

Mentally Disordered Women in Jail: Who Receives Services?

ABSTRACT

Objectives. Many jail inmates have severe psychiatric disorders (e.g., schizophrenia, major affective disorders). The courts have mandated that detainees have a constitutional right to treatment. We investigated what proportion of female jail detainees needed mental health services, what proportion received services, and what variables predicted who received services.

Methods. Trained interviewers administered a psychiatric evaluation (the NIMH Diagnostic Interview Schedule) to 1272 randomly selected female jail detainees during jail intake in a large Midwestern city. Project staff then documented whether women subsequently received services, using records and case files.

Results. Of the women who needed services, 23.5% received them while they were in jail. Type of disorder, treatment history, and socio-demographic variables all affected the odds of a mentally ill woman's receiving services.

Conclusions. Correctional health care is a growing national public health problem. The magnitude of mental health service needs far exceeds current resources. (*Am J Public Health*. 1997;87:604-609)

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Introduction

Many jail inmates have severe psychiatric disorders and require mental health services.¹⁻⁹ Numerous court decisions have established that mentally ill jail inmates have a constitutional right to treatment^{10,11} and that they should receive services on an emergency and regular basis.^{10,12-16} The law equates inmates' right to mental health services with their right to medical treatment.^{12,17,18}

Despite the law, mental health professionals speculate that many jail detainees do not receive needed services.¹⁹⁻²³ However, only one empirical study has examined this question. In a sample of 728 randomly selected male jail detainees, Teplin found that 37% of those who had a severe mental disorder (schizophrenia or major affective disorder) received services while in jail.²⁴ Type of diagnosis (schizophrenia vs depression) and treatment history predicted who received services.

No study has yet examined whether mentally ill women in jail receive needed services. This omission is critical; the female jail inmate population more than tripled between 1983 and 1994, while the male population doubled.²⁵ By 1994, the female jail census was almost 50 000, or 10% of the nation's jail population.²⁵

Findings from studies of men cannot be generalized to women for three reasons. First, many studies suggest that gender affects prevalence rates, diagnostic profiles, and service utilization patterns. For example, women in jail have higher rates of severe mental disorder,⁹ especially depression, than men in jail.^{6,7} With few exceptions,^{26,27} most researchers agree that gender affects how mental disorders are defined and treated.²⁸⁻³⁰

Second, men and women are managed differently in correctional settings.

Female offenders may be more likely than men to be defined as "mad" rather than "bad."^{2,3,31} Steadman et al.³² found women disproportionately represented among persons found "unfit to stand trial" or "not guilty by reason of insanity," suggesting that the criminal justice system may be more likely to treat female offenders than male offenders as mentally ill.

Third, the resources available in women's correctional facilities are different from those available in men's facilities. Ironically, because there are relatively few female inmates, the per capita cost is too high to provide them with comparable services.³³ Although the courts have mandated that female prisoners must have equivalent services³⁴⁻³⁶ and must be provided adequate health care,³⁷⁻³⁹ in practice, they are relatively underserved.⁴⁰

In this study, we investigated what proportion of female jail detainees had severe mental disorders and needed mental health services, and, of these women, what proportion received services; we also investigated what variables predicted who received services. To examine these issues, we conducted structured psychiatric interviews with a random sample of female jail detainees and then collected longitudinal data to find out whether those who needed services received them while in jail.

Method

The subjects were a stratified random sample of 1272 female arrestees

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awaiting trial who entered Cook County Department of Corrections (CCDOC) in Chicago, Ill, directly from pretrial arraignment between January 1991 and September 1993. We stratified the sample by arrest charge (felony or misdemeanor) and race/ethnicity (African American, non-Hispanic White, Hispanic) to have enough subjects to analyze differences between key subgroups. CCDOC receives approximately 70 000 admissions per year; 5500 are female.⁴¹ It is used solely for pretrial detention and for convicted misdemeanants serving sentences of less than 1 year. However, most detainees are in jail because they cannot afford bail. CCDOC is demographically similar to other large urban jails,⁴² with a population composed predominantly of racial/ethnic minorities.

All postarrest detainees (excluding persons with gunshot wounds or other traumatic injuries) were eligible to participate, regardless of psychiatric morbidity, state of drug or alcohol intoxication, potential for violence, or fitness to stand trial. Research interviewers selected detainees during intake, using the detainees' unique jail identification number and a random numbers table. We paid subjects \$15 for the interview.

