Rates of Sexual Victimization in Prison for Inmates With and Without Mental Disorders

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Objective: This study estimated the rates of sexual victimization among prison inmates with and without a mental disorder. Methods: The study sampled inmates aged 18 or older in 13 prisons within a single mid-Atlantic state prison system (12 facilities for men and one for women). A total of 7,528 inmates completed the survey instrument, which was administered by audio-computer-assisted technology. Of the 6,964 male respondents, 58.5% were African American, 16.2% were non-Hispanic white, 19.8% were Hispanic, and 5.5% were of another race or ethnicity. Of the 564 female respondents, 48.4% were African American, 30.9% were non-Hispanic white, 14.4% were Hispanic, and 7.3% were of another race or ethnicity. Mental disorder was based on self-reported previous mental health treatment for particular mental disorders. Sexual victimization was measured by using questions adapted from the National Violence Against Women and Men surveys. Results: Approximately one in 12 male inmates with a mental disorder reported at least one incident of sexual victimization by another inmate over a six-month period, compared with one in 33 male inmates without a mental disorder. Among those with a mental disorder, sexual victimization was three times as high among female inmates (23.4%) as among male inmates (8.3%). African-American and Hispanic inmates with a mental disorder, independent of gender, reported higher rates of sexual victimization than their non-Hispanic white counterparts. Conclusions: Prisons are hazardous places. Steps must be taken to protect inmates from predators inside prison, to screen them for posttraumatic stress disorder, to provide trauma-related treatment, and to keep them safe. (Psychiatric Services 58:1087-1094, 2007)

People with serious mental illness are at significant risk of victimization in the community (1–7). Deinstitutionalization increased the number of people with serious mental illness residing in the community and in the correctional system (8–10). According to a Human Rights Watch report (11), "prisons have become the nation's primary mental health facilities." Evidence indicates that people with mental

health problems in correctional settings are more likely than their counterparts without mental health problems to report prior victimization in the community (8). This evidence has raised concerns about their likely victimization in prison—environments known for their violence and exploitation of vulnerable groups (11–14).

Concern has been growing about sexual victimization inside America's prisons. Another report by Human Rights Watch documenting the rape and sexual abuse of more than 200 prisoners in 37 states (15) fuelled the passage of federal legislation entitled The Prison Rape Elimination Act of 2003 (16). The goal of this legislation is to document sexual assault in prisons and to develop interventions for treating rape victims and preventing future victimization.

Previous studies have reported rates of sexual victimization in prison ranging from 41% to less than 1% (17). Methodological differences contribute to the wide variation in estimated rates. Extant studies have used different definitions of sexual victimization and diverse designs. Prison rape studies have elicited sexual victimization information on the basis of various questions, some focusing on "being coerced to engage in a sex act or have sexual contact," and others framing questions in terms of "being raped or sexually assaulted." Contemporary rape research indicates that questions focusing on specific behavior produce more valid responses (18–20).

Studies also have focused primarily on a single or small number of prisons and on small numbers of inmates (less than 15%) within a facility (21-28). Rates of sexual victimization at a single facility are unlikely to be representative, because prison environments are heterogeneous in their management and operation and in their inmate populations (29). Prison rape studies have elicited information by using either mail surveys or faceto-face interviews. Because sexual victimization often invokes feelings of shame and stigma, computer-assisted self-administered interviews (CASI)

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with audio to assist with literacy problems is the most reliable method for eliciting information about stigmatizing behavior (17,30–37).

This study is the first to explore sexual victimization within a state prison system and to use a full-population sampling design of approximately 20,000 inmates at 13 prisons, general and specific questions to measure sexual victimization, and audio-CASI to administer the survey. It is also the first study to focus on mental disorders as a risk factor. The survey was designed to measure quality of prison life; a minority of the questions focused on physical and sexual victimization.

Methods

Setting

A sample of 7,528 persons was drawn from a large portion of the general population of inmates at 12 prisons for men and one prison for women (19,615 inmates, or 89% of the entire population at these facilities) in a single mid-Atlantic state prison system. Excluded from the sample were inmates younger than 18 or in prehearing custody, in detention, or on death row; those at a sex offender treatment facility or too sick to participate in the survey were also excluded, as were inmates residing in halfway houses or off site at the time of the survey. Data were collected from June 1, 2005, to August 31, 2005.

