities and another 16 percent have significant mental disabilities is but a first step in responding to their needs. The next step, and the one in which we are now involved, is to examine the specific nature of these disabilities—specific combinations of functional disabilities, drug and alcohol comorbidities, and mental retardation. Once the volume and types of specific disabilities and their clusters are determined, the planning process comes to a juncture where knowledge must be translated into services.

Clinicians must assess what types of services are needed for specific types of disabilities and then how these services can be packaged for a prison environ-

Table 2

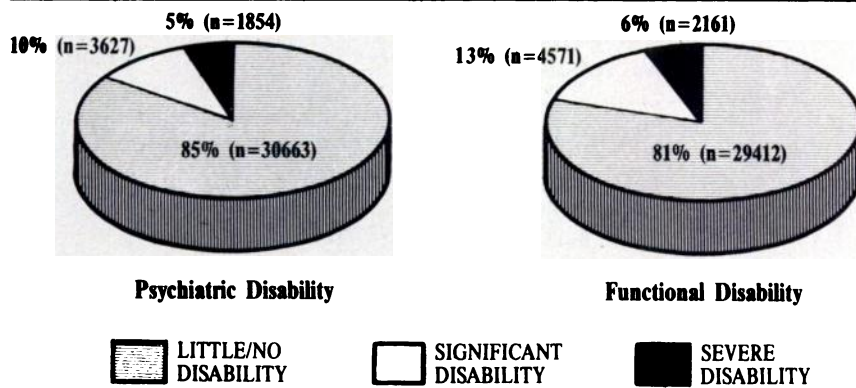
Mean scores on the Community Activity Dysfunction Scale (CADS),¹ by disability group

Scale item	Functional disability		
	Little or none	Significant	Severe
Follow a facility medication schedule	1.181	2.030	2.604
Keep program schedule	1.078	1.935	2.886
Make commissary buys without help	1.032	1.723	2.233
Engage in work assignments	1.067	1.926	2.827
Keep cell neat (up to standards)	1.158	2.047	2.963
Socialize with others	1.213	2.142	3.006
Maintain adequate diet	1.147	2.004	2.688
Take or seek assistance with own problems	1.274	2.280	3.109
Engage in educational or vocational activities	1.178	2.146	3.078
Use leisure time without supervision	1.220	2.227	3.191
Composite CADS scores	11.548	20.460	28.585

¹ Scores range from 1, indicating definitely able to perform the task, to 5, indicating definitely unable to perform the task.

Figure 2

Percentage of inmates with either psychiatric or functional disabilities in the New York State prison population (N=36,144) as of May 1986, by level of disability



ment. Decisions must be made on type of staff needed, staffing levels, treatment goals, lengths of practical treatments, treatment modalities, and the like. In concert with these programming decisions, the needs assessment data can then be probed for the number of inmates with each type or combination of disability so that the number of program units required and their most effective location can be ascertained. This planning process requires the effective integration of clinical, administrative, and research expertise.

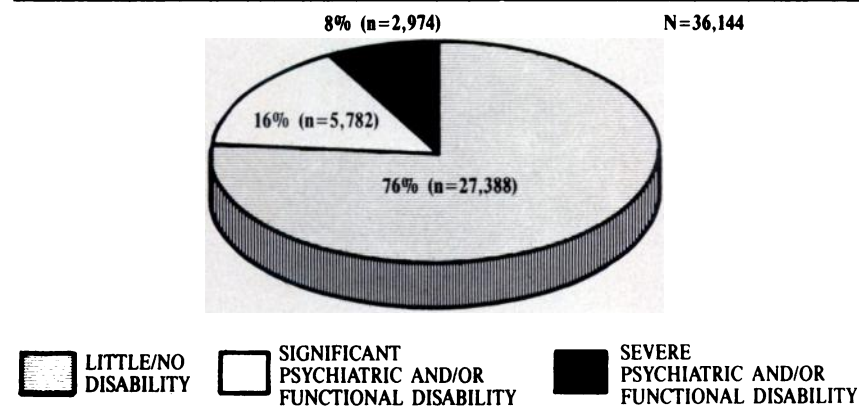
It is not the purpose of this article to advocate levels of service for the populations studied. Ultimately the threshold for how dis-

abled one must be to warrant a given level of service is a complicated decision involving both public policy and clinical issues. The decision must take into account diverse factors such as budgetary limitations and priorities and the legal and operational costs of not providing a service, as well as the level of service available to a similarly impaired nonoffender in the community. To assert that such decisions can be made purely on the basis of clinical data is neither realistic nor desirable. Clinical data help to establish the costs of providing programs but are only half of the cost-benefit analysis.

As we continue to analyze the data, we hope to find a better link

Figure 3

Percentage of inmates with psychiatric and/or functional disabilities in the New York State prison population (N=36,144) as of May 1986, by level of disability¹



¹ Inmates having both a severe disability and a significant disability are classified in the severe group.

between given levels of disability and negative events such as staff injury. It is hoped that such information will provide policymakers with tools to assess the benefits of services.

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References

1. James JF, Gregory D, Jones RK, et al: Psychiatric morbidity in prisons. *Hospital and Community Psychiatry* 11:674-677, 1980
2. Collins JJ, Schlenger WE: The Prevalence of Psychiatric Disorder Among Admissions to Prison. Paper presented at annual meeting of the American Society of Criminology, Denver, Nov 1983
3. Bureau of Justice Statistics: Prisoners in 1985. US Department of Justice. Washington, DC, US Government Printing Office, June 1986
4. Crime and Justice Annual Report. Albany, New York State Division of Criminal Justice Services, 1981
5. Hartstone E, Steadman HJ, Robbins PC, et al: Identifying and treating the mentally disordered prison inmate, in *Mental Health and Criminal Justice*. Edited by Teplin LA. Beverly Hills, Calif, Sage, 1984
6. Steadman HJ, Monahan J, Hartstone E, et al: Mentally disordered offenders: a national survey of patients and facilities. *Law and Human Behavior* 6:31-38, 1982
7. Fabisiak S, Baskin D, Hammer R: The New York State Level of Care Survey in community mental health centers and New York State's psychiatric centers. *Psychiatric Quarterly* 55:25-34, 1983
8. Fabisiak S: The changing clinical characteristics of New York State psychiatric center inpatients, in *Proceedings of the Eighth Annual MSIS National Users Group Conference*. Edited by Franks JM, Levine MS. Orangeburg, NY, Oct 18-19, 1984, pp 51-55
9. Fabisiak S: A Brief Introduction to the Level of Care Survey. Albany, Bureau of Evaluation Research, New York State Office of Mental Health, 1985
10. Honigfeld G, Gillis RD, Klett CJ: NOSIE-30: A Treatment Sensitive Behavior Scale. *Psychological Reports* 19:180-182, 1966