Conviction Offense and Prison Violence: A Comparative Study of Murderers and Other Offenders

Jon Sorensen and Mark D. Cunningham

Crime & Delinquency 2010 56: 103 originally published online 12 March 2008
DOI: 10.1177/0011128707307175

Crime & Delinquency
Volume 56 Number 1
January 2010 103-125

10.1177/0011128707307175
http://cad.sagepub.com
hosted at
http://online.sagepub.com

Conviction Offense and Prison Violence

A Comparative Study of Murderers and Other Offenders

Jon Sorensen
Prairie View A&M University, Texas
Mark D. Cunningham
Forensic Psychologist, Dallas, Texas

The characteristics of, and 2003 disciplinary data on, 51,527 inmates in the Florida Department of Corrections, including 9,586 inmates who had been convicted of some degree of homicide, were examined for rates and correlates of prison misconduct and violence. Disciplinary misconduct and institutional acts of violence committed by an admissions cohort (N = 14,088) and a subset of Close custody inmates (N = 4,113) also were considered. Regardless of conviction offense, the prevalence and rate of violent prison misconduct fell markedly as the severity of assault increased. Comparative data showed that convicted murderers did not account for a disproportionate share of prison violence, however defined. Furthermore, negative binomial regression models revealed that convicted murderers were not significantly more likely to engage in disciplinary misconduct or commit acts of institutional violence than were inmates serving time for other offenses.

Keywords: *assault; disciplinary infraction; future dangerousness; importation model; institutional misconduct; murder; prison violence; rule violation*

Are convicted murderers more violence-prone inmates than other offenders? The answer to this question has implications for the institutional classification and management of these offenders as well as for capital sentencing determinations. Conventional wisdom has been of two minds regarding this question, depending on which context was invoked.

Conventional wisdom among previous generations of correctional administrators held that murderers typically made the best prisoners, often behaving as model inmates. Wardens would frequently select murderers for

the most sensitive positions in the prisoner work hierarchy, choosing them to serve as their own houseboys, as clerks, and even as inmate guards or "building tenders." In the modern era, though, classification procedures routinely result in murderers being assigned to the most secure levels of custody. This may reflect one or both security issues underlying classification.

To explain, inmate classification rationales address three distinct concerns in inmate management: internal security, external security, and inmate needs. Security aspects typically dominate the classification process. Internal security reflects the likelihood of inmate misconduct and violence, assigning the inmate to a type of housing, level of supervision, and mix of inmates that would reduce this potential. External security reflects escape motivation, with associated assignment to facilities of varying perimeter hardening (i.e., fences, detection devices, gun towers, perimeter patrols, etc.) and restriction of movement outside of the perimeter. Because convicted murderers typically face lengthy sentences, their assignment to perimeter-secure facilities is an understandable response to external security concerns. Less clear, however, is whether a murder conviction in the community is predictive of prison misconduct, requiring heightened levels of internal security as well. Some classification systems use proxies that result in higher internal security classification of murderers. For example, the inmate security designation and classification system in the Federal Bureau of Prisons codes the severity of violence in the offense of conviction and extent of injury to the victim as factors that are relevant to institutional violence risk (Harer & Langan, 2001).

Consideration of the future institutional conduct of a convicted murderer is available as an aggravating factor in many jurisdictions in particularizing the death penalty (see *Jurek v. Texas*, 1976; *Barefoot v. Estelle*, 1983). Conventional wisdom at capital sentencing has held that a conviction for murder, alone or in combination with other factors, is indicative of an ongoing propensity for murder or other serious violence in a prison context, necessitating a death sentence for the protection of staff or other inmates (for discussion of assumptions underlying this conventional wisdom, see Cunningham, 2006). To illustrate, in asserting a special issue in capital sentencing determinations in Texas (i.e., "whether there is a probability the defendant would commit criminal acts of violence that would constitute a continuing threat to society," Texas Code Criminal Procedure, 1975-1976), the prosecution argued, "The brutality of this particular case standing alone, if you absolutely knew nothing else about LaRoyce Smith and his background, the brutality alone calls for the death penalty in this case" (see *Ex parte LaRoyce Lathair Smith*, 2006).

Given the prominent role that sentence length, and by extension offense of conviction, has in current inmate classification schemes, as well as the role that expectations of prison misconduct may play at capital sentencing, one might expect to find an extensive literature of large-scale studies examining the relationship between conviction offense and prison violence. This is not the case. Rather, relatively little large-scale research illuminates this relationship, and even less details the comparative institutional misconduct of convicted murderers.

In a study of the Canadian federal prison system, Porporino (1986) reported that during 1981-1984, offenders serving sentences for violent crimes had "rates of involvement in prison violence similar to or lower than those of property offenders" (p. 222). The same study found that inmates serving life sentences demonstrated rates of violent misconduct that were similar or lower than other sentence groups. A survey of 231 inmates incarcerated in a medium security prison in a Southwestern state reported that offenders who had been convicted of violent offenses were not more likely to commit assaults during incarceration (Wooldredge, 1994). An analysis of inmate data from three state prison systems in the 1980s found that the offense for which the inmate was incarcerated was not significantly related to the likelihood of misconduct (Wooldredge, Griffin, & Pratt, 2001). In another study examining the correlates of prison violence among a sample of 1,005 state prison inmates, Delisi, Berg, and Hochstetler (2004) found that convicted murderers were not significantly more likely to be involved in acts of prison violence. Other reviews also have concluded that the seriousness of conviction offense is not a good predictor of prison adjustment (Alexander & Austin, 1992; National Institute of Corrections, 1992).

Inconsistent with the above findings, however, an analysis of inmate assaults on correctional officers in 53 institutions drawn from surveys of 22 states and the Federal Bureau of Prisons found that offenders who had violent offenses of conviction perpetrated 70% of assaults on staff (Davis, 1996). Although this would appear to be an overrepresentation, the study failed to report comparative frequency data or control for other factors (e.g., age, time at risk, custody level).

Only two studies were identified that compared the prison assault rates of convicted murderers with inmates sentenced for other crimes. Marquart, Ekland-Olson, and Sorensen (1989) reported that convicted capital murderers in Texas demonstrated significantly lower rates of assaultive prison misconduct than did inmates systemwide. This finding held whether the capital offenders had been sentenced to life in prison at trial or following relief from their death sentences. Cunningham, Reidy, and Sorensen (2005)

observed that Missouri death-sentenced murderers who were mainstreamed in the general population of a high security prison displayed about half the prevalence of assaultive misconduct, net of other factors, as the parole-eligible inmates with whom they shared confinement.