Researchers requested enough time inside the facility to collect a 40% sample from the general population, which typically requires two to five days. A 66% random sample of inmates was selected in advance with the expectation of a 60% response rate, yielding the expected 40% target within the allotted time at the facility. Participation rates across facilities ranged from 26% to 53%, with a mean±SD participation rate of 39± 6.8%. Data collection at the facility with a 26% participation rate was prematurely terminated because of a lock-down situation that was not related to the research.

Inmates who declined to participate at six of the facilities for adult males (N=848) were surveyed about their reasons for not participating in the study. The three most common reasons for declining were "I believe

nothing will ever change here," "I am leaving here soon," and "This is prison. Our quality of life doesn't matter." Four facilities had specialized segregation units for inmates with behavioral infractions. These units housed 832 inmates, and a random sample of 10% completed the survey through direct interviews (these individuals have limited movement and were denied access to areas where the computers were located).

Instrument

The questions about victimization were adapted from the National Violence Against Women and Men surveys (38). Sexual violence was measured by using a general question for each type of perpetrator (inmate or staff member): "Have you been sexually assaulted by (an inmate or staff member) within the past six months?" In addition, ten questions about specific types of sexual victimization were asked regardless of a participant's answer to the general question.

The specific-behavior questions were combined for purposes of analysis only to reflect definitions of sexual violence developed by the National Center for Injury Prevention and Control (39). Sexual victimization was classified as nonconsensual sexual acts, which consisted of forced sex acts, including oral and anal sex, and abusive sexual contacts, including intentional touching of specified areas of the body (40). Seven of the questions involving penetration or sexual acts constituted the category for nonconsensual sexual acts; for example, "has (another inmate or staff member) . . . made you have oral sex by using force?" Three questions were used to construct abusive sexual contacts; for example, "has (another inmate or staff member) touched you, felt you, or grabbed you in a way that felt sexually threatening?"

Respondents were also asked if they had ever been treated for depression, schizophrenia, posttraumatic stress disorder (PTSD), bipolar disorder, or an anxiety disorder. Positive responses were used to classify respondents as having a mental health disorder. It was not feasible to administer diagnostic tests, nor was current treatment status or diagnosis likely to reliably represent mental disorder because underidentification and undertreatment of mental illness inside correctional settings are well established (38). Although the reliability of self-report diagnosis is suspect, in previous studies with correctional populations, we found that participants' self-reported clinical diagnoses were fully consistent with information in their clinical records maintained by the prison system (41,42).

Procedure

The consent procedures were approved by the appropriate institutional review boards and committees. Respondents were not compensated for participating. They were offered a follow-up mental health visit if they were distressed by the survey questions.

The survey was administered by using an audio-CASI instrument available in English and Spanish. Completing the English version took approximately 60 minutes, and the Spanish version took about 90 minutes. Overall, 112 men (1.6%) and 18 women (3.2%) were interviewed directly. A majority of these respondents (85 respondents, or 65%) were housed in administrative segregation, where computer access was prohibited and movement is restricted. Five interviewers conducted the direct interviews, and a majority (61%) were conducted by two interviewers. All interviewers followed a scripted protocol. Face-to-face interviews, conducted only in English, were completed in roughly 45 minutes.

Participants

Of the 19,788 inmates who were eligible to participate, approximately 13,000 were randomly selected and briefed on the study and 7,528 completed the survey, for a 58% response rate. Enrollment ceased when the time allowed inside the facility was reached. A total of 6,964 men and 564 women aged 18 or older participated.

On the basis of the race-ethnicity classification of the prison system, among the 6,964 male respondents, 4,074 (58.5%) were African American, 1,129 (16.2%) were non-Hispanic white, 1,379 (19.8%) were Hispanic, and 382 (5.5%) were of another

race or ethnicity. Among the 564 female respondents, 273 (48.4%) were African American, 169 (30.0%) were non-Hispanic white, 81 (14.4%) were Hispanic, and 41 (7.3%) were of another race or ethnicity. Thus over two-thirds of the female respondents (67.4%) were nonwhite, and 80.5% of the male respondents were nonwhite. The mean \pm SD age was 35.5 \pm 6.8 for the female respondents and 34.0 \pm 7.9 for the male respondents.

