

Racial Differences in the Criminalization of the Mentally Ill

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“Criminalization,” the hypothesis that mentally ill persons are diverted to the criminal justice system, has been difficult to confirm. The few relevant studies have examined aspects of the mental health or the criminal justice systems, but not both. This study compares state hospital admissions with the admission of mentally ill persons to state prisons. There was considerable variation between counties. Counties sent more mentally ill members of their largest minority group to prison than expected. These results suggest that jurisdictions differ in their use of these two systems and that race is a factor in this difference.

Over the past 35 years, state and county mental hospital populations have decreased dramatically, dropping from 558,922 in 1955 to 137,810 in 1980.¹ The development of community-based services has not kept pace with deinstitutionalization trends, and community-based treatment for many is inadequate or nonexistent. Some have examined the extent to which the criminal justice system has filled the void left by these changes.^{2, 3} “Criminalization” refers to the hypothesis that behavior once seen as a function of mental illness is now more likely to be addressed by the criminal justice system. Penrose⁴ proposed that prisons and mental institutions are used for removing mentally ill, developmentally disabled, and criminal com-

munity members, and that a dynamic relationship exists between these two systems for controlling deviance, broadly defined. However, the criminalization hypothesis has been difficult to confirm or disprove.⁵

While hospital populations were dropping, federal and state prison populations increased from 185,780 in 1955 to 315,974 in 1980.⁶ However, several factors indicate there has not been a simple transfer of the mentally ill from one institution to the other. The median age of prisoners, 28 in 1986,⁷ suggests they were not old enough to have been part of the state hospital depopulation of the 1960s and 1970s. The percentage of persons in prisons with prior hospital commitments increased from 7.9 in 1968 to 10.4 in 1978,⁸ a smaller increase than would be expected if there had been a wholesale transfer of individuals from one system to the other. On the other hand, in her review of the literature,

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Teplin⁵ found reported rates of mental illness in jails as high as 50 percent. Sosowsky⁹ observed an arrest rate of 219.3 per 1,000 among mental patients discharged from a California State hospital as compared with 38.5 per 1,000 in the surrounding county's general population. Steadman *et al.*⁸ have interpreted the increased rate of arrest for mentally ill persons as an artifact of the increased rate of mental illness in lower socioeconomic classes.

Few have studied the prevalence of mental illness in prisons. Neighbors,¹⁰ in his study of the Michigan prison system, found 19.7 percent of inmates were severely impaired. Steadman *et al.*¹¹ found severe or significant psychiatric disability in 15 percent of New York State prison inmates. In the Oklahoma state prisons, James *et al.*¹² found 45 percent of the inmates were in need of mental health treatment. Do these data reflect a higher rate of mental illness among prisoners related to changes in the mental health system?

Arvanites¹³ studied the effects of changes in civil commitment laws on incompetent-to-stand-trial (IST) commitments in three states. His hypothesis was that as civil commitment criteria became more stringent, use of arrest and subsequent IST commitments would increase as a means of circumventing these new laws. He found that the overall proportion of ISTs increased, but there was substantial variation, and in one state the proportion actually decreased. Dickey¹⁴ also found an increase in IST commitments in Wisconsin after deinstitutionalization, but most of the com-

mitments came from one county. While these findings suggest a negative correlation between general psychiatric and IST admissions, they also suggest a different use of incompetency-to-stand-trial in different jurisdictions. Studies that sum data across jurisdictions (those looking at whole states or national data) may blur interjurisdictional differences and obscure relationships between the mental health and criminal justice systems that occur on a local level.

There is also evidence that different racial groups are treated differently by the two systems. Blacks are found at a higher rate than whites among those involuntarily committed to mental institutions,¹⁵ and receive fewer community mental health services.¹⁶ Hough *et al.*¹⁷ found that Hispanics accessed mental health services at a lower rate than did the general population. Nationally, blacks comprise half the state prison population, but only 12 percent of the general population; and Hispanics are overrepresented as well.⁷ Arvanites¹⁸ noted a significantly greater increase in nonwhite IST defendants over the increase in white IST defendants after changes in commitment laws in his three-state study.