No study was identified that compared the institutional violence rates of a large sample of convicted murders with other offenders. The current study is designed to address this void in the literature on prison misconduct.

Method

Participants

Sample 1. Computerized files were provided by the Florida Department of Corrections (FDOC) that included demographic, conviction offense, sentence, and institutional information on all inmates who were incarcerated on January 1, 2003, and served the entire 2003 calendar year, thus providing a standardized "at-risk" period of 1 year. The total sample included a cross-section of the FDOC inmate stock population (N = 51,527) and, as such, included inmates incarcerated for a broad array of offenses, in various stages of confinement, and serving time under the entire range of custody levels. The characteristics of this population, presented in the first column of Table 1, show that the inmates also are quite diverse in terms of their demographic characteristics and prior incarceration history. Because these characteristics have been shown to have an effect on the likelihood or rate at which inmates commit violent rule infractions, they will be included as controls in the analyses of the correlates of misconduct.

Although including all inmates serving the year 2003 allows for an analysis of rates and correlates of prison violence on the broadest scale, using the stock population of inmates for this purpose has some drawbacks. First, the prison stock population is influenced by differential attrition and retention of inmates based on the outcome variables. Those inmates who are better behaved may receive good time that reduces the length of their sentence, whereas inmates who commit acts of prison misconduct, especially those involving violence, are less likely to attain early release. Because inmates with behavioral problems are held in prison longer, at any given point, the on-hand prison population might be expected to have more troublesome inmates among them and, hence, higher base rates of violence than an entering admissions cohort of inmates.

Table 1
Characteristics of the FDOC Stock Population, Admissions Cohort, and Close Custody Sample

Demographics	Stock Population (N = 51,527)	Admissions Cohort (N = 14,088)	Close Custody Sample (N = 4,113)
Sex: Female	4.8%	7.2%	0.0%
Age (M)	36.5 years	33.2 years	32.6 years
Gang member	4.0%	3.1%	0.0%
Prior prison commitment	48.0%	46.0%	44.5%
Sentence (M)	28.1 years	10.2 years	20.8 years
Time served as of 1/1/03 (M)	4.5 years	0.5 years	0.5 years
Custody level			
Community	6.0%	10.4%	0.0%
Minimum	17.2%	23.7%	0.0%
Medium	27.2%	33.8%	0.0%
Close	48.9%	32.0%	100.0%
Death row	0.6%	0.1%	0.0%
Conviction offense type			
Homicide	18.6%	5.9%	10.9%
Other violent	39.6%	33.8%	46.2%
Property	21.4%	26.7%	21.0%
Drugs	14.7%	24.0%	14.7%
Public order/weapons	5.7%	9.6%	7.2%

Note: FDOC = Florida Department of Corrections.

Two major counteracting influences, however, make this unlikely. First, inmates entering prison are younger than those in the prison stock population. Given that age is the strongest and most consistent correlate of prison misconduct, as in general society, this factor alone is likely to offset the increase in violent behavior caused by differential attrition. Second, incoming inmates often experience adjustment problems. The pattern of prison misconduct, to a large degree, parallels that of recidivism among newly released former inmates in the general society. Acts of prison misconduct are more common in the early stages of an inmate's prison career and tend to decrease throughout the course of their incarceration. Overall, then, the base rates of prison misconduct in general, and prison violence in particular, should be lower on average among the prison stock population than among an entering cohort.

The predictors of prison violence also may be influenced by the factors discussed above. Differential attrition based on behavior, along with the

effects of aging and adjustment to prison, all may be expected to influence the unadjusted relationship between offense of conviction and prison misconduct in the prison stock population mainly through the length of sentence. Inmates convicted of violent offenses, particularly murderers, receive longer sentences on average than inmates convicted of other types of offenses (i.e., property, drug, or public order). Because they are held in prison longer, murderers in the stock prison population at a given point in time tend to be older and in a later stage of their confinement than other inmates. Furthermore, because their sentences are longer and other restrictions often are placed on early release, differential attrition due to good behavior should have less of an influence on collective rates of misbehavior among murderers and other long-term inmates than among short-term inmates, for whom good behavior can shave off a more substantial portion of their prison term. At any given point in time, the group of short-term inmates in the prison stock population consists of legions of newly admitted, younger inmates and those who have failed to behave well enough to attain release, whereas murderers and other long-term inmates in the prison stock population tend to be older, settled, and better behaved in the prison population.

Some have hypothesized that lower rates of prison misbehavior should not be expected for a subset of long-term prisoners whose behavior has little or no bearing on their release date, such as those serving mandatory minimum sentences. Recent research, however, has shown that even among inmates serving life sentences with no possibility of parole, their rate of institutional violence is similar to (Cunningham & Sorensen, 2006) or less than (Cunningham, Sorensen, & Reidy, 2005) other groups of inmates whose behavior has a direct connection to their release date. Along with the influence of aging, time served, as well as the acculturation of lifers who come to view the prison as their home and seek to make the best of it, the potential rewards or sanctions that are paired with behavior likely also contribute to the relatively low incidence of violent institutional misconduct. Prisons are amazingly successful at controlling behavior when one considers that the rates of homicide and aggravated assault are consistently lower therein than in the general society, especially considering the demographics of prisoners, who are generally young, urban men with a prior history of social rule violation and violent behavior.

One of the main reasons that modern prison systems have been so successful in reducing violence potential among inmates is the continuous process of classifying inmates based largely on their adjustment in prison.

Inmates who show warning signs of violent misconduct or general irascibility often are assigned to more secure levels of custody, which in turn reduces their opportunities to commit violent acts. The third reason, then, to be skeptical of analyses of prison misconduct that rely solely on the prison stock population is that periodic custody classification and reclassifications due to bad acts can reduce violence potential for particular inmates in the stock population at any point in time. In addition to its effect on base rates, any correlates of misbehavior should be expected to lose strength during the course of inmates' incarceration as those who misbehave are reclassified to more secure custody levels or housing assignments and their opportunities for subsequent violence, which would be captured in a cross-sectional study, are thus reduced.