These demographic characteristics are comparable to those of the overall prison population at the 13 facilities studied, where 80.1% of the male inmates were nonwhite and had a mean age of 34.3±10.0 and 67.3% of female inmates were nonwhite and had a mean±SD age of 35.4±9.4. Among female inmates at the facilities, 10.1% are Hispanic, and among male inmates, Hispanics account for 14.9% of the population.

Weights were constructed to adjust the sampled population to the full population. A two-step weighting strategy was used (43). The first step (base weight) adjusted for the sampling design (that is, the exclusion of some units within a facility, the variation in the probability of selection, and proportional representation by facility). The second step (poststratification weight) adjusted the data on the basis of time at the facility, race-ethnicity, and age. The final weight for each weighting class is the rescaled base weight multiplied by the poststratification weight. [More detailed information about the weighting procedure is available in an online supplement to this article at ps.psychiatryonline.org.]

Analysis

Both weighted and unweighted analyses were conducted, and because the results were similar, only weighted results are presented. Unless otherwise indicated, the significance level used to assess the validity of the null hypotheses was set at p<.05. Prevalence of sexual victimization reflects the number of inmates in the population who experienced sexual victimization within a six-month period. The 95% confidence intervals (CIs) presented in each table are equivalent to two-sided t tests for differences in means or proportions based on Taylor expansion. The overlap of the confidence intervals between comparison groups suggests that the null hypothesis (the means or proportions are the same between comparison groups) cannot be rejected at a significance level of .05.

Results

Six-month prevalence estimates of sexual victimization among male and female inmates are reported, respectively, in Tables 1 and 2. Table 3 presents six-month prevalence rates by gender and race. Mental disorders are classified by any mental disorder (schizophrenia, bipolar disorder, depression, PTSD, and anxiety disorder) and chronic mental disorder (schizophrenia and bipolar disorder). Rates for inmates with mental disorders are compared with rates for those who did not report a mental disorder. Perpetrators of sexual victimization are categorized as inmates, staff, or either.

Male victimization by perpetrator On the basis of data in Table 1, which presents weighted estimates per 1,000 population, approximately one in 12 male inmates with a mental dis-

Table 1Six-month prevalence of sexual victimization in a statewide correctional system among male inmates with and without a mental disorder^a

Perpetrator and type of victimization	Any mental disorder (N=1,494) ^b		Schizophre polar disor	enia or bi- eder (N=447)	No mental (N=5,369)	disorder	Total sample (N=6,964)		
	Rate per 1,000 inmates	95% CI	Rate per 1,000 inmates	95% CI	Rate per 1,000 inmates	95% CI	Rate per 1,000 inmates	95% CI	
Inmate perpetrator									
Any sexual victimization	83	68-98*	101	72-130*	31	26-36	43	39-47	
Abusive sexual contact	75	61-89*	90	62-117*	23	19–28	35	31–38	
Nonconsensual sex act	29	20-38*	38	19–57*	11	8-14	15	12-17	
Staff perpetrator									
Any sexual victimization	95	79-111*	91	62-119	70	63–78	76	70-81	
Abusive sexual contact	82	68-97	72	47 - 98	62	55-69	66	61 - 71	
Nonconsensual sex act	26	18-34	21	7–34	17	13-20	19	16-21	
Inmate or staff perpetrator									
Any sexual victimization	151	132-171*	163	127-200*	89	81–97	103	96-111	
Abusive sexual contact	137	119-156*	144	110-179*	77	69–85	90	83-98	
Nonconsensual sex act	45	34–56*	49	27 - 70	23	19-27	28	24-32	
Any sexual victimization									
Ínmate perpetrator only	57	45-69*	73	49-98*	19	15-23	27	23-31	
Staff perpetrator only	69	55-82	63	39-87	58	51-65	60	54-66	
Both inmate and staff	26	18-35*	28	11-45	12	9–15	16	13-19	

^a Estimates of rates per 1,000 inmates are based on weighted valid numbers.

 $^{^{\}mathrm{b}}$ A total of 101 male respondents did not specify whether or not they had a mental disorder.