Of 1418 detainees randomly selected, 59 (4.2%) refused to be interviewed. Another 87 women (6.1%) agreed to participate but did not finish the interview for some reason (e.g., they became ill or were diverted for other processing). We found no pattern of selection bias; women who agreed to participate did not differ on key demographic variables from those who refused. Design weights reflect nonresponse within each stratum. Our final participation rate was 90%, and the final *n* was 1272.

The subjects were between 17 and 67 years old; mean and median ages were 28 years. The stratified sample was 40.4% African-American, 33.6% non-Hispanic White, 24.7% Hispanic, and 1.3% other. Nearly 80% were unemployed when they were arrested. Mean and median educational levels were 11 years. Nearly 80% of the women were mothers; 19% had four or more children.

To determine diagnosis, we used the National Institute of Mental Health Diagnostic Interview Schedule (DIS), Version III-R, which was developed for the Epidemiologic Catchment Area program.⁴³ We chose the DIS because it is structured, generates standard diagnoses⁴⁴ (scored by computer), differentiates lifetime disorders (which may be remitted) from current disorders, and has acceptable reliabil-

ity^{45,46} (in contrast, see the report by Anthony et al.⁴⁷). Detainees were interviewed in private rooms in the intake area. Most interviews lasted 1 to 3 hours, depending on the number of reported symptoms. Although the DIS can be used by lay interviewers, all but one of our interviewers had a master's degree in psychology or clinical social work. We used standard DIS procedures to train interviewers and maintain consistency.

All detainees who do not immediately post bond and leave jail go through mandatory intake procedures, including a 2- to 3-minute mental health screen that is administered by correctional officers trained to administer it. Subjects flagged at intake receive psychiatric services (e.g., in-depth evaluations, medications, acute care services). Detainees who pass the screen can still receive services at any time during their stay in jail. To determine whether subjects received psychiatric evaluations or other mental health services while in jail, we examined jail records and case files until the subjects' cases were disposed of by the courts or for 6 months, whichever came first.

Statistical Analysis

Before analyzing the substantive data patterns, we evaluated the Hawthorne effect by means of a generalized linear model with time dependence (available from the authors) to determine whether the interviewers' presence increased the number of jail detainees who received services. We collected data on the daily number of detainees who received services for 6 months (184 days) before the study began, during the study (977 days), and for 6 months after the study ended (178 days). The number of detainees receiving services averaged 1.07 per day before the study began, increased to 1.60 per day during the study period, and dropped to 1.40 per day after the study ended. This pattern was not likely due to chance ($P < .02$) and suggests that our presence may have sensitized jail personnel to the psychiatric needs of detainees.

The analyses excluded 372 subjects who posted bond and left jail immediately after the interview. The remaining 955 subjects were in jail long enough to be screened by the jail and receive mental health services.

Because we stratified our sample by charge severity and race/ethnicity, all reported parameter estimates were weighted by the inverse of the sampling fraction to

TABLE 1—Percentage of Female Jail Detainees (n = 955) Who Need Mental Health Services and Receive Them While in Jail

Need Services	Receive Services		
	No	Yes	Total
No (n = 839)	89.6	10.4	100
Yes (n = 116)	76.5	23.5	100

reflect the jail's true charge and racial/ethnic composition. We used SUDAAN 6.40 (Research Triangle Institute, Research Triangle Park, NC) to correct the reported standard errors and tests of significance. Additional methodological and epidemiologic information is available elsewhere.⁹

For our first analysis, we created a fourfold table using two dichotomous variables, "needs services" (yes or no) and "received services" (yes or no). The independent variable, "needs mental health services," was defined on the basis of established jail standards mandating that detainees with serious mental disorders receive treatment.^{23,48,49} Subjects were defined as needing mental health services if (1) they had schizophrenia or a major affective disorder and were symptomatic within 2 weeks before the interview (*n* = 110); (2) they had severe and definite cognitive impairment and were mentally disoriented at the time of the interview (*n* = 3); or (3) they had a moderate or severe substance use disorder and were mentally disoriented at the time of the interview (*n* = 3). Subjects with substance abuse disorders but no other mental disorder were not counted as needing services because inmates have no well-established constitutional right to substance abuse rehabilitation, only emergency detoxification treatment.^{23,49,50} Of the 955 subjects, 10.7% (unweighted *n* = 116) needed mental health services.

Subjects were defined as receiving services, the dependent variable, if they (1) received an in-depth psychiatric evaluation, medications, or acute care services (10.1%); (2) received a forensic examination to determine fitness to stand trial (2.2%); or (3) were sent to an outside psychiatric hospital (0.4%).

