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Abstract

Despite the growth in and debate about super-maximum security housing, there exist few studies of inmates' experiences or placement in supermax incarceration. The lack of research on this new type of confinement assumes particular salience given criticisms that such confinement is excessive, that placement in it is arbitrary, and that it may have adverse effects on reentry into society. The goal of this article was to inform efforts to understand how supermax housing is used and to contribute to policy debates about this housing. To this end, it used data from the Florida Department of Corrections to investigate several dimensions of the supermax experience. These included the frequency of placement into supermax confinement, the duration of time spent in such confinement, and the timing of it relative to reentry back into society. In addition, the article explored factors, especially behavioral indicators, that may contribute to decisions to place inmates in supermaxes. The article concludes by discussing the study's findings and implications for research and policy.

KEYWORDS: supermax housing placement reentry

Introduction

Super-maximum security housing has emerged as “one of the most dramatic features of the great American experiment with mass incarceration during the last quarter of the 20th century” (R. D. King, 1999, p. 163). This special type of housing, which consists of twenty-three hour-per-day, single-cell incarceration for extended periods of time and with few if any privileges or opportunities for services or visitation, originated with the solitary confinement model employed by the Eastern State Penitentiary in the early 1800s and in the Federal Alcatraz prison that opened in 1934 (Kurki & Morris, 2001; Morris & Rothman, 1995). These two instances aside, for the bulk of the United States’ history, solitary confinement has not been used, save on a short-term, temporary basis (Toch, 2003). As Riveland (1999) has emphasized, prisons have rarely “operated on a total lockdown basis as normal routine. Even prisons designated as maximum security have generally allowed movement, inmate interaction, congregate programs, and work opportunities” (p. 5). By contrast, as of 2009, all but a small handful of states have followed the federal government in developing supermax housing designed to house what frequently are referred to as the “worst of the worst” inmates (Mears, 2008; Ward & Werlich, 2003).

Although supermax housing is now widespread, there exist few empirical studies of even the most basic dimensions of such housing, including: the frequency and duration of such confinement; the extent to which supermax inmates are released directly into society or proximate in time to their reentry; and the factors that lead to placement in it (Briggs, Sundt, & Castellano, 2003; Cloyes, Lovell, Allen, & Rhodes, 2006; R. D. King, 2005; Kurki & Morris, 2001; Lovell, Johnson, & Cain, 2007; Mears & Watson, 2006; Pizarro & Narag, 2008). The absence of research is notable given the considerable debates about supermax housing. Concerns have been leveled that such housing is costly, inhumane, and unconstitutional, that placement in it is arbitrary, that it is ineffective, and that it may hinder successful transitions back to society (Briggs et al., 2003; Collins, 2004; Haney, 2003; K. King, Steiner, & Breach, 2008; Lovell et al., 2007; Mears & Bales, 2009; Mears & Watson, 2006; Pizarro & Stenius, 2004). The potentially

harmful effects on reentry constitute an especially important cause for concern in a context where two-thirds or more of inmates will be rearrested within three years of release (Langan & Levin, 2002) and where reentry has emerged as a prominent policy focus nationally (Petersilia, 2003; Sabol, Minton, & Harrison, 2007; Travis & Visher, 2005).

The goal of this article is to contribute to the emerging body of empirical research on supermax housing and to debates about how such housing is used. Drawing on data from the Florida Department of Corrections, the article examines the frequency and duration of supermax confinement, the timing of supermax confinement relative to reentry back into society, and factors that contribute to placement in supermax housing. The conclusion discusses the implications of the findings for research and policy. Although the article does not investigate the impacts of supermax housing on reentry outcomes (e.g., recidivism, employment, housing), it discusses the implications of the findings for reentry studies and for reentry policy debates.

Background

The emergence of supermax incarceration

The past three decades have been witness to a spectrum of increasingly “get tough” responses to crime (Garland, 2001; Steen & Bandy, 2007; Western, 2006). Increased incarceration perhaps constitutes the most conspicuous example of this development. Between 1980 and 2006, the United States prison population almost quadrupled, rising from 319,598 to 1,492,973 inmates (Bureau of Justice Statistics, 2008). Almost as notable, however, was the emergence of supermax housing—whereas no states had such housing in 1980, by 2004 there were forty-four states that held, by conservative estimates, 25,000 inmates in supermax confinement (Briggs et al., 2003; R. D. King, 1999; Mears, 2008; National Institute of Corrections, 1997).

Supermax housing represents what Kurki and Morris (2001) have described as a “new form of double incapacitation: not only to isolate prisoners from the rest of society but to isolate the worst of the worst of them from other prisoners and the staff” (p. 391). The essential

characteristics of supermax housing, and what differentiates it from traditional maximum security housing or temporary administrative segregation, include twenty to twenty-four hour-per-day single-cell confinement with limited to no programming, services, or visitation for an indefinite period of time, in a setting that relies on substantially more intensive security measures than used in other facilities (Irwin, 2005; R. D. King, 2005; Mears & Castro, 2006; Naday, Freilich, & Mellow, 2008; Riveland, 1999). It is these qualitatively more restrictive measures that make supermax housing a symbol of American “get tough” criminal justice policies and the belief that the causes of offending and inmate behavior lie with individuals rather than community or organizational conditions (Adams, 1992; Bottoms, 1999; Caplow & Simon, 1999; K. King et al., 2008; R. D. King, 1999; Kubrin & Stewart, 2006; Pizarro, Stenius, & Pratt, 2006; Sampson, Morenoff, & Gannon-Rowley, 2002; Sparks, Bottoms, & Hay, 1996; Sundt, Castellano, & Briggs, 2008).

Research gaps on supermax incarceration

Although substantial attention has been given to studying mass incarceration, and its attendant consequence (Western, 2006)—increased numbers of prisoners experiencing reentry back into society (Sabol et al., 2007; Travis & Visher, 2005)—few empirical studies of supermax housing have been conducted. Indeed, that observation constitutes a singularly unifying theme among scholarly accounts of supermaxes. Recently, for example, O’Keefe (2008) observed that “there is a void of even basic statistics on supermax prisons” (p. 129). Similarly, Pizarro and Narag (2008) remarked, “there is still a dearth in knowledge of the characteristics of inmates placed in [supermaxes and in] the covariates that influence the decision to place an inmate in a supermax” (p. 27). Lovell et al. (2007), too, have noted, “It is remarkable how little systematic research has been conducted on who gets assigned to supermax” (p. 635).

The limited research to date is not restricted to questions about factors that predict placement into supermax housing. It also extends to questions about whether such housing improves or harms prison system operations or has beneficial or harmful short-term or long-term

effects on inmates exposed to it (Briggs et al., 2003; Haney, 2003; K. King et al., 2008; R. D. King, 1999, 2005; Kurki & Morris, 2001; Mears & Castro, 2006; Mears & Watson, 2006; Pizarro & Stenius, 2004; Pizarro et al., 2006; Rhodes, 2004; Sundt et al., 2008; Ward & Werlich, 2003). Almost three decades after the emergence of supermax prisons, empirical evidence for or against them remains scant. A number of scholars have made compelling arguments that supermax housing causes mental illness (Haney, 2003; R. D. King, 2005; Kurki & Morris, 2001; Rhodes, 2004; cf. Ward & Werlich, 2003). As Pizarro and Narag (2008) emphasized, however, “most, if not all, of these studies . . . are methodologically weak” (p. 31; see also Cloyes et al., 2006, pp. 777-778).