Sample 2. For the reasons discussed above, all analyses herein are repeated on an entering group of inmates. This admissions cohort includes all inmates entering the FDOC during 2002 and serving the entire 2003 calendar year (N = 14,088). Although not a perfect solution, the 2002 FDOC inmate admissions cohort has obvious advantages over the stock population and, to the extent that the findings are consistent with those from the stock population, supplemental analyses offer additional support for any relationships uncovered. The characteristics of the admissions cohort are presented in the second column of Table 1. As expected, in comparison to the stock population, the admissions cohort includes a smaller portion of murderers, inmates who have shorter sentences to complete, and those assigned to lower custody levels.

In addition to periodic custody classifications and reclassifications due to bad acts, initial custody classifications upon entering prison also can restrict inmates' opportunity for violence from the beginning of their sentences. Long-term inmates, and murderers in particular, often are classified to more secure custody levels upon entrance to prison. To the extent that murderers serve time under different conditions of confinement, the true relationship between conviction offense and prison misconduct or violent outcomes may be confounded. That is, what one would really like to know is whether murderers are more prone to prison misconduct and violence than are inmates convicted of other types of offenses held under the same conditions of confinement. Studies have shown that environmental factors in prison can have a large impact on the institutional misbehavior of inmates. It is also possible that custody levels influence staff tolerance levels and reporting practices.

Sample 3. For the above reasons, a third sample was selected that is restricted to a subset of the admissions cohort initially classified as Close custody inmates. In the FDOC, inmates receive both an external classification (i.e., Community, Minimum, Medium, Close) that defines perimeter security of the facility and outside-facility movement of inmates and an internal classification that addresses housing, movement, and programming within the facility. Close custody represents only an external classification element and as such different inmates may be housed differently (i.e., open bay dorms, double-celled) within Close custody prisons. Although offense of conviction does not influence internal classification decisions in FDOC, one variable that can is prison gang membership. Not only do these inmates often end up serving time under more restrictive housing but their involvement in violent misconduct has been shown to be higher than other Close custody inmates in the FDOC (Cunningham & Sorensen, 2006). Due to the potential confounding influence of gang membership and/or housing assignment related to gang membership on the relationship between conviction offense and violence, verified and suspected gang members also were removed from the Close custody sample. For similar reasons, female inmates and death-sentenced inmates also were excluded from the final Close custody sample (N = 4,113). Although younger than the other groups, the Close custody sample more closely resembles the stock population in terms of sentence length and conviction offense, with a larger portion of inmates serving longer sentences for violent crimes than the admissions cohort.

Measures

Conviction offenses were aggregated from a listing of more than 1,700 potential offense codes. Because the main concern herein is with the violent rule-violating behavior of murderers, any inmate with a current offense of conviction for homicide received an indicator separate from those with all other types of conviction offenses. To illuminate potential differences in misconduct depending on the seriousness of the homicide conviction, these were disaggregated by first-degree murder, second-degree murder, and lesser homicide for the 2003 stock population (see Table 4). Inmates with convictions for other violent crimes (assault/attempted murder, sexual assault, robbery, and kidnapping) were combined into an "other violent crimes" category. Categorization of the remaining offenses followed the Bureau of Justice Statistics (BJS) convention of combining offenses related to property, drugs, and public order/weapons. Also consistent with BJS convention, inmates were classified only according to their most serious conviction offense.

Table 2
Frequency and Prevalence (in parentheses) of Disciplinary Violations Involving Actual or Potential Violence

Disciplinary Violations	Stock Population	Admissions Cohort	Close Custody Sample
Total violations	1.128 (44.83%)	1.456 (50.34%)	2.425 (60.22%)
Potentially violent	0.138 (10.47%)	0.163 (12.34%)	0.313 (21.20%)
Threaten officer	0.042 (3.45%)	0.046 (3.74%)	0.102 (7.80%)
Weapon possession	0.013 (1.22%)	0.011 (1.09%)	0.024 (2.29%)
Escape	0.000 (0.02%)	0.000 (0.02%)	0.001 (0.07%)
Riot	0.004 (0.37%)	0.005 (0.55%)	0.017 (1.60%)
Fighting	0.045 (4.25%)	0.062 (5.81%)	0.092 (8.27%)
Assault (no weapon)	0.029 (2.49%)	0.033 (2.90%)	0.065 (5.69%)
Assault with weapon	0.005 (0.46%)	0.005 (0.43%)	0.013 (1.19%)
Robbery	0.000 (0.01%)	0.000 (0.01%)	0.000 (0.02%)

A variety of operational definitions have been used previously in studies predicting violent or assaultive misconduct in prison (Delisi & Munoz, 2003; Edens, Buffington-Vollum, Keilen, Roskamp, & Anthony, 2005). The most comprehensive definition would include a broad range of rule violations that have the potential to result in a violent outcome. Table 2 provides an overview of the types of violent rule infractions occurring in the FDOC that could be useful for comparing the level of violent misconduct among convicted murderers to that of other inmates. The time period during which the frequency of disciplinary violations was calculated was 1 calendar year. As such, frequency represents the yearly rate of rule violations and assaultive acts per inmate, whereas prevalence refers to the percentage of inmates involved in particular types of violations during 2003.

Two observations are readily apparent from viewing Table 2. First, overall violations involving potential violence are infrequent relative to the total number of rule infractions. The inmate stock population averaged more than 1 rule violation per year, with nearly half of FDOC's incarcerated population involved in at least one violation. Potentially violent rule violations accounted for about 12% of the total number of rule infractions among these inmates. The rate at which they committed potentially violent rule infractions was about 14 per 100 inmates per year and involved 10.5% of the inmate population.

Second, many of these "potentially-violent" rule infractions did not result in actual physical harm. Nearly 40% of the total stock population's violations at this level involved verbal threats to officers or the possession of a weapon. For some other offenses, the violence potential is much more

direct, such as escape and rioting, even if no physical harm resulted from the actions. In the case of riots, a new dimension is introduced concerning the level of individual responsibility for the action. Often, responsibility for these actions is diffused across aggregates of inmates, some of whom are more culpable and some of whom are much less culpable. A somewhat analogous situation presents itself in the case of fighting, the next largest category of offenses, at more than 30% of the total stock population's potentially violent misconducts. Fights are generally seen as involving mutually consenting combatants. Although it certainly may be the case that one combatant is more responsible than the other, the identification of the perpetrator is difficult in these cases and therefore all inmates involved are typically cited. Nonetheless, these cases involve overt violence rather than just violence potential, as was the case in the previous categories of offenses discussed. The remaining categories of offenses obviously resulted in a violent outcome and leave little doubt as to the individual responsibility of the perpetrator. Those inmates who rob other inmates or assault them, either with or without a weapon, have engaged in overtly violent acts as the perpetrators. Even in these cases, however, the level of physical harm resulting from the assault varies from none, as in the case of attempts or conspiracies, to minor, or even serious, bodily injury in accomplished assaults.