For our second analysis, we used logistic regression to determine which variables—especially specific diagnoses—

TABLE 2—Logistic Regression Predicting Whether or Not Female Jail Detainees (n = 944) Received Mental Health Services While in Jail

	Crude Odds Ratio	95% CI	Logit Coefficient	Satherwaite Adjusted Chi-Square	Estimated Odds Ratio	95% CI
Schizophrenia/mania	9.35	3.42, 25.57	4.18	22.5***	65.20	27.012, 157.37
Schizophrenia/mania with drug abuse or dependence ^a	5.22	1.31, 20.83	-4.46	12.0***	0.01	0.003, 0.04
Major depressive disorder	1.76	0.84, 3.68	-3.00	10.2**	0.05	0.019, 0.13
Major depressive disorder with drug abuse or dependence ^a	1.91	0.83, 4.43	2.53	5.4*	12.59	4.211, 37.64
Drug abuse or dependence	1.47	0.87, 2.50	0.08	0.0	1.09	0.734, 1.61
History of psychiatric treatment	56.50	27.82, 114.76	4.41	114.7***	82.42	54.593, 124.42
Two or more prior arrests	0.82	0.48, 1.40	-0.89	5.9*	0.41	0.285, 0.59
White race, high school education, and depression ^b	4.13	1.38, 12.35	2.62	8.9**	13.72	5.689, 33.10
Constant			-2.77			

Note. Four cases missing recency criteria on major depressive disorder, two cases missing recency criteria on schizophrenia/mania, and five cases missing charge information are excluded from this analysis. All effects are entered as indicator variables. Confidence intervals and Satherwaite chi-square statistics were computed with SUDAAN 6.40. CI = confidence interval.

^aInteraction terms are coded hierarchically; estimated odds ratios are deviations from lower-order terms.

^bAnalysis of residuals and deviance statistics identified this combination of characteristics as an important predictor of services received.

* $P < .05$; ** $P < .01$; *** $P < .001$.

predicted who received services. For the logistic regression analysis, we counted a subject as receiving services only if she received them within 1 week of arrest. We used 1 week as the cutoff for this analysis because mentally ill detainees who need services should receive them soon after arrest, and most detainees stay in jail less than a week. One week allows the criminal justice system time to recognize and respond to a severely ill detainee.

We explored four categories of independent variables:

1. *Current disorder (symptomatic within 2 weeks before the interview)*. These dichotomous variables included schizophrenia or moderate or severe manic episode (combined, because there were too few cases to analyze separately), moderate or severe major depressive episode, moderate or severe drug abuse or dependence, and moderate or severe alcohol abuse or dependence.

2. *Treatment history*. This dichotomous variable was scored "yes" if the subject reported to the intake officer that she had ever received psychiatric services (inpatient or outpatient) or taken psychoactive medications. (We first analyzed these variables separately, but they were so intercorrelated that we combined them.)

3. *Crime*. We included the severity (misdemeanor or felony) and nature (violent or nonviolent) of the charge and the number of prior arrests (none or one, two or more).

4. *Sociodemographic characteristics*. Categorical variables included employment status (working or not working), and race (African-American, non-Hispanic White, or Hispanic). For the continuous variables—age, level of education, and self-reported income (including illegal income)—we used exploratory methods to find which form of the independent variable (linear, quadratic, or categorical) best predicted the dependent variable; this procedure is standard when there are no specific hypotheses.⁵¹

We used reference cell coding to assess the effect of the independent variables on the dependent variable, received services (yes or no). This technique compares each observed effect with the reference group, detainees with none of the disorders or characteristics in the final model (the constant).⁵² Interaction terms are coded hierarchically. For statistical inference, we report the corrected Satherwaite chi-square statistic for the likelihood ratio test for each predictor as entered last. Likelihood ratio statistics are more stable than asymptotic z statistics when cell sizes become small.^{53,54}

Results

Of the 116 subjects who needed mental health services, 23.5% received them during their jail stay (Table 1), (ϕ [the correlation coefficient] = 0.125, $P < .01$). Although the correlation is

significant, it explains less than 2% of the variance of the "received services" variable. In contrast, 10.4% of the 839 subjects who were not scored as needing services did receive them. Most likely, these latter subjects either were missed by the DIS, did not meet all the DSM-III-R criteria for a disorder, or developed symptoms sometime after the interview. All but two of the subjects who needed services and received them were flagged at intake.