Studies by Briggs et al. (2003) and Sundt et al. (2008) of a small handful of states suggest that supermax housing either has no effect or may worsen systemwide prison disorder; but they also found that in one state, Illinois, fewer assaults on staff occurred after the opening of a supermax. The authors emphasized, however, that the research methodologies and data suffered from several shortcomings. On a related front, Ward and Werlich (2003) studied inmates released from two Federal supermax facilities, Alcatraz and Marion, to other Federal prisons and suggested that supermax housing did not increase violent behavior. As Roy King (2005) noted, however, the study used return-to-supermax housing as the primary measure of this outcome and did not rely on any comparison groups. One of the more rigorous studies on supermax housing was recently conducted by Lovell et al. (2007), who found that Washington State’s supermax housing contributed to increased recidivism if inmates were directly released from such housing back into society. Mears and Bales (2009) found no such proximity effect; however, their study found that Florida inmates who experienced supermax incarceration were more likely to recidivate for a violent offense.

Reviews of the literature indicate that supermax housing is supposed to be used by administrators for the “worst of the worst” inmates—that is, individuals deemed to be so violent or disruptive that they cannot be managed in traditional maximum security housing (Mears, 2008; Pizarro & Narag, 2008). Even so, little systematic evidence has been presented about the

factors that lead some inmates to be placed in supermax confinement and others not (Kurki & Morris, 2001; R. D. King, 1999, 2005; Rhodes, 2004). A prominent criticism of supermax incarceration is that placement decisions are arbitrary (Mears & Watson, 2006; Riveland, 1999). Several studies described some inmates already in supermax housing (e.g., Cloyes et al., 2006; Lovell, Cloyes, Allen, & Rhodes, 2000; Lovell et al., 2007; O'Keefe, 2008) and found that they appeared to have histories of infractions and violent behavior that are greater than those of general population inmates. They left open, however, the question of whether the characteristics of the inmates, different types of infractions, as well as behavioral histories, are linked to administrator's decisions to place inmates in such housing, and they did not adjust for differences in the lengths of supermax inmates' and general populations inmates' prison terms, respectively.

Concerns about supermax incarceration

Set against a context of limited research on supermax housing is a range of concerns that have been raised about such housing. It is, for example, costly (Lawrence & Mears, 2004). Supermax housing has been a lightning rod for controversy, with critics arguing that the conditions of confinement are inhumane and unconstitutional; indeed, many lawsuits have been filed on those grounds (Collins, 2004; Pizarro & Narag, 2008). In addition, supermax housing may not achieve the goals for which it has been designed and may, as Lovell et al.'s (2007) recent study suggested, increase the recidivism of inmates exposed to it. More generally, it may adversely influence a range of reentry outcomes among inmates placed in supermax housing, including not only recidivism but also housing, employment, drug use, mental health, and reintegration back into families, friendship networks, and communities, all of which constitute critical dimensions of the reentry experience (Mears & Bales, 2009; Petersilia, 2003; Pizarro & Narag, 2008; Thompson, 2008; Visher & Travis, 2003). Indeed, by its very nature, supermax incarceration impedes efforts to prepare inmates for reentry, as it largely precludes the provision of services, programs, and treatment to supermax inmates, and appears to inhibit the social

functioning of such inmates (Lovell et al., 2007; Rhodes, 2004).

With these observations in mind, and heeding the calls of recent supermax research and reviews (e.g., Cloyes et al., 2006; Kurki & Morris, 2001; Mears, 2008; O’Keefe, 2008; Pizarro & Narag, 2008; Ward & Werlich, 2003), the goal of this exploratory study was to contribute to scholarship on how supermax housing is used. To this end, it provides what the authors believed to be the first study both to quantify several critical dimensions of the supermax experience, including the frequency of placement into supermax confinement, the duration of such confinement, and the timing of supermax incarceration prior to reentry, and to examine factors, including demographic characteristics, prior record, and measures of in-prison behavior, that may contribute to placement in supermax housing. The focus on the frequency of placement was aimed at understanding whether supermax confinement typically is a one-time event or whether inmates are placed in it repeatedly, while the focus on duration was aimed at understanding whether, as some critics hold, supermax confinement typically occurs for lengthy periods of time. The reentry focus stems from Lovell et al.’s (2007) and other’s (e.g., Haney, 2002) observations that supermax incarceration in the months proximate to release into society may produce more harm than if it occurs more temporally distal from release. A relevant question, then, is whether in fact supermax incarceration occurs immediately prior to reentry back into society.

Data and methods

Data for this study came from the Florida Department of Corrections (FDOC) and were advantageous for several reasons. First, Florida has used supermax housing for close to two decades (R. D. King, 1999; Naday et al., 2008). The FDOC does not officially designate the housing as “supermax” but rather terms it “close management 1” (Florida Department of Corrections, 2008). Nonetheless, the housing comports with prominent definitions of supermax incarceration (K. King et al., 2008; Mears & Castro, 2006; National Institute of Corrections, 1997; Riveland, 1999), including twenty-three hour-per-day single-cell confinement in highly

restrictive settings, with limited to no programming, services, or visitation. Second, Florida has a relatively large number of inmates who have experienced supermax confinement, in turn facilitating analyses aimed at identifying factors that predict placement. By contrast, many states place far fewer inmates in supermax housing (R. D. King, 1999; Lovell et al., 2007; Mears & Watson, 2006; National Institute of Corrections, 1997). Third, the FDOC data include not only demographic and criminal history measures but also information about transitions to supermax confinement, lengths of stay, and, perhaps most important, their in-prison behavior. This latter information is especially relevant given that supermax housing has been described as being developed primarily to manage inmates who commit violent and disruptive behavior (Briggs et al., 2003; Bruton, 2004; Mears & Watson, 2006; Pizarro & Narag, 2008; Riveland, 1999; Stickrath & Bucholtz, 2003).

The data file used here builds on one created by the FDOC (2003), which contains data on all inmates released from Florida prisons between July 1996 and June 2001. Although it contains information about the demographic characteristics and criminal history of inmates, there is limited information about movements from one facility to another. For that reason, the data were supplemented with by a data file with additional variables from the Department's Offender-Based Information System (OBIS). These data contain detailed information on internal movements in the prison system, including transitions into and out of supermax housing. The combined data file consists of 54,637 released inmates who served at least twelve months in prison. The file is a person-level file that includes only the first release an inmate experienced in the study window. (Fewer than 5 percent of the original data file included inmates who had been released from prison two or more times during the study period.) Of the released inmates, 1,199, or 2.2 percent of the total sample, experienced at least one thirty-day-or-more period of confinement in supermax housing. The thirty-day window was used to distinguish supermax inmates from those who otherwise would be viewed as experiencing the type of brief lockdown status more typically associated with temporary administrative segregation (Lovell et al., 2007; Riveland, 1999). Below, the measures used in the study are discussed. Table 1 provides the

descriptive statistics for these measures, with separate breakouts for non-supermax and supermax inmates, respectively.

Insert Table 1 about here

Descriptive measures of supermax incarceration

The analyses begin with a presentation of descriptive information about the frequency and duration of supermax confinement as well as its timing relative to reentry back into society. The frequency measure consists of the number of times inmates experienced thirty-day-or-more periods of supermax incarceration. Duration is measured in two ways. The first is the number of months inmates were confined in supermax housing during their entire prison stay, while the second is the percent of the each inmate's entire incarceration period that was spent in supermax housing. The time-to-reentry measure is calculated as the last supermax exposure an inmate experienced that occurred in the month closest to the date of release from prison back into society.