Third, the frequency and prevalence of overall violations and each act involving potential or actual violence is slightly higher among the admissions cohort and much higher among the Close custody sample than among the prison stock population. Youth and adjustment problems among newly admitted inmates appear to more than offset any potential inflation of base rates of violence caused by differential attrition of well-behaved inmates from among the prison stock population. The much higher frequency and prevalence among the Close custody sample, nearly twice as many potentially violent misconducts when compared to the larger admissions cohort, suggests that FDOC's initial classification procedures are somewhat successful in anticipating inmate violence. Alternately, these findings also might suggest that the Close custody environment encourages rule violations or lower staff tolerance thresholds, and hence higher levels of violation reporting.

Table 3 displays the actual level of harm resulting from the potentially violent acts cataloged in Table 2. Of the entire inmate stock population, just more than 1% were involved in rule violations that resulted in at least minor injuries to inmates or staff. Inmates sustained most of these minor injuries. Only one-fifth of 1% of the cohort were involved in violations that resulted

Table 3
Frequency and Prevalence (in parentheses) of Disciplinary Violations Resulting in Injury to Staff or Inmates

Level of Injury by Victim	Stock Population	Admissions Cohort	Close Custody Sample
Violations resulting in at least minor injuries	0.015 (1.34%)	0.019 (1.72%)	0.034 (2.99%)
To inmates	0.013 (1.20%)	0.017 (1.61%)	0.030 (2.46%)
To staff	0.002 (0.19%)	0.002 (0.16%)	0.005 (0.41%)
Violations resulting in serious bodily injury	0.004 (0.36%)	0.004 (0.35%)	0.004 (0.41%)
To inmates	0.003 (0.29%)	0.003 (0.32%)	0.004 (0.34%)
To staff	0.001 (0.08%)	0.000 (0.04%)	0.001 (0.12%)

in harm to staff. Serious bodily injury was quite rare. Only 4 in 1,000 inmates were involved in acts that resulted in serious bodily injury. Again, most of these injuries were sustained by other inmates. Only 8 in 10,000 inmates were involved in acts that resulted in serious bodily injury to staff. Although the rates are higher among the Close custody sample, the results still speak to the rarity of violence in the system, particularly acts of violence directed at staff and violent acts resulting in serious injuries.

Even these numbers may exaggerate the extent to which inmates cause harm to other inmates and staff. In many of these cases, it was impossible to determine whether the actions of a particular individual resulted in the harm. The injury indicator in the FDOC database was coded yes if any injury resulted from a rule violation, regardless of whether a particular inmate or some other inmate involved in the incident caused the harm. Injuries also would be noted in instances where an inmate receiving a disciplinary violation was the victim of the injury. This most often occurs in the case of mutually consensual fights but also may occur when correctional officers cause injuries while attempting to restrain a resisting inmate who has committed a rule violation. The injury indicator also overstates the prevalence and frequency of harm to some unknown degree because more than one inmate can be cited for the same incident in which a single physical injury occurred. The scenarios are endless, and the available measures are simply not sensitive enough to assign individual blame for actual harm. Given these cautions, assaults, particularly those resulting in some degree of bodily injury, represent the categories for which the resulting harm is most reliably attributed to the inmate who was cited with this violation. Accordingly, assault that results in either minor or serious bodily injury is arguably the most appropriate measure of violent outcome for a particular inmate.

Table 4
A Comparison of the Frequency and Prevalence (in parentheses) of Disciplinary Infractions Among Homicide-Convicted Offenders and All Offenders in the 2003 FDOC Stock Population

Offense of Conviction	Total Violations	Potentially Violent Assaults	Assaults	Assaults With Injuries	Assaults With Serious Injuries
First-degree murder ($n = 5{,}010$)	.752***	.113***	.032	.006	.002
	(35.0%)	(8.8%)	(2.6%)	(0.6%)	(0.2%)
Second-degree murder ($n = 3{,}256$)	.902*	.117**	.038	.006	.002
	(39.7%)	(8.8%)	(3.0%)	(0.5%)	(0.2%)
Lesser homicide ($n = 1{,}320$)	.704***	.085***	.021*	.002	.001
	(33.7%)	(7.2%)	(2.0%)	(0.2%)	(0.1%)
FDOC all offenders ($N = 51{,}527$)	1.128	.138	.034	.005	.002
	(44.8%)	(10.5%)	(2.9%)	(0.5%)	(0.2%)

Note: FDOC = Florida Department of Corrections.
*$p < .05$. **$p < .01$. ***$p < .001$.

Results

Table 4 presents a comparison of disciplinary infractions, potentially violent infractions, and assaultive rule violations among offenders convicted of homicide of varying degrees in the 2003 FDOC stock population. The chart moves from all institutional misconduct to the broadest measure of violations with violence potential and then to the narrowest category involving assaults resulting in serious bodily injury. As true with the stock population, the frequency and prevalence of misconduct for each degree of homicide offense decreased as the severity of the misconduct increased. The results show that relative to the other groups of inmates, murderers convicted of various degrees of homicide were not overly involved, significantly less in some cases, in violent or assaultive rule infractions, regardless of how this misconduct is defined. The frequency and prevalence of their involvement in institutional violence was below or near the mean for the entire inmate cohort on all of these measures. Because the degree of homicide appeared to have little effect on the violent outcomes, homicide offenders are treated as a single category in subsequent analyses.