 $^{^{*}\}mathrm{p}<.05$ (two-tailed), for the comparison with the group with no mental disorder

Table 2Six-month prevalence of sexual victimization in a statewide correctional system among female inmates with and without a mental disorder^a

Perpetrator and type of victimization	Any mental disorder (N=325) ^b		Schizophre polar disor	enia or bi- der (N=120)	No mental (N=234)	disorder	Total sample (N=564)		
	Rate per 1,000 inmates	95% CI	Rate per 1,000 inmates	95% CI	Rate per 1,000 inmates	95% CI	Rate per 1,000 inmates	95% CI	
Inmate perpetrator									
Any sexual victimization	234	186-281	224	147-301	185	134-237	212	188 – 237	
Abusive sexual contact	223	177-270	205	130-280	172	122 - 221	201	178 – 224	
Nonconsensual sex act	37	15–56	45	8-81	28	6-49	32	23-42	
Staff perpetrator									
Any sexual victimization	79	51 - 108	95	43-146	75	40 - 110	76	62-91	
Abusive sexual contact	72	44-99	77	29 - 125	63	30-96	66	52-80	
Nonconsensual sex act	21	6-36	c		c		17	10-25	
Inmate or staff perpetrator									
Any sexual victimization	272	223-322	285	201-369	209	155-263	245	209-282	
Abusive sexual contact	261	212-311	259	177 - 340	195	143-248	233	197-269	
Nonconsensual sex act	51	28 - 75	67	23-111	36	11-60	44	27 - 61	
Any sexual victimization									
Ínmate perpetrator only	194	149-238	190	117 - 263	134	89-179	168	137 - 200	
Staff perpetrator only	39	18-60	61	18-104	24	3-45	32	17-47	
Both inmate and staff	40	20–60	34	4–64	51	23–80	45	29–61	

^a Estimates of rates per 1,000 inmates are based on weighted valid numbers.

order reported at least one incident of sexual victimization by another inmate over a six-month period, compared with 1 in 33 inmates without a mental disorder. Rates of sexual victimization were significantly higher among inmates with a mental disorder, independent of the type of disorder, than among inmates without a mental disorder. Rates were highest among those who reported previous treatment for schizophrenia or bipolar disorder. Abusive sexual contact was more likely than nonconsensual sex acts (rape or sexual assault) for inmates both with and without a mental disorder.

Rates of sexual victimization by staff and abusive sexual contact by staff were higher for both groups (with and without a mental disorder) than rates of victimization by another inmate. Roughly one in ten male inmates with a mental disorder reported some form of sexual victimization by staff, compared with one in 14 male inmates without a mental health disorder. The rate of sexual victimization by staff, although generally higher among inmates with a mental disorder, was significantly different be-

tween the groups only when it was measured as any sexual victimization.

Over a six-month period, 15.1% of the 1,494 male inmates with a mental disorder (N=226) reported being sexually victimized, compared with 8.9% of their 5,369 counterparts (N=478) without a mental disorder. Rates of sexual assault (nonconsensual sex acts) among male inmates were nearly twice as high for those with a mental disorder (including chronic disorders) as for those without a mental disorder. Among the male respondents, 717 inmates (10.3%; CI=9.6%-11.1%) reported being sexually victimized by inmates or staff. Most of those reporting sexual victimization identified staff as the only perpetrator (418 inmates, or 58.2%), 15.5% (N=111) reported being victimized both by staff and inmates, and 26.2% (N=188) reported victimization by inmates only.

Patterns of victimization varied between those with and without a mental disorder. Overall, 226 male inmates (15.1%; CI=13.2%–17.1%) with a mental disorder reported being sexually victimized by inmates or staff. Among male inmates with a mental disorder, staff were most fre-

quently identified as the only perpetrator (by 103 inmates, or 45.7%). Among male inmates with a mental disorder, 85 (37.7%) identified other inmates as the only perpetrator, and 39 (17.2%) identified both staff and inmates as perpetrators. For men without a mental disorder, 478 (8.9%; CI=8.1%–9.7%) reported being sexually victimized by inmates or staff. Of those reporting sexual victimization, 311 inmates without a mental disorder (65.2%) identified staff as the sole perpetrator, 102 (21.3%) identified inmates as the only perpetrators, and 64 (13.5%) reported being victimized both by staff and inmates.