Dependent and independent variables

The dependent variable used in the predictive logistic regression analyses is the first instance in which an inmate experienced thirty days or more of supermax incarceration. As noted above and as shown in Table 1, 2.2 percent of the released Florida inmates experienced supermax confinement at some time during their period of incarceration (N=1,199). That percentage approximates the 2 percent national average identified by Roy King (1999) in his revision of the National Institute of Corrections' (1997) census of supermax housing.

Several variables are used to estimate the likelihood of placement into supermax housing. Three demographic measures include age at release, measured in years, race (1=non-Hispanic Black, 0=other), and ethnicity (1=Hispanic, 0=other). Too few females (N=9) were in supermax housing during the study period to support statistical analyses and so were not included in the

models. The age, race, and ethnicity variables were obtained from the FDOC's OBIS database. Following an approach used in prior studies (e.g., Bontrager, Bales, & Chiricos, 2005), the authors of this study refined the FDOC's ethnicity measure to ensure that inmates with Hispanic surnames, as designated by the U.S. Census (Word & Perkins, 1996), were classified as Hispanic.

Given that departments of corrections typically claim that supermax housing is to be used to house the most violent offenders (K. King et al., 2008; R. D. King, 1999; Mears & Watson, 2006; Riveland, 1999; Toch, 2003), a measure of whether an inmate's instant, or current, offense was violent was included. If any of the offenses that resulted in an inmate's prison commitment were violent (including murder, sexual battery, robbery, and aggravated battery), this measure was coded as "1=violent, 0=other." This measure may not directly capture violent behavior that occurs in prison (see the discussion below). In addition, it may not capture the most serious violent behavior that occurs there. It does serve, however, to capture a critical offender background characteristic that may be relevant to prison officials in determining whether to place inmates in supermax incarceration initially or at some later point in time.

Three measures of prior criminal record are also included in the analyses since prior record may influence inmates' behaviors as well as perceptions about or supervision of them. The first is the number of prior recidivism events, defined as the number of times an inmate was previously imprisoned in Florida and then re-imprisoned for a new felony conviction. The second is the total number of prior felony crimes that resulted in conviction. The third is the number of times inmates were convicted of escaping from a local jail or prison.

Supermax incarceration has been described by departments of corrections as resulting primarily, if not exclusively, from commission of violent or disruptive behavior while in prison (Briggs et al., 2003; Bruton, 2004; K. King et al., 2008; R. D. King, 1999; National Institute of Corrections, 1997; Riveland, 1999). To test this claim, four measures of in-prison behavior committed during inmates' current terms of incarceration were created. The first is the number of disciplinary infractions resulting from violent acts, such as fighting and assaults. The second

is the number of disciplinary infractions received as a result of defiant behavior, such as disobeying an order, refusing to work, or refusing to comply with an order. The third is the number of disciplinary infractions resulting from threatening behavior related to the supervision and control of inmates, including such actions as unauthorized absences or being in an unauthorized area. The last is the number of disciplinary infractions for contraband related behavior, such as possession of contraband or unauthorized use of drugs. Table 1 depicts the means for the total number of each type of infraction. In the analyses, however, only infractions that accumulated up to the first instance in which an inmate experienced a thirty-day-or-more period of supermax confinement are used.

Finally, a control for the total time (in years) inmates served in prison prior to release was included. In addition, the analyses incorporated a measure of the year in which inmates were released from prison. Specifically, dummy variables for each of the years from 1996 to 2001 were included, with 1995 excluded as the reference category. The year of release was used to control for period effects, including possible changes in the use of supermax confinement.

Analytic strategy

The analyses begin first by presenting descriptive analyses that focus on three dimensions of supermax housing that have also gone largely unexamined but that nonetheless are central to debates about the uses and merits of such housing: the frequency, duration, and proximity-to-reentry of supermax confinement. The focus then turns to logistic regression analyses aimed at identifying the factors that predict placement into supermax housing. Given the range of independent variables included in the models, and the similarity among some of them, multicollinearity among the predictors was examined. The tolerance statistics revealed no serious multicollinearity. The year of release had the lowest tolerance levels; none, however, were below .31, while all other variables had levels of .47 or higher. Results with the year variables omitted did not alter the statistical or substantive significance of the other predictors.

Findings

Frequency of placement into supermax housing

Most accounts of supermax housing assume that placement into it is a one-time event. It may be, however, that placements occur more frequently. Indeed, as Table 1 shows, inmates in Florida who experience any supermax housing typically are placed in it an average of 3.7 times (standard deviation=2.8), with the median consisting of 3.0 placements. The distribution of placements is skewed, with some—but not many—inmates experiencing up to 10 supermax placements. Figure 1 explores placements in more detail by depicting the frequency with which inmates experience multiple episodes of thirty-day-or-more periods of supermax confinement. As inspection of the figure shows, only 25 percent of supermax inmates experienced just one such episode. Almost one-fifth (19 percent) experienced two episodes, 15 percent experienced three, 11 percent experienced four, and 7 percent experienced five, with the remaining 23 percent experiencing six or more terms of confinement in supermax housing. Viewed somewhat differently, 75 percent of supermax inmates experienced two or more placements and 55 percent experienced three or more such placements. Placement in supermax housing thus is not typically a one-time event for inmates. Rather, among inmates who have ever been in supermax housing, placement in such confinement is something they experience repeatedly.

Insert Figure 1 about here

Duration of supermax confinement

Next, the analyses turn to the question of how long inmates are placed in supermax confinement. Duration is examined in two ways: first, the total months of supermax confinement inmates experience, and, second, the duration of supermax confinement as a percentage of supermax inmates' total served time prior to release into society. For the first duration analysis, Table 1 provides an initial point of departure. As can be seen in the table, the average length of stay in supermax confinement is 13.7 months (standard deviation=11.3).

Duration of confinement among supermax inmates is, however, skewed. For example, the median number of months of supermax confinement is 9.0, with a low of one month and a maximum of thirty-six-or-more months.

Figure 2 provides a more detailed perspective, showing the monthly duration totals. Inspection of the figure suggests support for those who argue that supermax confinement typically is short-term in nature, but it also supports those who argue that it is long-term. Observe, for example, that just over 8 percent of inmates experience only two months of supermax incarceration and that 36 percent of inmates spent six months or less in supermax incarceration. Such figures lend credence to the notion that supermax incarceration is used for what might be termed a relatively short calming-down period of time, one that nonetheless is more lengthy than what one would typically associate with the use of traditional segregation cells (Riveland, 1999). At the same time, 41 percent of supermax inmates spent one year or more in supermax housing, 21 percent spent two years or more in it, and 13 percent spent three years or more in it, suggesting that, for some inmates, supermax confinement constitutes a long-term experience. In short, although one-third of inmates experience relatively short stays in supermax incarceration, others experience considerably longer stays.

Insert Figure 2 about here

It might be argued that exposure to supermax housing, even if for more than one year, nonetheless constitutes a trivial percentage of most inmates' completed terms of incarceration. Figure 3 addresses this possibility by showing the percent of supermax inmates' total prison term that was served in supermax confinement. For 44 percent of such inmates, supermax confinement constituted a relatively small fraction—14 percent or less—of their total prison term. Even so, substantial percentages of supermax inmates spent far greater proportions of their prison term in supermax housing. For example, one-third (33 percent) of inmates spent 30 percent or more of their total prison term in such housing, and 14 percent spent half or more of their total prison term in it. Thus, it appears that whether measured in absolute terms, as in

Figure 2, or in relative terms, as in Figure 3, considerable variation exists in the duration of supermax incarceration experienced by inmates. This variation, in turn, raises questions about whether the intensity of such incarceration, as measured by duration, affects the direction (positive or negative) or magnitude of in-prison or post-release outcomes.