Research on the criminalization hypothesis has been hampered by the lack of information on the rates of mental illness in prison populations. Developments in prison admission screening have provided a means of estimating the number of new prisoners who are mentally ill. These estimates allow a direct comparison of state hospital and state

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prison detentions of the mentally ill for each county.

The questions addressed by this study are the following: Is there a trend in the relationship between state hospital admissions and mentally ill offender (MIO) prison admissions across jurisdictions? If there is no overall trend, do different jurisdictions use the two systems differently? Is there a relationship between race and jurisdiction in the way these two systems are used?

Methods

Subjects Subjects were drawn from state hospitals and prisons in the state of Washington, which served a general population of 4.5 million. The study period was from July 1, 1985 through June 30, 1988. During this period there were 14,399 admissions to the state hospitals and 8,380 admissions to the state prisons. Of these prison admissions, 4,736 underwent evaluation, and 691 were assessed to be mentally ill. Each admission event (as opposed to individual) constituted a unique record for the data analyses.

Data Sources *United States census.* The 1980 census and the 1986 update provided population, racial proportions, and population densities for each of the 39 counties.

State prison admissions. The Department of Corrections (DOC) annual summary statistics provided the number of admissions, classified by race and county of admission.

All incoming prisoners are administered a structured psychiatric history and mental status exam and a psycho-

logical test battery shortly after admission. The structured interview was developed to facilitate the initial mental health screening of a large number of incoming offenders. It necessarily had to be brief, and requires five to 15 minutes to administer by a trained examiner, a Masters level mental health professional in this case. It focuses on current psychiatric symptoms, family history, and history of treatment and hospitalization, and consists of 44 questions derived from the Diagnostic Interview Schedule or DIS,¹⁹ the Folstein Mini-Mental State Exam,²⁰ and standard psychiatric history items. The interview also included an adaptive functioning assessment.

Tests administered include the Minnesota Multiphasic Personality Inventory,²¹ the Buss-Durkee Hostility Inventory,²² the Veteran Alcohol Screening Test,²³ the Monroe Dyscontrol Scale,²⁴ the Suicide Risk Scale.²⁵ All have been used previously with criminal populations.

Using these sources, computer algorithms assign preliminary DSM-III-R diagnoses for each prisoner.²⁶ A prisoner was considered mentally ill if he had a diagnosis of schizophrenia, schizophreniform disorder, schizoaffective disorder, or unipolar or bipolar affective disorder. This screening process, in a validation study using clinician diagnosis and the DIS for comparison,²⁷ yielded a high percentage of agreement with both. When considering the presence or absence of any of the major psychiatric disorders listed above, rather than a specific disorder, the comparison with the DIS yielded 85.9 percent of the cases in

agreement, a sensitivity of .47, and a specificity of .92. This study²⁷ demonstrates in more detail the equivalence of the diagnoses obtained with those based on DSM-III-R criteria. The percentage of prisoners defined as mentally ill for each county was multiplied by the total number of prison admissions for the appropriate county-by-race category. This adjustment produced an estimate of the total number of mentally ill offender (MIO) admissions to prison for each county-by-race group. These estimates were used to calculate correlation coefficients between state hospital admissions and MIO admissions to the state prisons.

State hospital admissions. Admissions to state hospitals classified by county and race were obtained from annual reports of hospital activity, published by the Department of Social and Health Services (DSHS).²⁸ Two adjustments were made to the hospital data for use in the log-linear analyses, described below. To account for missing MIO data attributed to noncompliance with testing, adjustments to the state hospital data were made for each county by race group. The number of hospital admissions was multiplied by the percentage of prison admissions tested for each county by racial group. This adjustment makes the counts of state hospital admissions directly comparable to unadjusted counts of prison admissions. Individual cases were generated from these adjusted composite statistics so that each state hospital record represents a unique admission with a known race and a known county of origin.