Table 5 takes a different tack, looking at the percentage of total disciplinary infractions, potentially violent infractions, and assaultive rule violations attributable to murderers incarcerated in FDOC during 2003. The first

Table 5
Percentage of Disciplinary Violations Committed by Inmates Convicted of Homicide

Disciplinary Violations	Stock Population	Admissions Cohort	Close Custody Sample
Percentage of homicide offenders	18.6%[a] (9,586/51,527)[b]	5.9% (837/14,088)	10.9% (450/4,113)
Total violations	13.1%[c] (7,633/58,135)[d]	4.7%*** (966/20,517)	6.9%*** (685/9,976)
Potentially violent	14.9% (1,061/7,098)[d]	5.1% (118/2,292)	6.6%*** (85/1,289)
Assaultive acts	17.7% (310/1,748)[d]	6.7% (35/526)	6.2%** (20/321)
Assaults with injuries	19.4% (53/273)[d]	8.0% (6/75)	4.0% (2/50)
Assaults with serious injuries	15.8% (15/95)[d]	10.0% (2/20)	8.3% (1/12)

a. Reference percentage of homicide offenders in sample.
b. Number of homicide offenders/number of inmates in sample.
c. Percentage of specified violations committed by homicide offenders.
d. Number of specified violations committed by homicide offenders/number of specified violations committed by entire sample.
**$p < .01$. ***$p < .001$.

row of Table 5 reflects the percentage of murderers in each of the three samples, whereas the numbers in parentheses indicate the ratio used to derive this percentage (number of murderers/total number of inmates); these are the reference categories. The same is true for subsequent rows except that the percentage indicates how many of the total number of prison misconducts at each level were committed by convicted murderers. To the extent that the percentage of acts of misconduct at a particular level committed by murderers exceeds the percentage of murderers in a sample, murderers may be considered disproportionately involved in those acts of institutional misconduct. In subsequent rows, the chart moves from all institutional misconduct to the broadest measure of violations with violence potential and then to the narrowest category involving assaults resulting in serious bodily injury.

Two major findings can be culled from Table 5. First, as noted in Tables 2 and 3, the number of violent acts substantially decreased as the severity level of the misconduct increased. For instance, among the stock population, 7,098 acts of potentially violent misconduct were recorded, of which only 95

resulted in serious injuries. The prevalence of violence would be 75 times greater when defined according to the broadest, as opposed to the narrowest, measure. Second, the relationship between offense of conviction and prison violence appears fairly stable regardless of the measure of institutional violence used. The percentage of murderers involved in violence exceeded their proportion for only 3 of the 15 measures across the samples; these differences were not statistically significant. In 4 of the measures, convicted murderers committed significantly fewer acts of prison misconduct. The results show that relative to the other groups of inmates, murderers were not disproportionately involved in violent or assaultive rule infractions, regardless of the sample analyzed or how misconduct was defined.

An argument could be made, however, that in such bivariate analyses a number of factors could obscure the true relationship between offense of conviction and prison violence. In addition to conviction offense, many of the variables described in Table 1 have been found to influence prison violence. Although many of these factors (i.e., sex, gang membership, custody level) are controlled by design in the Close custody sample, they are not in the other samples. Even in the Close custody sample, some relevant factors (i.e., age, prior prison commitments, sentence length) are not held constant by design. To the extent that these variables influence the outcome, the true relationship between conviction offense and prison violence is confounded in the bivariate analysis.

To isolate the influence of conviction offense on prison violence, then, it is necessary to control for a host of other plausible causal factors. Accordingly, multivariate regression models were calculated that pitted the effects of conviction offense against other offender, conviction, and institutional characteristics that would be expected to influence the likelihood of inmate violence. Because regression models predict more optimally with larger samples and outcome variables that have a higher likelihood of occurrence, the main multivariate regression model presented in Table 6 predicts potentially violent rule infractions among the prison stock population.

Even using the broadest measure of prison violence, the outcome was still highly skewed (M = .138, SD = .477, skewness = 5.862). This is not unexpected given that the dependent variable is count data expressed in raw form. Although the scores on the dependent variable range from 0 to 13, nearly all of the scores are clustered near 0, with 89.5% of the observations committing no violent acts, 8.3% committing 1, 1.6% committing 2, 0.4% committing 3, 0.2% committing 4, and the remaining 0.1% committing 5 to 13 violent acts. Given this dispersion of the outcome variable, modeling the relationship among the predictors and prison violence using standard linear

Table 6
Negative Binomial Regression Model Used to Predict Potentially Violent Rule Misconduct Among the FDOC Stock Population

						95.0% CI for *B*	
Variable	*B*	*SE*	*Z* Test	Sig.	*Exp* (*B*)	Lower	Upper
Sex: Female	–.424	.067	–6.30	.001	.654	–.557	–.292
Age	–.052	.012	–29.37	.001	.949	–.056	–.049
Gang member	.213	.058	3.69	.001	1.239	.100	.327
Prior prison commitment	.255	.031	8.25	.001	1.290	.194	.316
Sentence	–.007	.001	–11.23	.001	.993	–.008	–.006
Time served	.009	.004	2.15	.031	1.009	.001	.017
Community custody	–2.604	.125	–20.91	.001	.074	–2.848	–2.340
Minimum custody	–1.738	.056	–31.21	.001	.176	–1.847	–1.629
Medium custody	–1.085	.037	–29.59	.001	.338	–1.157	–1.013
Homicide conviction	–.089	.045	–1.95	.051	.915	–.178	.000
Property conviction	.163	.038	4.29	.001	1.177	.089	.238
Drug conviction	.140	.048	2.95	.003	1.150	.047	.234
Public order/ weapons conviction	.207	.062	3.33	.001	1.230	.085	.329
Constant	.676	.086	7.83	.001	1.966	.506	.845

Note: FDOC = Florida Department of Corrections; CI = confidence interval.

ordinary least squares (OLS) regression would be inappropriate. The most common approach to correcting for nonlinearity in studies predicting prison violence has been to dichotomize the dependent variable and model the relationship using logistic regression. Such an approach, however, gives up the opportunity to capitalize on any explanation of variance related to the actual rate of offending as opposed to simply the presence or absence of an event of interest: violent prison misconduct in this case.

One way to modeling the relationship between the predictors and the frequency of offending is to utilize Poisson regression. Poisson regression has commonly been used in criminology to model offending among career criminals (Greenberg, 1991; Nagin & Land, 1993). Given that the resulting pattern of offending in prison, at least in its distribution, is very similar to that in the free world, Poisson regression is an obvious alternative to OLS regression. One of the assumptions of Poisson regression, however, is that the conditional variance is equal to the conditional mean. Because this requirement of equidispersion is seldom met with count data, especially in cases where occurrence of the event is rare, some transformation is necessary when modeling the variance (Cameron & Trivedi, 1998; Osgood,

2000). In the case of overdispersion, the most common extension of Poisson regression that allows the conditional variance to exceed the conditional mean is negative binomial regression. In the following analysis, the standard form of negative binomial regression was calculated using the *nbreg* command in *Stata*.