Female victimization by perpetrator

Female inmates with a mental disorder, independent of the type of disorder, reported higher rates of sexual victimization by other inmates than female inmates without a mental disorder (Table 2). These differences were not statistically significant. Female inmates were significantly more likely to report abusive sexual contact than nonconsensual sex acts (rape or sexual assault).

^b Five female respondents did not specify whether or not they had a mental disorder.

^c Estimates were not calculated for fewer than five victims.

Table 3Six—month prevalence of sexual victimization by either an inmate or staff perpetrator in a statewide correctional system among male inmates with and without a mental disorder, by race-ethnicity^a

	Any mental disorder			Schizophrenia or bipolar disorder			No mental disorder			Total		
Gender and race of victim and type of victimization	N in sub- sample	Rate per 1,000 inmates	95% CI	N in sub- sample	Rate per 1,000 inmates	95% CI	N in sub- sample	Rate per 1,000 inmates	95% CI	N in sub- sample	Rate per 1,000 inmates	95% CI
Male, African American	590			151			3,430			4,074		
Any sexual victimization		170	138-202*		146	87-206	,	90	80-100	,	102	93-112
Abusive sexual contact		159	128-190*	i	142	83-202		79	69-88		91	81-100
Nonconsensual sex act		58	38-78*		63	21 - 104		20	16-25		26	21-31
Male, non-Hispanic white	491			168			630			1,129		
Any sexual victimization		101	74 - 128		115	65 - 165		68	45 - 91		83	66-101
Abusive sexual contact		89	63-114		93	47 - 139		46	27 - 66		66	50 - 82
Nonconsensual sex act		28	14-43		42	10 - 75		23	10 - 37		25	16 - 35
Male, Hispanic	300			89			1,054			1,379		
Any sexual victimization		165	118–211*	i	230	134–327		91	72 - 110		108	90 - 125
Abusive sexual contact		142	98 - 186		203	111–294		83	65-101		96	79 - 113
Nonconsensual sex act		39	18–60*	b				26	17 - 36		30	21 - 39
Female, African American	136			40			132			273		
Any sexual victimization		275	199–352		315	162–467		203	134–273		239	188 – 290
Abusive sexual contact		275	199–352		315	162-467		187	120–254		231	180-281
Nonconsensual sex act		68	26-109		89	1-177		36	4–68		51	25 - 77
Female, non-Hispanic												
white ^c 123			60			46			169			
Any sexual victimization		239	162–316		231	121–341		230	102–358		236	171 - 302
Abusive sexual contact		225	150–301		203	98–308		230	102–358		227	162 - 291
Female, Hispanic ^c	41			9			40			81		
Any sexual victimization		351	192–511		464	41–886		165	42–288		259	157–360

^a Estimates of rates per 1,000 inmates are based on weighted valid numbers. A total of 101 male and five female respondents did not specify whether or not they had a mental disorder.

Prevalence rates of sexual victimization by staff among female inmates both with and without a mental disorder were two to three times lower than rates of reported victimization by other inmates. Prevalence rates increased among both groups when questions about specific sexual victimization behaviors were used.

As among male inmates, sexual victimization was more frequently reported by female inmates with a mental disorder than by their counterparts without a mental disorder, and abusive sexual contact was the most common form of sexual victimization reported by female inmates. Nearly a quarter of female inmates (138 inmates, or 24.5%; CI=20.9%–28.2%) reported being sexually victimized by staff or another inmate within a sixmonth period. Of those reporting sexual victimization, over two-thirds (95 inmates, or 68.6%) reported victim-

ization by another inmate only, and 25 (18.4%) reported victimization by both an inmate and staff; the remaining 18 inmates (13.1%) reported victimization by staff only.