To create discrete categorical independent variables for use in log-linear analyses, counties were subgrouped along three dimensions. The distributions of population density and unemployment²⁸ rate were examined for natural groupings. A county was assigned to a predominant-minority group if the largest minority in the county (black, native, or Hispanic), constituted a larger proportion of the county population than did that minority group statewide. If no minority's proportion was greater than the state average, the county was classified as having no predominant minority (see Table 1).

Race was divided into four categories: white, black, native American, and Hispanic (Asians were admitted too infrequently to either system to permit analysis). Disposition had two categories: admission to the state hospital and admission to the state prison.

Results

Table 2 shows the statewide total counts and rates, per 100,000, of state hospital admissions, state prison admissions, and MIO state prison admissions for each racial group. Rates are utilized to facilitate comparison across races and are expressed as a function of the state population of each race.

A Pearson product-moment correlation between admissions to state hospitals per 100,000 and adjusted MIO admissions to prisons per 100,000 was calculated to determine whether an inverse relationship between these admissions rates existed for the 39 counties. The correlation between these rates

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Table 1
Subgroupings of Counties

Dimension	Subgroups	Number of Counties	Range
Population density	very low	31	Persons per square mile 2.7–69.0
	low	4	185.3–234.0
	moderate	3	318.4–430.5
	high	1	640.2
Unemployment rate			Percent unemployed
	low	5	3.5–6.4
	medium	16	7.2–10.3
	high	18	11.1–21.2
Predominant minority			Percent of population
	None	18	
	Black	2	4.35–6.18%
	Native American	11	2.00–16.83
	Hispanic	8	3.04–22.24

Table 2
Admission Counts and Rates by Race

	Total	White	Black	Native	Hispanic	Asian
State hospital (SH) admissions	14,399	12,501	985	247	236	78
SH rate/100K	323	310	862	359	180	65
State prisons (SP) admissions	8,380	5,601	1,580	299	745	84
SP rate/100K	188	139	1,383	435	568	70
Mentally ill offenders (MIO) admissions	1,223	721	241	50	194	19
MIO rate/100K	27	18	211	73	148	16

was $-.018$ ($n = 39$, $p = .915$, not significant).

Log-linear analysis²⁹ is the n-way generalization of the chi-square test, and allows testing for the independence of n categorical variables. This procedure was used to test hypotheses about differential use of the criminal and mental health systems for different jurisdictions and races.

Three-way analysis was performed on four jurisdiction-by-race-by-disposition combinations. When counties were grouped by their predominant minority, the Likelihood Ratio Chi Square (L. R.

Chisq) was highly significant for the three-way interaction (L. R. Chisq = 23.736, $p = .005$, $df = 9$). The standardized residuals indicate that some counties send more mentally ill persons from the predominant minority to prison than expected (see Table 3). These residuals are expressed as Z-score equivalents. For example, in counties with a large Hispanic population, the number of mentally ill Hispanics sent to prison was 19.49 standard deviations greater than expected, based on statewide data. Table 3 shows that the standardized residuals for a particular minority are

Table 3
Standardized Residuals of Disposition by Race Interactions When Counties are Grouped by Predominant Minority¹

Predominant Minority in County	Disposition of Mentally Ill Persons	Race			
		White	Black	Native	Hispanic
None	Hospital	1.30	-0.67	0.13	-0.91
	Prison	-4.89	2.52	-0.49	3.41
Black	Hospital	1.23	-2.48	-1.19	-2.69
	Prison	-4.63	9.29	4.46	10.08
Native	Hospital	0.42	-0.04	-1.26	-1.07
	Prison	-1.59	0.15	4.72	4.02
Hispanic	Hospital	0.67	-1.07	-0.20	-5.19
	Prison	-2.51	4.02	0.74	19.49

¹ These standardized residuals were calculated by the SPSS Program HILOGLINER, a statistical program for conducting log linear analyses.

greatest in counties with a large population of that same minority. Within any particular predominant minority cluster, the largest standardized residual is associated with the county's predominant minority, with the exception of counties whose predominant minority is black, where both blacks and Hispanics are overrepresented in MIO Prison admissions. Three-way analyses were not significant when jurisdictions were grouped by unemployment rate (L. R. $\text{Chisq} = 7.469$, $p = .280$, $df = 6$) or by population density (L. R. $\text{Chisq} = 16.179$, $p = .063$, $df = 9$).