The *nbreg* showed that the dispersion parameter was significantly greater than 0 (LR chi square = 1625.60, $p < .001$), thus confirming that negative binomial regression was a more appropriate functional form than unadjusted Poisson regression. The results of the *nbreg* model are presented in Table 6. The overall model was found to predict violence quite well (LR chi square = 3412.97, $p < .001$).

Among inmates' personal characteristics, the one most strongly related to violence was age. The exponentiated *nbreg* coefficients (*exp* [*b*] column) is most useful for interpreting the results. The *exp* (*b*) is typically interpreted as the factor change in violence for each unit increase in the predictor variable. This column shows that for each yearly increase in age, the number of violent acts an inmate is expected to commit decreases by more than 5%, holding constant all of the other predictors present in the model. The negative relationship between sex (a dichotomous variable coded as male = 0, female = 1) suggests that being female decreased the expected number of violent acts by 35%. Gang membership also was found to have a significant influence on the outcome, with suspected or confirmed gang members being expected to commit 24% more violent acts than nongang members. A prior prison incarceration increased the expected number of violent acts by 29%. Sentence had a negative relationship to violence. Those serving shorter sentences were more likely to commit a violent act, with each additional year of sentence resulting in an expected decrease of nearly 1% in the number of violent acts. Time served had the opposite effect, with each additional year of time served resulting in an increase of nearly 1% in the number of violent acts.

An inmate's level of custody at the beginning of the observation period was strongly predictive of their level of violent misbehavior. The influence of the three dichotomous indicators of custody level must be interpreted in relation to the omitted reference category of Close custody.[1] Relative to inmates in Close custody, the number of violent acts expected among inmates in lower levels of custody were as follows: Community custody = 93% lower, Minimum custody = 82% lower, and Medium custody = 66% lower. The relationship of custody level to violent misconduct must be interpreted cautiously, however, because the observation period for the stock population did not mark the beginning of the inmates' terms of incarceration.

As such, many of the inmates had an opportunity to self-select into custody levels during the course of their stay through their own compliance or misconduct. Custody level in this analysis may be akin to an anamnestic predictor of 2003 behavior based on something the inmate did to demonstrate his or her violence propensity previously during their term of imprisonment. In its relationship to 2003 behavioral outcomes, the influence of custody level is likely to be endogenous and dependent on other earlier predictors.

Our main concern is with the relationship between offense of conviction, homicide specifically, and prison violence. As such, the category of other violent conviction offense was excluded from the models and thus it serves as the referent when interpreting the coefficients of the other conviction offense types. Relative to those incarcerated for other violent crime, inmates incarcerated for property, drug, and public order crimes were significantly more likely to be involved in acts of violence. Given the likelihood of attrition bias based on the behavior of inmates, particularly those convicted of nonviolent offenses, however, these results should be interpreted with caution. As mentioned earlier, because the behavior of inmates convicted of homicide and other violent offenses has less of an effect on time served, differential attrition is unlikely between these groups and hence less likely to confound the relationship between conviction offense and violent outcome. The coefficient for convicted homicide offenders, then, relative to those convicted of other violent crimes, represents the most reliable comparison between types of conviction and outcome. The model coefficient shows that murderers are 8.5% less likely to commit acts with violence potential than is the reference category. At the .051 level of significance (two-tailed), the 95% confidence interval (CI) suggests that the true parameter ranges from a 0% to 24% reduction in potential acts of violence.

The inclusiveness of the sample and breadth of the outcome measures are major strengths in an analysis of the stock population; however, each of these choices could bias coefficients and ultimately unduly influence the test of the hypothesis related to offense of conviction and prison violence. First, including all inmates in the stock population could influence results mainly due to differences in the institutional environment experienced by murderers versus those convicted of other offense types. Second, the outcome variable includes many offenses that do not result in actual violence and, as such, suffers from a conceptual over-inclusiveness that could bias empirical outcomes as well as the ability to draw inferences from the findings.

For these reasons, additional models were run using various operational measures of institutional misconduct for each of the three samples. The exponentiated homicide coefficients from each of these models are presented in

Table 7
Exponentiated Homicide Conviction Coefficients and *Z* Tests (in parentheses) From Negative Binomial Regression Models Predicting Disciplinary Misconduct Within Each Sample

Disciplinary Violations	Stock Population	Admissions Cohort	Close Custody Sample
Total violations	0.846 (–7.71)***	0.795 (–4.10)***	0.870 (–1.78)
Potentially violent	0.915 (–1.95)	0.809 (–1.84)	0.858 (–1.07)
Assaultive acts	0.965 (–0.44)	0.884 (–0.57)	0.875 (–0.50)
Assaults with injuries	1.161 (0.75)	1.835 (1.27)	0.888 (–0.15)
Assaults with serious injuries	0.682 (–1.13)	2.052 (0.79)	1.201 (0.14)

***$p < .001$.

Table 7. Four of the coefficients from the 15 models were positive, more than 1.000, although not statistically significant.[2] The only two statistically significant results were negative, suggesting that convicted murderers commit fewer total rule violations than do those convicted of other offenses. Although not significant, the coefficients greater than 1.000 resulted in models predicting more serious outcomes—assaults with some form of injury, particularly among the admissions cohort. Although this may be cause for speculation, the numbers underlying these results are small (see Table 5) and, on the whole, the results presented herein do not support the hypothesis that convicted murderers are responsible for a disproportionate share of violence in prison.

Discussion

This large-scale study examined the relationship of homicide conviction to prison misconduct and violence based on officially recorded disciplinary infractions in 2003. Three samples were used: all inmates (i.e., stock population) in the FDOC who were incarcerated for the entire 2003 calendar year (N = 51,527), including 9,586 inmates who had been convicted of homicide; a cohort of inmates entering FDOC in 2002 and remaining for the entire 2003 calendar year (N = 14,088), including 837 convicted of homicide; and a subsample of the above admissions cohort who were initially assigned to Close custody (N = 4,113), including 450 convicted of homicide.