In the analysis of variables predicting receipt of services, none of our social status variables affected whether or not detainees received services (Table 2). Hence, these variables were excluded from the final model. Alcohol abuse or dependence was excluded on the same grounds.

Analysis of residuals and deviance statistics⁵² revealed a number of extreme outliers. When we examined these cases, we found that severely depressed White high school graduates had far higher odds of receiving services than any model predicted. An indicator variable for this configuration of predictors is included in the final model. However, there were not enough high school graduates in our sample to identify which variable—education, race, or diagnosis—or combination of variables affected who received services. There was one other outlier, but jackknife estimates excluding this case⁵⁵ did not differ from those reported below.

Variables predicting who received services were as follows:

1. *Current disorder.* Subjects with schizophrenia or manic episode were 65 times more likely to receive services than the reference group, persons with none of the disorders or characteristics in the final model (the constant) ($P < .001$). In contrast, persons with major depression were less likely to receive services than persons in the reference group (estimated odds ratio [OR] = 0.05, $P < .001$). Co-occurring drug abuse or dependence had significant interaction effects, but in different directions, depending on the severe disorder. Because co-occurring drug abuse or dependence was coded hierarchically, we calculated the interaction by multiplying the relevant estimated odds ratios. Table 2 thus shows that persons with schizophrenia or mania and comorbid drug abuse or dependence were less likely to receive services than persons who had only schizophrenia or mania (65.2×0.01 , $P < .001$). However, persons with major depression and comorbid drug abuse or dependence were more likely to receive services than persons with only major depression; the odds increased from 0.05 to 0.63 (0.05×12.59 , $P < .05$).

2. *Treatment history.* A history of psychiatric treatment increased the odds of receiving services more than 80 times ($P < .001$) compared with the reference group.

3. *Crime.* Having two or more prior arrests reduced the odds of receiving services (OR = 0.41, $P < .01$) compared with the reference group.

4. *Sociodemographic characteristics.* White high school graduates experiencing a major depressive episode had almost 15 times the odds of receiving services compared with the reference group ($P < .01$).

To assess the impact of each category of variables on whether or not detainees received services, we computed the variables' contributions to the sensitivity (true positive fraction or positive predictive value) of the model.^{56,57} The positive predictive value for the model is 65.5%. This analysis confirmed the importance of treatment history in predicting whether or not jail detainees receive mental health services. The five mental disorder and drug abuse variables contributed only 2.4% to the positive predictive power of the model; in contrast, history of psychiatric treatment contributed 30.1%. Two or more prior arrests did not contribute to the model's positive predictive

performance, and the White/high school graduate/depressed indicator contributed less than 1.0% to the sensitivity of the model because few subjects had these characteristics.

Discussion

Our data suggest that less than one quarter of female jail detainees who had severe mental disorders and needed services received them while they were in jail. This rate of service provision occurred despite the observed Hawthorne effect (i.e., our presence probably raised jail personnel's sensitivity to the detainees' psychiatric symptomatology and service needs). The true rate of service provision may be lower.

The detainees' diagnoses determined whether or not they received services. The crude percentages are instructive: 47.5% of detainees with schizophrenia or manic episode received services, compared with 15.2% of detainees with depression. Perhaps depressed detainees are overlooked in the chaos of the jail milieu. Improving services for detainees with depression may reduce jail suicide, which currently accounts for 36% of all jail inmate deaths nationally.²⁵

Treatment history profoundly affected whether or not detainees received services, superseding the "true" presence or absence of disorder. Of detainees with schizophrenia or manic episode and a treatment history, 75% received services, compared with 27% of detainees who had these disorders but no history; 3.5% of detainees with major depressive episode and no treatment history received services. Because CCDOC admits so many detainees every day, intake officers probably use treatment history to determine current service need. Treatment history is a useful indicator because severe mental disorders tend to persist^{58,59} and because detainees with a history of severe mental disorder could relapse under the stress of incarceration. However, if intake personnel use treatment history as a surrogate measure of psychiatric disorder, they will miss many ill detainees who have never been treated.

Co-occurring drug use or dependence affected the probability of receiving services in different ways, depending on the severe disorder. Detainees with schizophrenia or manic episode and a co-occurring drug use disorder were less likely to receive services than those with only the severe disorder. Jail personnel may have attributed these symptoms to

the effects of drugs or drug withdrawal. In contrast, detainees with major depressive episode and drug abuse or dependence were more likely to receive services than those with only the major depressive disorder. Drug withdrawal may heighten the detainee's depressive symptoms, alerting jail personnel that the detainee needs help.