Of the 325 female inmates with a mental disorder, 88 (27.2%; CI= 22.3%–32.2%) reported being sexually victimized by staff or another inmate within a six-month period. A majority of these women (63 inmates, or 71.3%) reported that the perpetrator was another inmate, and 13 (14.7%) reported victimization by both an inmate and staff; the remaining 12 inmates (14.3%) reported victimization by staff only. Roughly onefifth of the 234 women without a mental disorder (49 inmates, or 20.9%, CI=15.5%-26.3%) reported being sexually victimized by staff or another inmate within a six-month period. Of those reporting some type of sexual victimization, nearly twothirds of those without a mental disorder (31 inmates, or 64.1%) reported another inmate as the perpetrator, and 12 (24.4%) reported victimization by both an inmate and staff; the remaining six inmates (11.5%) reported victimization by staff only.

Victimization by gender and race or ethnicity

Rates of sexual victimization by any perpetrator type were significantly higher among African-American and Hispanic male inmates with a mental disorder than among their counterparts without mental disorder (Table 3). Rates of sexual victimization among racial-ethnic groups also varied. African-American and Hispanic men with a mental disorder reported higher rates of sexual victimization than non-Hispanic white male inmates with a mental disorder. Among men with a mental disorder, the rate

^b Estimates were not calculated for fewer than five victims.

 $^{^{\}rm c}$ Some estimates for these groups were omitted due to insufficient sample size.

^{*}p<.05 (two-tailed), for the comparison with the group with no mental disorder

of nonconsensual sex acts among African Americans (5.8%; CI=3.8%–7.8%) was twice as high as the rate among non-Hispanic white men (2.8%; CI=1.4%–4.3%), and the rate of abusive sexual contact was roughly 1.8 times as high—15.9% (CI= 12.8%–19.0%) compared with 8.9% (CI= 6.3%–11.4%).

Rates of sexual victimization among female inmates followed patterns similar to rates among male inmates, but the differences between inmates with and without a mental disorder did not reach significance because of the small subgroups of female inmates. Compared with male inmates with a mental disorder, female inmates with a mental disorder in all racial-ethnic groups reported significantly higher rates of any sexual victimization, ranging from 1.6 times as high among African-American women to 2.4 times as high among non-Hispanic white women.

Discussion

Rates of sexual victimization perpetrated by inmates were higher among inmates with a mental disorder than among those without a mental disorder, independent of gender, although the difference was statistically significant only for male inmates. In addition, among inmates with a mental disorder, rates of victimization by inmates were higher among women than among men. Sexual victimization by an inmate or by a staff member rarely involved sexual assault or rape and was more likely to involve sexually threatening contact, such as touching or grabbing in ways that felt sexually threatening.

Whether individuals with a mental disorder are at greater risk of sexual victimization in prison than in the community depends on the evidence used for comparison. Teplin and colleagues (1) estimated that 2.6% (CI=1.8%-3.5%) of 936 persons with serious mental illness who were living in the community had been victims of sexual assault over a 12-month period, compared with .16% (CI=.10%–. 22%) of 32,449 persons in the general population; these authors found lower rates for men with serious mental illness (.8%; CI=-.3% to 1.8%) and higher rates for women with serious mental illness (4.3%; CI=3.0%–5.7%). Higher rates were estimated by Goodman and colleagues (44) for a group with similar diagnoses but who were all in active treatment. On the basis of a convenience sample of 321 women and 461 men with serious mental illness, 12-month rates of sexual assault were estimated at 20.3% and 7.6%, respectively.

Our six-month estimates fall between rates estimated for persons with serious mental illness in the community, suggesting that inmates with schizophrenia and bipolar disorder are either at greater or lesser risk of sexual victimization inside prison than in the community, depending on the characteristics of the community

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sample with which they are compared. In prison, sexual assault by staff or inmates among inmates with schizophrenia or bipolar disorder was estimated at 4.9% among men (CI= 2.7%–7.0%) and 6.7% among women (CI=2.3%-11.1%). The method used by Teplin and colleagues (1) and Goodman and associates (44) differed from the method we used, which may partly explain the variation in the estimated rates. Yet the overarching finding across these three studies is similar: people with a serious mental disorder are at higher risk of sexual assault than the general population living in the same environment.

Our findings also suggest that the source of risk varies by gender. Women are at greater risk of inappropriate touching and rape than their male counterparts, but the source of their risk is other inmates. By contrast, although men have relatively lower rates of risk, they are at greater risk than women of sexually inappropriate touching by officers than by other inmates. This finding needs greater explication in future research, because it suggests different interventions for keeping people safe inside prison.