Insert Figure 3 about here

Proximity of supermax confinement to reentry into society

Finally, a particular concern raised in the literature (e.g., Haney, 2003; Lovell et al., 2007) is whether inmates experience supermax incarceration in the months immediately prior to release, since any such incarceration might inhibit or reduce the likelihood of a successful transition, or reentry, back into society. Table 1 establishes that, on average, inmates are released from supermax incarceration 11.7 months (standard deviation=9.1) prior to their return to society. The median is 9.0 months, however, with some inmates released from supermax within one month of their transition into the free world and others released two years or more prior to this transition.

Figure 4 explores this issue in more detail by presenting the percentages of inmates released from supermax exposure in each of the twenty-four months immediately preceding reentry into society. As can be seen, 12 percent of supermax inmates experienced supermax incarceration within one month of reentry, 28 percent experienced it within one to three months of reentry, 44 percent experienced it within one to six months of reentry, and 55 percent experienced it within one year of reentry. The remaining 45 percent of supermax inmates experienced their last supermax incarceration one or more years prior to reentry, and 26 percent experienced it two or more years prior to reentry. In short, many inmates experience supermax incarceration proximate to their reentry into society but many do not. For those that do, the concern is that the proximity of the supermax experience to an inmate's transition to society may increase their likelihood of recidivating (see Lovell et al., 2007; cf. Mears & Bales, 2009).

Insert Figure 4 about here

Predicting placement into supermax housing

The focus turns now to factors that predict placement into supermax housing. The analyses begin first with a comparison of the characteristics of supermax and non-supermax inmates. As can be seen in Table 1, the two groups differ along many dimensions. For example, supermax inmates tended to be younger than non-supermax inmates (twenty-eight years old versus thirty-two years old at release, respectively) and were more likely to be Black (75 percent versus 58 percent). The offense for which they were serving time was more likely to be a violent offense (55 percent versus 41 percent) but, on average, they had accumulated fewer total prior convictions (8.0 versus 8.5). As one would expect, however, they had accumulated more prior convictions for violent offending (2.2 versus 1.6) and for escapes (.11 versus .07). Of particular relevance for this study is the fact that supermax inmates also were more likely to have engaged in more in-prison misconduct of different types, including violence (2.7 versus .7), defiance (7.6 versus 1.4), and threats (1.4 versus .4), as well as contraband possession or distribution (1.2 versus .4). In addition, the average completed sentence term of supermax inmates upon release (5.8 years) was substantially greater than that of non-supermax inmates (3.5 years). In short, across almost every dimension, supermax inmates differed. Except for the greater percentage of Blacks in supermax housing, the differences perhaps should not be surprising given that supermax housing is typically described by corrections officials as existing to incarcerate the most violent and disruptive inmates.

Insert Table 2 about here

Next, logistic regression analyses are presented to identify factors that predict supermax placement. The goal here is to examine the extent to which each of a range of factors is

statistically significant and to assess the contribution of in-prison behavior to the likelihood of being placed in supermax housing. Beginning with model 1 in Table 2, it can be seen that several factors predict placement. Older inmates were less likely to be placed in supermax housing, while Black inmates were considerably more likely to be placed in it. Specifically, the odds of Blacks experiencing supermax incarceration were 56 percent greater than the odds of non-Blacks experiencing it. No statistically significant effect of ethnicity surfaced.

Somewhat surprisingly, having a violent current, or instant, offense was negatively associated with supermax placement. One possible explanation for this finding is that such offenders may be classified into higher-custody housing and thus have fewer opportunities to commit the types of infractions that may lead to placement in supermax housing. It still may be the case that maximum security facilities cannot manage the most violent and disruptive inmates and so send such inmates to supermax confinement. Inmates with a violent past, however, may be afforded less opportunity to act out precisely because of the greater security measures, such as placement in maximum security housing, taken with them when they enter the prison system.

Somewhat surprisingly, too, total prior convictions was not associated with supermax placement. There was, however, a relatively strong and statistically significant positive association between placement in supermax housing and prior convictions for violent offending and for escapes, respectively. Not least, inmates who had served more time in prison were substantially more likely to be placed in supermax housing.

The question arises as to whether these different factors serve as proxies for behaviors inmates commit while in prison. Model 2 addresses this question by including measures of four distinct types of behavior. Several notable findings emerge. First, there is no longer any effect of race, suggesting that any race-based differences in supermax confinement stem from differences in rates of misconduct. The elimination of the race effect parallels findings from sentencing studies that find no race effect, or a reduced effect, after controlling for such factors as prior record (Chiricos & Crawford, 1995; Kleck, 1981; Mitchell, 2005; Sampson & Lauritsen, 1997; Spohn, 2000; Wooldredge, 2007) and, in particular, prior violent behavior (Felson &

Armstrong, 2008). It also accords with scholarship that has identified race-based differences in prison misconduct (e.g., Berg & DeLisi, 2006; Harer & Steffensmeier, 1996; Lahm, 2008; Steiner & Wooldredge, 2008; Wooldredge, Griffin, & Pratt, 2001).

Second, after introducing the behavioral indicators, several other baseline model measures remained statistically significant, including age, violent current offense, prior convictions for violent crimes, prior convictions for escapes, and the number of years in prison. Third, three of the behavioral measures are statistically significant, suggesting that diverse types of misconduct contribute to placement in supermax housing. Fourth, among the types of misconduct contributing to supermax confinement, violent behavior emerged as the strongest predictor. Specifically, a one-unit increase in violent behavior resulted in a 164 percent increase in the odds of being placed in supermax housing. Defiance was also positively associated with supermax placement, but the effect was smaller. There was no effect of threatening behavior. By contrast, involvement in contraband reduced the likelihood of placement in supermax confinement, which may reflect the possibility that inmates committed to involvement in contraband activities are less likely to be committed to the kinds of behaviors that lead to such confinement. Fifth, collectively, the behavioral measures—violence, in particular—substantially improved model fit, with the Nagelkerke R-square increasing from .18 in a model without these measures to .36 when they were included. (Ancillary analyses of factors predicting the frequency of supermax placement, duration of placement, and proximity of placement to reentry produced a similar pattern of results. The results are available upon request.)

Conclusion

Summary

Supermax housing has emerged as one of the most prominent developments in American prison systems over the past twenty-five years, with almost every state in the country now having some form of such housing. Even so, and despite concerns that inmates are held for excessive amounts of time in supermax confinement and that assignment to this housing is arbitrary,

supermaxes operate more or less as “black boxes.” Little is known, for example, about their uses, including the number or duration of supermax stays or the factors that predict placement. Such research gaps are problematic because they undermine efforts to understand and monitor the contours of the supermax experience and to identify whether, in fact, in-prison behavior contributes to placement in supermax incarceration. At the same time, they undermine efforts to engage in informed debates about the merits of this contentious form of prison housing. For example, policy discussions frequently assume that inmates experience supermax confinement for lengthy periods (Haney, 2003; Kurki & Morris, 2001; Mears & Watson, 2006), but that assumption may not be true. Similarly, scholars have speculated that supermax incarceration may increase recidivism (Mears & Bales, 2009) and may exert a greater adverse effect on reentry outcomes if inmates have no time to experience a “cooling off” period in general population facilities (Lovell et al., 2007). That concern only has merit, however, if many supermax inmates are released more or less directly from supermax confinement to society.