In illuminating the question of whether homicide offenders are disproportionately involved in prison misconduct and violence, each of the three samples used in this study had strengths and limitations. The 2003 stock

population provided the largest sample for base rates as well as data regarding the comparative rates of misconduct by most serious offense of conviction in any given year. Such stock population data are useful to prison administrators in weighing the role of offense of conviction in midsentence internal classification decisions. The misconduct rates in the stock population, however, could have been affected by differences in length of prison tenure (and associated age) between homicide and other offenders. The 2002 admissions cohort provided a uniform sentence tenure but the misconduct rates among this sample, although equivalent, were potentially inflated by the early stage of their prison incarcerations. Both the stock population and admissions cohort also failed to reflect comparisons at the same level of custody. The 2002 admissions cohort that received an initial assignment to Close custody allowed for a comparison during a standard phase of incarceration and at the same level of custody. Rates of misconduct among inmates among this subsample, however, were potentially affected both by early incarceration adjustment problems and by classification decisions considering histories of institutional misconduct occurring prior to admission or during a prior prison incarceration.

Additional sample controls for super-maximum or administrative segregation confinement were not necessary for the investigative purposes of this study. The FDOC uses variables such as community violence history and sentence length for external security rather than internal security classifications. Accordingly, a conviction for homicide would not result in an assignment to super-maximum internal security.

Consistent with recommendations of prior research (Edens et al., 2005), prison misconduct was disaggregated on a continuum of specificity and seriousness. This study provided important base rate information for inmate misconduct that was disaggregated by severity. As expected, the rate of misconduct fell sharply as the assaultive seriousness of the act in question increased. This was most dramatically demonstrated in the rate of assault with serious injury, incidents that have a particularly high likelihood of being reported. Among the 2003 FDOC stock population, the rate of assault on other inmates resulting in injuries that required more than first aid treatment was 2.9 per 1,000 inmates, and the rate of such assaults on staff was only .8 per 1,000 inmates. This demonstration of the low frequency of serious assaults in Florida prisons is consistent with data from the Texas prison system, where the incidence of assaults resulting in serious injuries to inmates and staff in 2003 ($N = 152,602$) was 6.5 per 1,000 and .3 per 1,000, respectively (Texas Department of Criminal Justice, 2006). Such base rate data largely debunk popular misconceptions that “shankings” and other serious injury assaults in prison are routine.

A number of factors were variously associated with an increased or decreased incidence of violent prison misconduct among the FDOC stock population. Consistent with other research (see Cunningham et al., 2005; Cunningham & Reidy, 1998; Goetting & Howsen, 1986; Hirschi & Gottfredson, 1989; Wooldredge et al., 2001), age of the inmate was associated with monotonically decreasing rates of violent prison misconduct. Also consistent with prior research, prior prison commitment (see Cunningham et al., 2005) and gang membership (see Sorensen & Pilgrim, 2000) were associated with an increase in risk of violent misconduct. Women among the FDOC stock population were less likely than men to be involved in violent rule violations. This finding adds to a mixed literature on the role of sex in prison misconduct, consistent with Baskin, Sommers, and Steadman (1991) but inconsistent with Sorensen and Cunningham (in press). The finding that sentence length was inversely related to assaultive misconduct among the FDOC stock population is consistent with the findings of Flanagan (1980). Also consistent with other findings, the frequency of violent misconduct increased with the security level of inmate assignment.

Rates of misconduct among homicide offenders in this study were broadly consistent, regardless of whether the inmate had been convicted of first-degree murder, second-degree murder, or homicide of a lesser severity. This finding is at odds with recent comparative data (Sorensen & Cunningham, in press) regarding homicide offenders in the Texas Department of Criminal Justice (TDCJ), where the rate of institutional assault increased with the degree of the homicide conviction. Reconciling these discrepant findings is difficult. The definitions of homicide used by the two studies were not entirely equivalent, with the Texas offenders being classified by lesser homicide, murder, and capital murder (i.e., death penalty eligible offense). Different charging and plea bargaining practices between Florida and Texas also may be contributing factors as are contextual differences between the two prison systems. A comparative sample of inmates who had been convicted of nonhomicide offenses was not reported in the Texas study (i.e., Sorensen & Cunningham, in press) and thus it is unclear whether such a comparison also would have been discrepant from the current findings.

Most important to the issue of investigation in this study, a conviction for homicide was not associated with an increased rate of institutional violence as compared to nonhomicide offenders. This fundamental finding that incarcerated murderers, regardless of the level of their homicide conviction or the sample examined, did not constitute a disproportionate menace to institutional order, staff, or other inmates has important implications for

two arenas in the criminal justice system. First, utilization of a murder conviction as a primary or override factor for classification to maximum security cannot be justified under an internal security (i.e., prison violence risk proneness) rationale. That is not to say that assignment to a secure perimeter facility is not indicated under an external security or escape-motivation rationale. Rather, the current findings, in combination with prior research, suggest that conviction offense be deemphasized in projections of risk of institutional violence-proneness among inmates.

Second, a broad assertion of "future dangerousness" or "propensity for murder" during the sentencing phase of a capital murder trial based on a defendant's commission of murder in the community is not supported by these data. The current findings, in samples of compelling magnitude, reveal that a murder conviction is not predictive of a greater risk of prison violence relative to a conviction for some other offense.

Future large-scale research should test the primary finding of this study (i.e., homicide offenders are not a disproportionate source of prison misconduct) in other correctional systems. Several findings of this study also bear additional investigation, particularly given the results of other recent studies or an inconsistent literature. For example, future studies in correctional departments beyond Florida and Texas should investigate whether different degrees of homicide conviction are associated with different rates of institutional misconduct and assault. Furthermore, it remains unclear whether male and female homicide offenders have different rates or patterns of assaultive misconduct in prison or what accounts for the mixed literature regarding this issue. There is a particular need for studies that include comprehensive arrest record data so that the role of criminal history in the comparative institutional conduct of homicide offenders can be delineated. More detailed examinations of precipitating events, the backgrounds of the perpetrators and victims in prison assaults, and the extent of resulting harm are warranted. The use of other statistical procedures, such as those resulting in classification trees, will allow researchers to further clarify the nature of the relationship between homicide and prison violence vis-à-vis other relevant factors.