The study has several important limitations. There is a possibility of uncorrected sampling bias. Our samples ranged from 26% to 53% of the population of 13 facilities—and the sample consisted of approximately 8,000 inmates. Our sample was large, but results may not generalize to the full population. Nonrepresentativeness of the sample was tested by age, race or ethnicity, and length of time at the current facility, and these variables were adjusted for in the weighting strategy. Although it is possible that these rates are biased in ways that are unknown, the low overall victimization rates are consistent with participants' verbal and written responses after they completed the survey. There was a general sentiment that the sex questions were biased toward the myth that rape is part of life in prison. Participants were in many cases frustrated by these questions but not by comparable questions about physical victimization or emotional abuse. The uncertainty within our estimates is partly captured in the CIs. It is important to note, however, that the estimates may not generalize beyond the 7,528 inmates who completed the survey.

Another limitation concerns the possibility of biased reporting. Inmates and custody staff often have relations fraught with tension and hostility. As such, false reporting is a possibility. Given that the survey instruments were read and completed in real time, involved hundreds of questions, and were completed by hundreds of inmates each day by unit and rapidly over a two- to five-day period, systematic strategies for manipulating the survey through false reporting

were minimized. Considerably higher and more clustered rates of victimization would have been expected if intentional manipulation was systematic and widespread.

Another limitation, as mentioned earlier, concerns our measure of mental disorders, which was based on self-report to a question about ever having received treatment for a mental health problem. Approximately one-quarter of the sample reported some prior treatment for schizophrenia, bipolar disorder, depression, PTSD, or anxiety disorder, with rates as high as 57.6% for female respondents and 22.8% for male respondents. These rates are higher than national rates of mental disorders in prison populations, which were estimated at 16% for males and 24% for females (8). Yet higher rates of mental disorders have been estimated for a single prison system by using official records of inmates who were actively receiving mental health treatment (45). In that study by Blitz and colleagues, roughly 25% of the male and female inmates classified as having a mental disorder were treated for schizophrenia or bipolar disorder. In our sample, 32% of the group reporting prior treatment reported treatment for schizophrenia or bipolar disorder. It is unclear whether and to what extent our sample over- or underrepresents mental disorders, given the likelihood of undetected and untreated disorders in the prison population. Future research needs to explore this issue with measures of mental disorder that are based on clinical interviews or chart review.

A related limitation concerns the expected correlation between sexual victimization in prison and treatment for trauma, depression, or anxiety as a consequence of the trauma. Our data did not allow us to identify the time pattern, hence causality, between treatment and victimization. In an effort to partially control for the causal sequence, we focused on six-month prevalence estimates and divided the sample into diagnostic groups with prior treatment for any mental disorder and those with prior treatment for a serious mental illness (schizophrenia or bipolar disorder, which are disorders not caused by sexual victimization) in an effort to control for the effect of sexual victimization in prison on treatment. Future research needs to explore the causality issue in more robust ways.

Conclusions

It is well established in the literature that prisons are violent places (11-15). This research suggests that prisons are particularly violent for people with a mental disorder. As in the community, these individuals are more likely than their counterparts without mental disorders to experience sexual victimization inside prison. It has been estimated that 15.0% of male inmates and 58.9% of female inmates with mental health problems were sexually abused before coming to prison (8). If people with mental disorders are sexually victimized inside prison, prior victimization adds cumulatively to the need for trauma-related treatment during incarceration (44,46). Screening for PTSD may be one way to identify those who have experienced sexual victimization in prison without requiring formal reporting, which bears risk in terms of further punitive victimization.

Solid epidemiological research on the prevalence of mental disorders within prison populations is critically needed, in part because the violent environment in prison is likely to increase the need for mental health treatment, in part because inmates with mental disorders need treatment while incarcerated, in part because people with mental disorders need to be protected from predators while in prison, and in part because people with mental disorders in prison will eventually return to the community. Returning to the community individuals who not only have mental illness but a more aggravated and complicated mental disorder, and possibly additional comorbid mental disorders, will challenge the community-based mental health delivery system in ways that must be anticipated.

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