With the goal of helping to unpack the “black box” of supermax incarceration, this study used Florida Department of Corrections data to explore several dimensions of the supermax experience: the frequency of placement in supermax housing; the duration of exposure to it; the timing of the experience relative to reentry into society; and the factors that predict placement into such housing. Briefly, the study found that supermax inmates typically experienced multiple placements in supermax housing. For example, 55 percent of supermax inmates experienced three or more episodes of supermax confinement. The study also found that, some inmates spent but a few months, or a small percentage, of their total prison term in such housing, while others spent much more time in it. To illustrate, for 44 percent of all supermax inmates, supermax confinement constituted less than 15 percent of their total term of incarceration; even so, for 14 percent of supermax inmates, supermax confinement constituted over half of their total term of incarceration. The analyses also revealed that 28 percent of inmates were released from supermax housing within three months of their return to society and 44 percent were released from it within six months of their return.

When the focus turned to predicting supermax placement, the study found that Blacks and younger inmates were disproportionately likely to experience supermax incarceration. One argument is that these groups commit more of the behaviors that contribute to supermax incarceration; some research finds, for example, that younger offenders may be more disruptive than older inmates (Adams, 1992). In support of this view, there was no racial difference in the likelihood of placement in supermax housing after controlling for in-prison behavior; similarly, the effect of age was substantially reduced after controlling for such behavior. In addition, the study found that a regression model including the behavioral measures accounted for over one-third (36 percent) of the variation in decisions to place inmates in supermax housing; inmates who committed violent acts in prison were especially likely to be sent to this type of housing. The study also found that inmates with more prior violent or escape convictions, as well as inmates who served more time in prison, were more likely to be placed in supermax confinement. That may reflect the possibility that inmates with such histories are less likely to adjust well to prison life and are more likely to act out and be disruptive (Adams, 1992; Bottoms, 1999).

Research implications

With respect to future research, this article echoes the consistent theme raised by scholars (Haney, 2002; K. King et al., 2008; R. D. King, 2005; Kurki & Morris, 2001; Lovell et al., 2007; Mears, 2008; Naday et al., 2008; Pizarro & Narag, 2008; Riveland, 1999; Ward & Werlich, 2003)—namely, there remains a considerable need for more studies on all aspects of supermax operations. In particular, there is a need both to determine whether the patterns identified in Florida hold in other states and to shed light on a broader range of questions. There is, for example, a need for empirical research on the criteria for supermax placement and release; the extent to which such criteria are followed; the duration of supermax confinement; the treatment of inmates while confined in supermax housing; the in-prison behavior of inmates before, during, and after supermax confinement; and the effects of such confinement—and of variation in the

duration of exposure to supermax housing—on post-prison behavior along a range of dimensions (e.g., employment, housing, mental and physical health, recidivism).

Such research would be important in its own right for documenting how supermax incarceration is used. It also might contribute to more informed policy debates. For example, many critiques of supermax incarceration appear to assume that there is a single “supermax” experience in which inmates are placed in supermax housing once for a lengthy period of time. The current study clearly refutes that image and highlights that there is no single supermax experience. Rather, inmates cycle into and out of supermax confinement for variable periods of time and for different durations relative to their total prison terms. In addition, some inmates experience supermax confinement relatively close to the time of their release back into society while others do not.

In a similar vein, more attention is needed on the factors that predict supermax placement. Many critiques and studies suggest that placement into supermax confinement is arbitrary and that nuisance inmates and others who do not neatly fit the “most violent” characterization get placed in it (Irwin, 2005; R. D. King, 2005; Riveland, 1999). This study’s findings suggest that this view may not be entirely accurate: a substantial amount of the variation in whether an inmate gets placed in such housing appears to stem from their in-prison behavior. Even so, it is conceivable—indeed, it seems likely given accounts from other research (see, e.g., Mears & Watson, 2006; Riveland, 1999)—that prison systems inconsistently use supermax incarceration as a response to extreme violence or disruption and that some wardens pursue such incarceration more aggressively for different types of inmates (e.g., violent, nuisance, mentally ill). The fact that most states have rules that allow for supermax incarceration for any of a range of behaviors allows for these types of inconsistencies. Indeed, it remains unclear conceptually what exactly a “most violent” inmate is or what measures should be used to identify such an inmate. Research investigating such possibilities and issues would speak directly to concerns about arbitrary, capricious, or inappropriate use of supermax housing.

Finally, reentry studies will want to use more nuanced measures of supermax

incarceration than merely the fact of exposure, or not, to such incarceration, and will want to link these experiences to different outcomes (e.g., recidivism, employment, housing). For example, inmates who accumulate six months or less of supermax incarceration may be affected by it less than those who accumulate, say, two years or more of it. Similarly, short, one-time stays in supermax confinement may exert less of an effect than repeated, lengthier stays. In addition, supermax confinement that occurs more proximate to the time of reentry into society may have differential long-term effects (Lovell et al., 2007), and such effects may vary among specific types of inmates (Lovell, Cloyes, et al., 2000; Mears & Watson, 2006).

Policy implications

With respect to implications for policy, several considerations can be identified. First, closer scrutiny of the link between race and supermax incarceration is needed. In the present study, Blacks were disproportionately more likely to be placed in supermax housing, but the predictive models indicated that this disproportionality resulted entirely from differences in in-prison behaviors. It bears emphasizing, however, this article cannot conclude that the use of supermax confinement is race-neutral. For example, if environmental and management conditions in prisons—including such factors as racial insensitivity or hostility toward Black inmates—were to increase the probability of misconduct among Black inmates, then these conditions in turn would contribute to the disproportionate confinement of Blacks in supermax housing.

The potential for such conditions to influence inmate behavior is considerable. Indeed, many studies point to prison conditions and differential treatment of certain inmate populations—including not only racial groups but younger offenders—playing a substantial role in the behavior of inmates (Bottoms, 1999; Dhimi, Ayton, & Loewenstein, 2007; French & Gendreau, 2006; Gendreau & Keyes, 2001; Mears & Reisig, 2006; Sparks et al., 1996). It is possible, for example, that prison officers more frequently or proactively respond to misconduct committed by Blacks as compared to comparable misconduct committed by White inmates (see

Irwin, 2005, p. 141). Should these or other factors influence misconduct among Blacks and, in turn, placement in supermax housing, it would suggest the need to adopt prison management strategies that reduce racial disparities in misconduct (see, generally, Steiner, 2008; Tartaro & Levy, 2007; Trulson, Marquart, Hemmens, & Carroll, 2008). This article is not suggesting that racial discrimination is evident in the use of Florida supermax housing. Rather, it simply suggests that the greater use of supermax housing for Black inmates highlights a central policy issue that bears on debates about such housing.

Second, a number of scholars have argued that supermax incarceration may cause or increase mental illness (Haney, 2003; R. D. King, 2005; Kurki & Morris, 2001; Pizarro & Narag, 2008; Rhodes, 2004; cf. Ward & Werlich, 2003). Should that assessment be true, the fact that many inmates are housed in supermax housing for extended and repeated periods of time suggests the importance, as these scholars have argued, of strict criteria for assessing the mental health of inmates prior to and during placement into such housing.