Looking only at prison admissions, three-way log-linear analyses were used to determine what county characteristics are associated with prisoners' mental health status. The same three groupings of counties were employed, giving three jurisdiction-by-race-by-mental health status combinations. The three-way interaction between predominant minority, race, and mental health status was significant (L. R. $\text{Chisq} = 18.039$, $p = .035$, $df = 9$). The standardized residuals

from this analysis show a similar pattern to that discussed above for native Americans and Hispanics, but not blacks. Thirty percent of Hispanic prisoners from the counties with a large Hispanic population were mentally ill, whereas the proportion of all prisoners with mental illness was 15 percent. The Z-score residual for MIO admissions of Hispanic persons from these counties was 6.25, and the Z-score for non-MIO admissions of Hispanic persons was -2.59. Thirty-nine percent of native American prisoners from the counties with a large native population were mentally ill. The Z-score for MIO admissions of native American persons from these counties was 3.07. None of the other standardized residuals from this analysis were significant.

The three-way analyses were not significant when counties were grouped by unemployment rate (L. R. $\text{Chisq} = 5.059$, $p = .536$, $df = 6$) or population density (L. R. $\text{Chisq} = 9.043$, $p = .433$, $df = 9$).

Discussion

The Washington data base allows comparison of inpatient admissions to the mental health system with admissions of mentally ill offenders (MIO) into the state criminal justice system. The total number of inmates diagnosed with a major mental illness by this method agrees with both the DIS and with other recent studies of the prevalence of mental disorder in other prison systems.¹⁰⁻¹² Although less accurate on a case-by-case basis, false-positives and false-negatives appear to be about equal, and the total number identified as mentally ill by this procedure appears to be accurate. Further, errors in classification should be independent of jurisdiction. This should allow a reliable count of the relative number of MIOs admitted from each county. There may be some differential accuracy between races, but it is less likely that this difference varies between counties.

Because admission events rather than individuals were the unit of analysis, recidivism is a potential confounding factor. Hospital stays are on average shorter than prison stays, making it more likely that one individual could account for multiple hospital admissions in this study. This effect could alter differences between rates of admission to hospitals and prisons. Because individuals' hospitalization data was not available for this study, the impact of this potential confound cannot be determined precisely.

The data on the number of MIOs from a given county is based solely on data from the state prisons. While pris-

ons are used to remove people from the community for longer periods, there is evidence that many acutely mentally ill persons are admitted to jails³⁰ rather than to prisons. Similarly, inpatient psychiatric admissions may be underestimated by not including community hospital data. However, state hospitals are the primary hospital option for patients without insurance or other financial resources.

No linear relationship between admissions to state hospitals and MIO admissions to prisons was found. But there was a significant three-way interaction between disposition, race, and counties grouped by predominant minority. These results suggest that counties with a high proportion of a particular minority send more mentally ill members of that minority to prison and fewer to state hospitals than expected. This trend was strongest for Hispanics, but was also strong for blacks and native Americans (see Table 3).

Higher rates of admission of mentally ill persons to prisons might result from a differential crime rate and/or a differential incarceration rate between races. Even though the proportion of a specific minority's number of mentally ill persons in prison may be high relative to that minority's number of mentally ill persons in the state hospitals, it may not be high relative to the total number of that minority in prison. On the other hand, a higher frequency of mental illness among prisoners of a given group would be consistent with a shunting of that group's mentally ill into the criminal justice system. The three-way analy-

sis of jurisdictions (grouped by predominant minority) by race by mental health status of prison admissions demonstrates that mental illness in Hispanic prisoners is most prevalent among admissions from counties with a large Hispanic population and most prevalent in Native American prisoners among admissions from counties with a large Native American population. When comparing these results with those in Table 3, it can be seen that counties with a high rate of mental illness among their predominant minority prisoners are the same counties that send more of their predominant minority mentally ill persons to prison than expected.