Informed correctional procedures, public policy, judicial determinations, and forensic practice depend on large-scale data. We are hopeful that the present study will be an exemplar for future research in analyzing substantial correctional databases, using a variety of operational definitions of prison misconduct, and controlling for the influence of numerous other factors in seeking the predictors of prison violence.

Notes

1. Although they are technically categorized as maximum security, 333 death row inmates are included in the reference category.

2. The models include all of the predictor variables described in Table 1 except those held constant by design. Logistic regression coefficients also were computed for each of the models reported herein. Differences were slight, although the negative homicide coefficient from the original model predicting potential violence reported in Table 6, and reported in column 1, row 2 of Table 7, reached the .05 level of significance.

References

Alexander, J., & Austin, J. (1992). *Handbook for evaluating objective prison classification systems*. San Francisco: National Council on Crime and Delinquency. Sponsored by U.S. Department of Justice.

Barefoot v. Estelle, 463 U.S. 880 (1983).

Baskin, D. H., Sommers, I., & Steadman, H. J. (1991). Assessing the impact of psychiatric impairment on prison violence. *Journal of Criminal Justice*, *19*, 271-280.

Cameron, A. C., & Trivedi, P. K. (1998). *Regression analysis of count data*. Cambridge, UK: Cambridge University Press.

Cunningham, M. D. (2006). Dangerousness and death: A nexus in search of science and reason. *American Psychologist*, *61*, 828-839.

Cunningham, M. D., & Reidy, T. J. (1998). Integrating base rate data in violence risk assessments at capital sentencing. *Behavioral Sciences and the Law*, *16*, 71-95.

Cunningham, M. D., Reidy, T. J., & Sorensen, J. R. (2005). Is death row obsolete? A decade of mainstreaming death-sentenced inmates in Missouri. *Behavioral Sciences and the Law*, *23*, 307-320.

Cunningham, M. D., & Sorensen, J. R. (2006). Nothing to lose? A comparative examination of prison misconduct rates among life-without-parole and other long-term high security inmates. *Criminal Justice and Behavior*, *33*, 683-705.

Cunningham, M. D., Sorensen, J. R., & Reidy, T. J. (2005). An actuarial model for assessment of prison violence risk among maximum security inmates. *Assessment*, *12*, 40-49.

Davis, D. L. (1996, August). An assessment of prisoner assaults on corrections officers. *Corrections Compendium*, pp. 6-10.

Delisi, M., Berg, M. T., & Hochstetler, A. (2004). Gang members, career criminals and prison violence: Further specification of the importation model of inmate behavior. *Criminal Justice Studies*, *17*, 369-383.

Delisi, M., & Munoz, E. A. (2003). Future dangerousness revisited. *Criminal Justice Policy Review*, *14*, 287-305.

Edens, J. F., Buffington-Vollum, J. K., Keilen, A., Roskamp, P., & Anthony, C. (2005). Predictions of future dangerousness in capital murder trials: Is it time to "disinvent the wheel." *Law and Human Behavior*, *29*, 55-86.

Ex parte LaRoyce Lathair Smith, Texas Court of Criminal Appeals, AP 74,228 (2006, March 1).

Flanagan, T. J. (1980). Time served and institutional misconduct: Patterns of involvement in disciplinary infractions among long-term and short-term inmates. *Journal of Criminal Justice*, *8*, 357-367.

Goetting, A., & Howsen, R. M. (1986). Correlates of prisoner misconduct. *Journal of Quantitative Criminology*, *3*, 49-65.

Greenberg, D. F. (1991). Modeling criminal careers. *Criminology*, *29*, 17-46.

Harer, M. D., & Langan, N. P. (2001). Gender differences in predictors of prison violence: Assessing the predictive validity of a risk classification system. *Crime & Delinquency*, *47*, 513-536.

Hirschi, T., & Gottfredson, M. (1989). Age and the explanation of crime. *American Journal of Sociology*, *89*, 552-584.

Jurek v. Texas, 428 U.S. 153 (1976).

Marquart, J. W., Ekland-Olson, S., & Sorensen, J. R. (1989). Gazing into the crystal ball: Can jurors accurately predict dangerousness in capital cases? *Law and Society Review*, *23*, 449-468.

Nagin, D. S., & Land, K. C. (1993). Age, criminal careers, and population heterogeneity: Specification and estimation of a nonparametric, mixed Poisson model. *Criminology*, *31*, 327-362.

National Institute of Corrections. (1992). *Jail classification system development: A review of the literature*, *revised edition*. U.S. Department of Justice.

Osgood, D. W. (2000). Poisson-based regression analysis of aggregate crime rates. *Journal of Quantitative Criminology*, *16*, 21-43.

Porporino, F. J. (1986). Managing violent individuals in correctional settings. *Journal of Interpersonal Violence*, *1*, 213-237.

Sorensen, J. R., & Cunningham, M. D. (in press). Operationalizing risk: The influence of measurement choice on the prevalence and correlates of violence among incarcerated murderers. *Journal of Criminal Justice*.

Sorensen, J. R., & Pilgrim, R. L. (2000). An actuarial risk assessment of violence posed by capital murder defendants. *Journal of Criminal Law and Criminology*, *90*, 1251-1270.

Texas Code Criminal Procedure. Article 37.071 (b), Supp. (1975-1976).

Texas Department of Criminal Justice. (2006, June). *Emergency Action Center select statistics: May 2006. Executive Services Department*. Huntsville, TX: Author.

Wooldredge, J. D. (1994). Inmate crime and victimization in a Southwestern correctional facility. *Journal of Criminal Justice*, *22*, 367-381.

Wooldredge, J., Griffin, T., & Pratt, T. (2001). Considering hierarchical models for research on inmate behavior: Predicting misconduct with multilevel data. *Justice Quarterly*, *18*, 203-231.

Jon Sorensen is professor of justice studies at Prairie View A&M University. He has published numerous articles on prison violence and capital punishment and is coauthor of *Lethal Injection: Capital Punishment in Texas During the Modern Era* (2006, University of Texas Press).

Mark D. Cunningham is a forensic psychologist in Dallas. He was recognized with the 2006 American Psychological Association Award for Distinguished Contributions to Research in Public Policy. His research focuses on capital offenders and rates and correlates of prison violence. Recent work has appeared in or is pending publication in the *American Psychologist*, *Law and Human Behavior*, *Journal of Criminal Justice*, *Criminal Justice and Behavior*, *The Prison Journal*, and *Assessment*.