Third, this study's finding that inmates experience repeated placement into supermax confinement raises questions about the effectiveness of it for controlling inmates, which is one of the primary goals given for such housing (Stickrath & Bucholtz, 2003). For example, if the goal is to deter such inmates so that they become more compliant, the question arises as to whether supermax incarceration does so effectively if certain inmates must be placed repeatedly in supermax housing. It also raises the question, again, of whether supermax housing decisions are arbitrary or fair. For example, why exactly do some inmates experience repeated stays in supermax housing? Are such inmates essentially being given repeated "second chances" or are prison systems failing to provide environments or services that reduce the likelihood that some inmate populations, such as the mentally ill, commit the behaviors that lead to supermax incarceration (Haney, 2003; Lovell et al., 2007; Mears & Watson, 2006)?

Fourth, the fact that some inmates are placed in supermax confinement for quite different periods of time, some for a few months and some for years, raises questions about the fairness and appropriateness of such confinement. That concern takes on more relevance in a context in

which little evidence exists about the beneficial effects of supermax housing and in which evidence exists to suggest that there may be harmful effects of it on recidivism and the mental health of inmates (Mears & Bales, 2009).

Fifth, the timing of supermax incarceration relatively close to—frequently within six months of—release into society raises questions about the potential for harmful impacts on supermax inmates and society. To be certain, evidence of positive or harmful effects of supermax incarceration remain largely unknown (cf. Lovell et al., 2007; Mears & Bales, 2009). If, however, as many scholars have argued, supermax incarceration adversely affects the psychological and social functioning of inmates, and if reentry preparation indeed is critical to successful transitions back into society (Maruna, 2001; Travis & Visher, 2005), efforts should be made to reduce the use of such incarceration in the last year of an inmate’s prison term. As Haney (2002) and Lovell et al. (2007) have emphasized, such a restriction would allow inmates to regain or develop a better ability to interact with others and to prepare for reentry back to home, friends, and families. In so doing, inmates may have a greater likelihood of successfully securing housing and employment and avoiding criminal behavior. This observation made, a counter-argument bears emphasis—housing the most disruptive inmates in supermax confinement during the year prior to release may enable prison systems to devote more and better attention to preparing general population inmates for reentry. From this perspective, it may well be that supermax confinement serves a beneficial effect, on average, if used strategically (i.e., with the most disruptive inmates) in the year prior to release.

In sum, supermax incarceration may achieve many goals and may do so in a cost-effective way (Mears & Watson, 2006). Research has yet to establish whether that is true (Pizarro & Narag, 2008) and whether alternative approaches more effectively produce similar outcomes (Bottoms, 1999; French & Gendreau, 2006; Gendreau & Keyes, 2001; Reisig, 1998; Sparks et al., 1996). The potential returns for prison system safety alone, however, underscore the importance of carefully assessing the pros and cons of this hotly debated type of confinement (Ward & Werlich, 2003). Even so, should a body of research emerge that finds supermax

housing to be effective in achieving any of a range of goals, it will still be important to monitor how such housing is used, as Mears (2008) and Naday et al. (2008) have argued. Doing so will enable researchers to compare different supermax regimes, which, in turn, will enable them to identify whether such factors as the duration or timing of supermax confinement have any bearing on various outcomes. It also will create greater transparency about supermax operations and thus help to ensure that this extreme type of incarceration is used appropriately. In short, given the stakes involved, it is time to illuminate the “black box” of supermax housing.

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Table 1.
Descriptive statistics

	<i>Supermax inmates</i> (N = 1,199)		<i>Non-supermax inmates</i> (N = 53,438)		<i>t-Test</i>
	Mean	S.D. ^a	Mean	S.D. ^a	
<i>Supermax descriptive measures</i>					
Number of supermax placements (1 to 10+)	3.70	(2.75)			
Total supermax exposure (1 to 36+ mos.)	13.73	(11.31)			
Prison time in supermax (<5% to 50+%)	23.86	(15.93)			
Supermax proximity to reentry (1 to 24+ mos.)	11.74	(9.09)			
<i>Dependent variable</i>					
Placement in supermax (0 = no, 1 = yes)	.02	(.15)	.98	(.15)	
<i>Independent variables</i>					
Age at release (age)	28.31	(6.80)	32.15	(9.39)	14.06***
Black (0 = other, 1 = non-Hispanic Black)	.75	(.43)	.58	(.49)	-11.74***
Hispanic (0 = other, 1 = Hispanic)	.04	(.21)	.06	(.23)	2.07*
Current offense violent (0 = no, 1 = yes)	.55	(.50)	.41	(.49)	-9.73***
Prior total convictions (0, 1, 2, . . . , 21+)	7.98	(5.25)	8.56	(5.70)	3.45***
Prior violent convictions (0, 1, 2, 3, 4+)	2.17	(1.50)	1.64	(1.53)	-11.76***
Prior escape convictions (0, 1, 2+)	.11	(.34)	.07	(.29)	-5.00***
Violent behavior (0, 1, . . . , 3+)	2.72	(.72)	.65	(1.03)	-69.55***
Defiance behavior (0, 1, . . . , 10+)	7.60	(3.23)	1.40	(2.39)	-88.15***
Threat behavior (0, 1, 2+)	1.42	(.81)	.40	(.70)	-49.27***
Contraband behavior (0, 1, 2+)	1.15	(.87)	.35	(.66)	-41.27***
Years in prison (0, 1, . . . , 10+)	5.84	(2.44)	3.48	(1.96)	-41.05***
Release year, 1996 (0 = no, 1 = yes)	.10	(.30)	.16	(.36)	5.26***
Release year, 1997 (0 = no, 1 = yes)	.15	(.36)	.17	(.38)	1.69
Release year, 1998 (0 = no, 1 = yes)	.16	(.37)	.16	(.37)	-0.03
Release year, 1999 (0 = no, 1 = yes)	.23	(.50)	.17	(.38)	-4.90***
Release year, 2000 (0 = no, 1 = yes)	.20	(.40)	.19	(.39)	-1.26
Release year, 2001 (0 = no, 1 = yes)	.11	(.31)	.09	(.29)	-1.78

a. Standard deviation.

* $p < .05$ (two-tailed t -test).