Using "county" as an independent variable results in too many empty cells to permit analysis. By subgrouping it is possible that the predominant minority effect results from one or more "outlier" counties. The data from two counties with large Hispanic populations support this possibility. From the first, a large county, 31 percent of Hispanic prisoners were classified as mentally ill as compared to 11 percent of white prisoners. Forty-seven percent of admissions of mentally ill Hispanic persons were to prison, while only 7 percent of admissions of white mentally ill persons were to prison. The other county, with a medium-size population, had a rate of mental illness of 25 percent among its Hispanic prison admissions and 10 percent among its white prison admissions. Of Hispanic mentally ill persons admitted to state institutions, 76 percent went to prison. The comparable number for whites was 7 percent.

It is notable that the effect of an individual county did not produce significant results in the other analyses, suggesting that the predominant minority grouping is an important factor. In any case, large intercounty differences support the hypothesis that there are jurisdictional differences in use of the mental health and criminal justice systems. It would be useful to repeat this study in other states to see if a similar pattern exists.

The role of the county's economic status was tested by using the unemployment rate to divide jurisdictions. Jurisdictions were also divided by population density to test the hypothesis that rural counties have different abilities to provide services for minorities. Neither of these three-way interactions was significant, suggesting that urban and rural distinctions and economic vitality of a region are not significant factors in explaining differences in admission rates.

There are several possible explanations that could account for our findings. The first set of hypotheses assumes a higher crime rate among the mentally ill of certain races. There could be biological factors that cause mental illness to be expressed with more criminal behavior, or there could be more selective mating between those with mental illness and those with Antisocial Personality Disorder, leading to a co-occurrence of these traits. There could be cultural differences. Among groups for whom mental illness is less acceptable than crime, engaging in criminal behavior may be a way to avoid stigma. Another way mentally ill persons may

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avoid stigma is to engage in substance abuse. Substance abuse may predispose an individual to crime and incarceration. This trend may be stronger in some racial groups than in others.

It could also be hypothesized that there is a systematic bias against some racial groups. The mental health system may lack cultural and language-appropriate services for minority groups. Resources may be exhausted in areas with larger minority populations. Bias in the criminal justice system may also be associated with language and cultural barriers.

Although it cannot be concluded from this study that criminalization of the mentally ill occurs, these results are strong evidence that different jurisdictions use the mental health and criminal justice systems differently. Mentally ill racial minority members are overrepresented in the prisons. Different counties use the criminal justice and mental health systems differently for removing mentally ill persons from the community. Race is a factor in these differences, and the differences cannot be explained by higher incarceration rates in the predominant minority population. While not necessarily a causal factor, race is correlated with other variables accounting for counties' differential use of these two systems for controlling deviations from norms for acceptable behavior.

It would seem reasonable to expect a relationship between utilization of community mental health services and criminal behavior on the part of the mentally ill. Even more basic is the question of whether services are available in some

communities. If not, it would not be surprising that more mentally ill persons in those communities find themselves in jail and prison. Availability of mental health services within jails and jail diversion options may also account for differences in dispositional alternatives chosen by different communities. Further studies exploring other aspects of the two systems, including jails, local hospitals, and mental health centers may provide information that will help communities identify needs and develop effective services for all citizens.

Acknowledgments

This research was supported by a grant from the National Institute of Justice (86-IJ-CX-0072) and a technical assistance contract with the Washington State Department of Corrections. Dr. Grekin was supported through a training grant with the Washington State Department of Social and Health Services. The authors would like to acknowledge the contributions of Mr. William E. Jones, who assisted with the data analyses for this study.

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