Detainees with only one prior arrest or no arrest history were more likely to receive services than those with two or more prior arrests. Detainees with fewer prior arrests may be more upset and symptomatic than those who have been arrested many times. Moreover, jail personnel may be more cautious when screening detainees whom they have not assessed before.

Our findings—especially regarding the influence of diagnosis and treatment history on whether or not detainees received services—are similar to those of Teplin's prior study of men in jail. However, we found that, compared with men, significantly fewer women in jail received needed mental health services (23.5% vs 35.5%; $P < .01$); for the most part, this difference is because women in jail have rates of depression that are four times higher than rates for men^{6,7,9} and depression is often undetected in jails (analysis available from the authors). However, the findings may also differ because jail services have changed in the 8 years since the data on men were collected.

The accuracy of our data is dependent on the accuracy of the DIS. Unlike physical medicine, psychiatry has no gold standard,⁶⁰ and the DIS, like all diagnostic assessments, is imperfect.⁴³ We tried to maximize the accuracy of our data by using experienced interviewers and to maximize specificity by defining the "needs services" category so narrowly—including only persons who had current and severe psychiatric disorders. Nevertheless, given the limitations of the DIS, our investigation should be replicated as psychiatric assessments improve.

Another study limitation is that we did not measure whether detainees' desire for treatment affected whether or not they received services. It is possible that some subjects may have hidden their symptoms from jail personnel because they did not wish to receive services.

The rate of service provision that we observed in CCDOC is probably much better than in most jails. Unlike many jails,⁶¹ CCDOC screens all detainees at intake for mental health problems.

CCDOC's integrated psychiatric service system is used as a model nationwide.⁶² However, our data suggest that even in jails with sophisticated programs, it is difficult to detect service needs when so many detainees enter overcrowded and burdened facilities.

Our findings suggest that jails may need better intake assessments tailored to the needs of incarcerated women. The Brief Psychiatric Rating Scale is useful in jails that employ mental health professionals.⁶³ The Referral Decision Scale⁶⁴ has acceptable reliability and validity⁶³ and can be used by lay interviewers in jails. Neither instrument, however, has been validated on female inmates.

Our data also suggest that correctional officers need more training to identify serious psychiatric disorders, especially depression, among detainees whose disorders are missed at intake. We found that only two of the detainees who needed services and yet passed the jail's intake screen were later provided services. Correctional officers may play a major role in service referral, but they need training to be effective liaisons.

Improving mental health services in jails is only the first step. Because only one third of jail detainees stay longer than 4 days,⁶⁵ the public health system must also provide mental health services in the community for released detainees. However, providing effective programs will be difficult for several reasons. First, many female jail detainees with severe mental disorders may also have substance abuse or dependence.⁶⁶ Comorbidity is difficult to treat, and there are not enough community placements.⁶⁶ Service providers often view such persons as undesirable clients.⁶⁶

Second, most released detainees are poor, making it difficult for them to seek services and to maintain a treatment plan. Poverty also causes many psychological stressors; poor persons are more likely to be victims of crime,⁶⁷ to have inadequate housing, and to live in dangerous neighborhoods.²⁹

Finally, motherhood complicates service utilization. Over 60% of our subjects had children under 5 years of age, and most of the sample were single parents. Few mental health programs provide child care. In short, successful public health delivery for released jail detainees must go beyond addressing psychopathology alone; it requires a systematic network of resources.

Our findings highlight the discrepancy between jail detainees' service needs

and the services that they receive. However, many persons in the general population also do not receive needed mental health services.^{68,69} Some of these persons may not have access to services. Others choose to live in the community without treatment and can do so unless they are found to be dangerous to themselves or others.⁷⁰ However, the public health system has an obligation to jail detainees because they are captive and, under the 14th amendment, have a constitutional right to needed mental health services.⁴⁹

Correctional health care is a growing national public health problem.⁷¹ Correctional populations, especially in jails, have increased dramatically. Between 1983 and 1994, the national jail census increased from 223 551 to nearly 500 000.²⁵ Although health services are a large component of correctional facilities' operating budgets, funding is not keeping pace with need.⁷¹ We must continue to improve screening techniques, as well as provide liaisons between the criminal justice and mental health systems,⁷² so that mentally ill inmates who need services receive them. □

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