** $p < .01$ (two-tailed t -test).

*** $p < .001$ (two-tailed t -test).

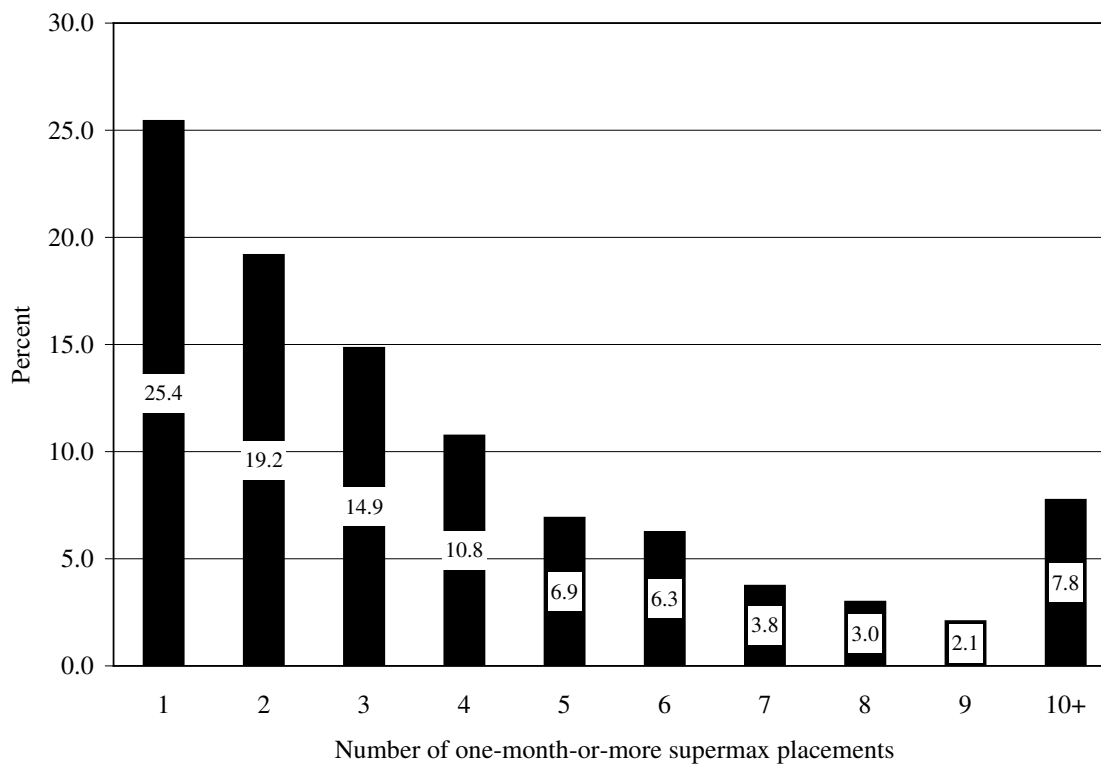


Fig. 1.
Frequency of supermax placements (supermax inmates only, N=1,199).

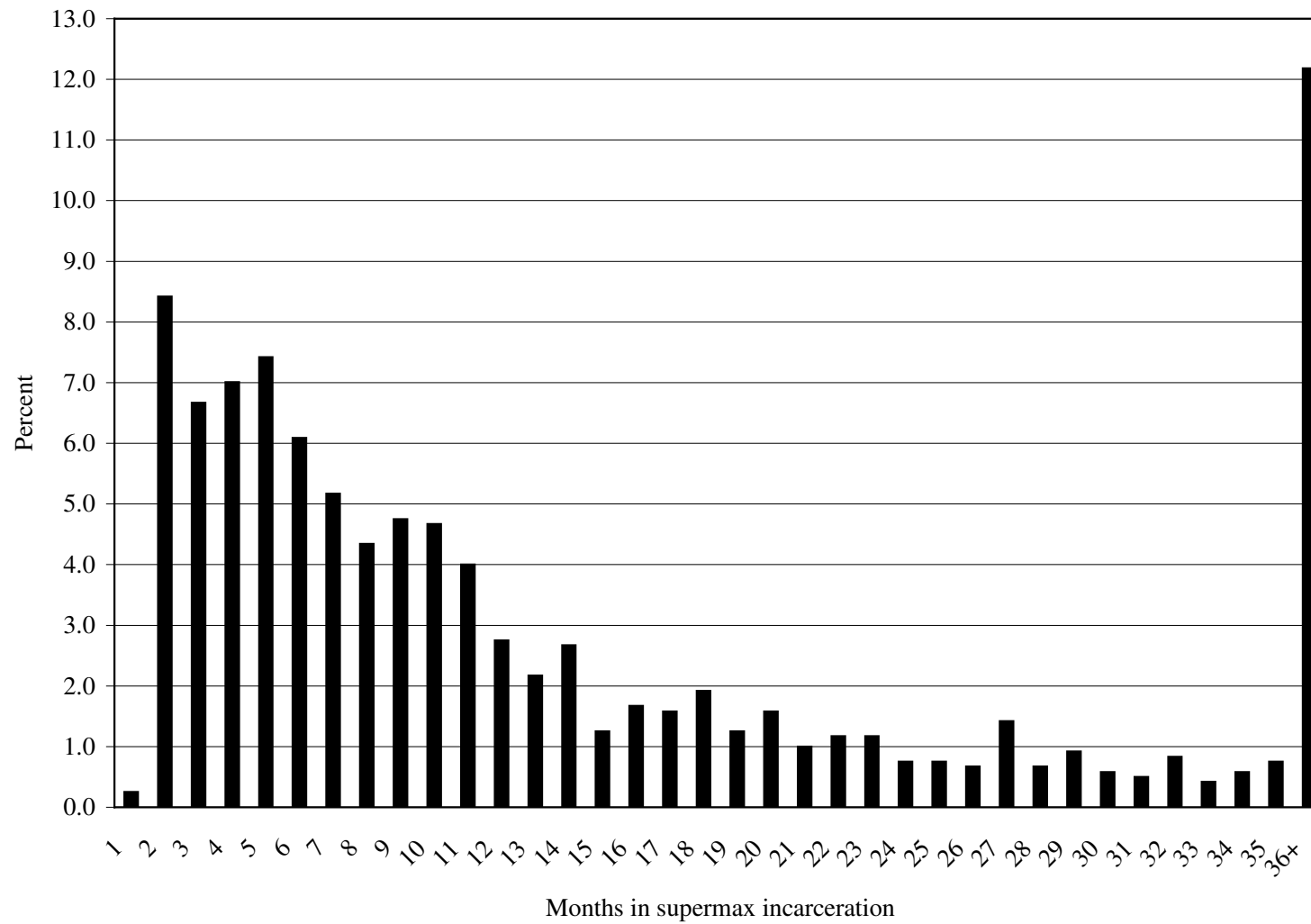


Fig. 2.
Total supermax incarceration exposure, in months (supermax inmates only, N=1,199).

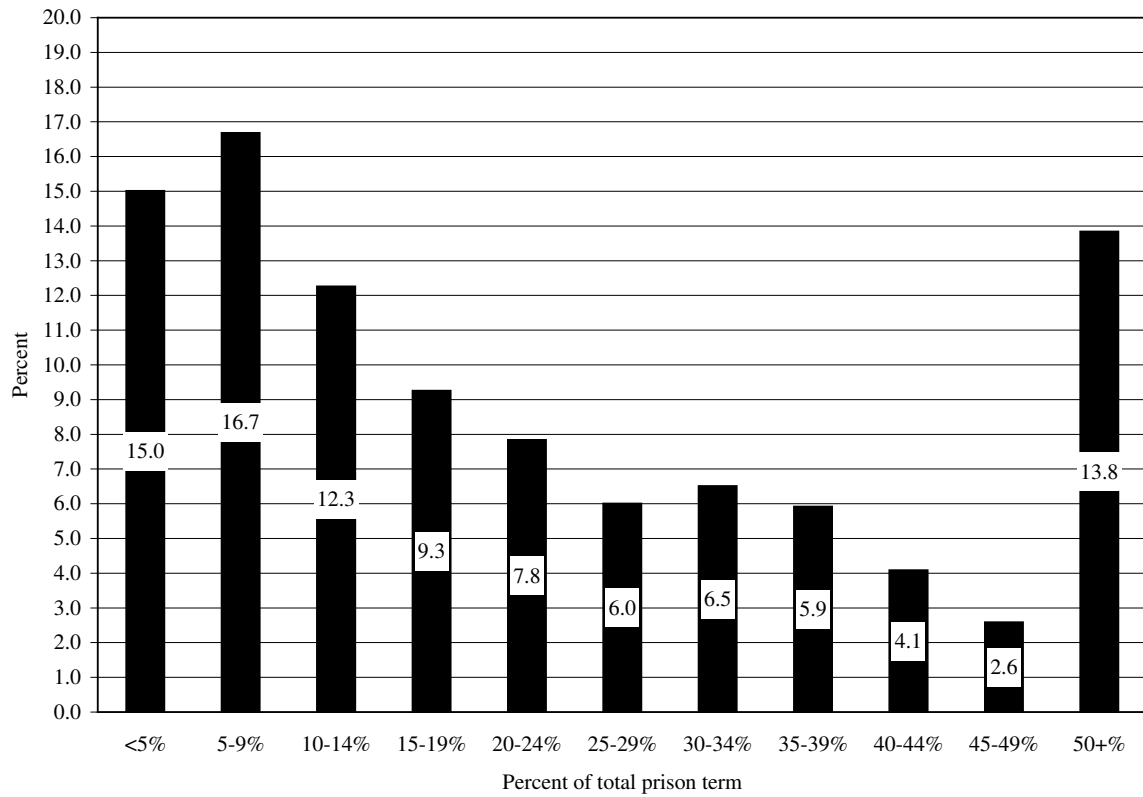


Fig. 3.
Percent of total prison term served in supermax incarceration (supermax inmates only, N=1,199).

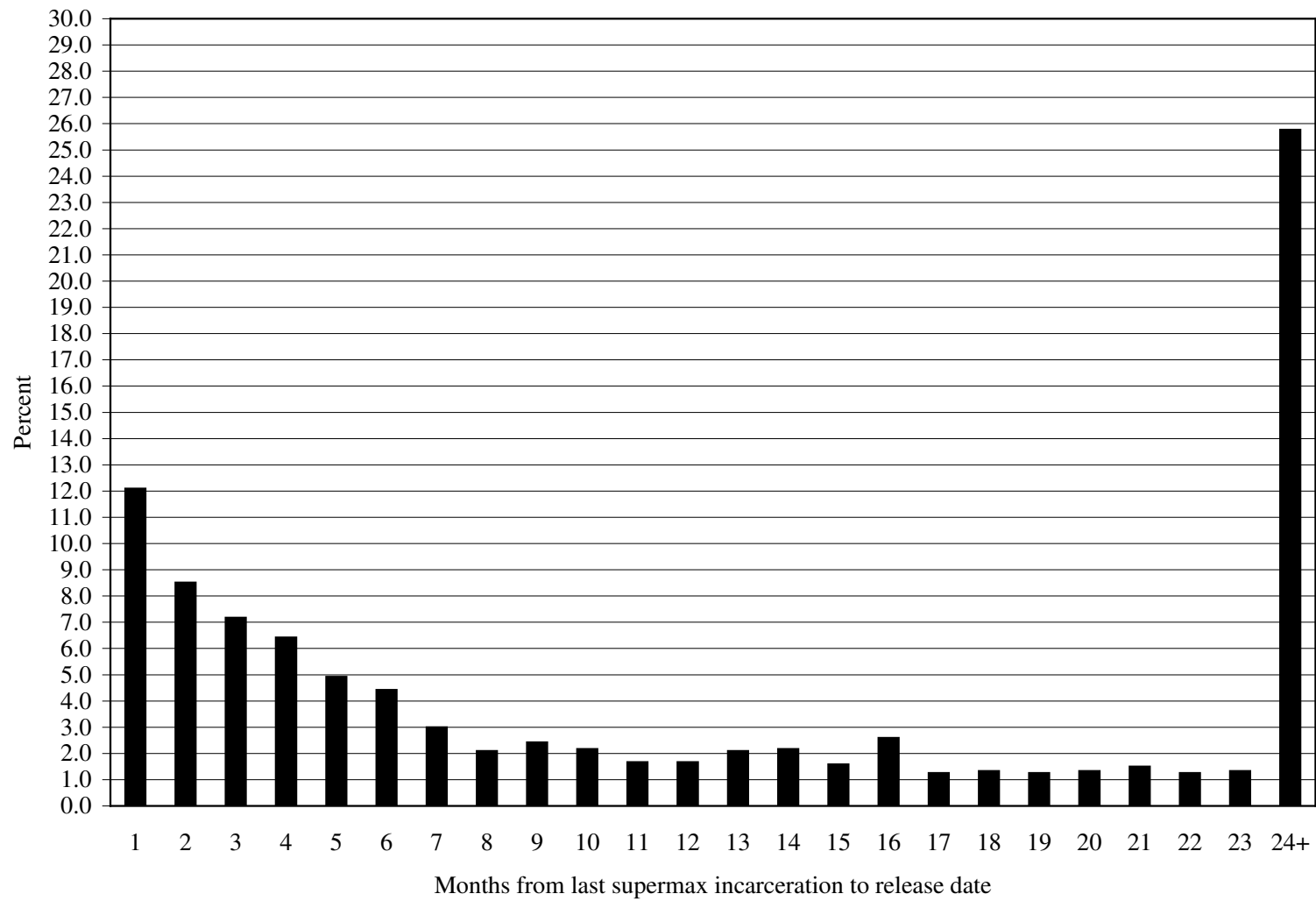


Fig. 4.
Proximity of last supermax experience to release date, in months (supermax inmates only, N=1,199).

Table 2.
 Logistic regression of supermax placement on demographic characteristics, prior record, and institutional behavior

	<i>Model 1</i>			<i>Model 2</i>		
	Log odds	Standard errors	Odds ratios	Log odds	Standard errors	Odds ratios
Age at Release (years)	-0.11***	(0.01)	0.89	-0.02***	(0.01)	0.98
Black (1 = non-Hispanic Black)	0.44***	(0.07)	1.56	-0.02	(0.08)	0.98
Hispanic (1 = Hispanic)	0.03	(0.15)	1.03	-0.13	(0.16)	0.88
Current offense violent (1 = yes)	-0.43***	(0.08)	0.85	-0.28***	(0.08)	0.76
Prior total convictions (#)	-0.01	(0.01)	0.99	0.00	(0.01)	1.00
Prior violent convictions (#)	0.14***	(0.02)	1.15	0.11***	(0.03)	1.12
Prior escape convictions (#)	0.36***	(0.09)	1.43	0.26**	(0.09)	1.30
Violent behavior (#)	—	—	—	.97***	(0.04)	2.64
Defiance behavior (#)	—	—	—	0.19***	(0.01)	1.21
Threat behavior (#)	—	—	—	0.02	(0.04)	1.03
Contraband behavior (#)	—	—	—	-0.23***	(0.04)	0.80
Time in prison (years)	0.48***	(0.01)	1.62	0.22***	(0.02)	1.25
1996 (ref = 1995)	-0.27	(0.16)	0.77	-0.27	(0.17)	0.76
1997 (ref = 1995)	-0.16	(0.15)	0.85	-0.22	(0.16)	0.81
1998 (ref = 1995)	-0.03	(0.15)	0.97	-0.08	(0.16)	0.93
1999 (ref = 1995)	0.08	(0.15)	1.08	0.07	(0.16)	1.04
2000 (ref = 1995)	0.02	(0.15)	1.02	-0.04	(0.16)	0.96
2001 (ref = 1995)	0.08	(0.16)	1.08	-0.05	(0.17)	0.99
Intercept	-2.90***	(0.20)		-6.33***	(0.23)	
Model Chi-square / df		1,921.4*** / 14			3,889.4*** / 18	
Nagelkerke R-square		.182			.361	
<i>N</i> = 54,637						

**p*<.05.

***p*<.01.

****p*<.001.