

SUPERMAX PRISONS: THEIR RISE, CURRENT PRACTICES, AND EFFECT ON INMATES

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In recent years, a number of new approaches in corrections have developed, one of which is the super-maximum, or "supermax," prison. This article explores the roots of these institutions, explains how they operate, and examines their potential effects on inmate populations. The extant empirical research on supermax facilities suggests that these institutions have the potential to damage inmates' mental health while failing to meet their purported goals (e.g., deterring inmates in the general prison population from committing criminal acts inside prison), resulting in added problems for correctional administrators and increased economic costs to public budgets without apparent benefits.

Keywords: *supermax; solitary confinement; prison administration; administrative segregation*

The United States has built the largest prison system in the world (Currie, 1998), and the prison population has skyrocketed in the past decade. Between 1973 and the beginning of the 1990s, the number of prisoners increased by 332%, and the incarceration rate per 100,000 citizens increased by over 200% (Bureau of Justice Statistics, 1993; Clear, 1994). The growth in the prison population brought with it an increase in young, more violent inmates as well as court rulings affecting the powers of guards and administrators. The combination of these factors pushed many corrections practitioners and scholars to try to develop more effective ways to manage penal institutions and to ensure prison safety. In doing so, a number of new approaches in corrections emerged in recent years, one of which is the super-

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maximum, or “supermax,” prison. The National Institute of Corrections (NIC) (1997) defined supermax prisons as

free-standing facilities, or a distinct unit within a facility, that provides for the management and secure control of inmates who have been officially designated as exhibiting violent or seriously disruptive behavior while incarcerated. Such inmates have been determined to be a threat to safety and security in traditional high security facilities, and their behavior can be controlled only by separation, restricted movement, and limited direct access to staff and other inmates. (p. 1)

The advent of supermax institutions has not been without controversy. Opponents argue that supermax institutions violate prisoners’ rights, contribute to inmates’ psychological problems, and are extremely costly (Fellner & Mariner, 1997). Proponents claim that the “toughening” of the inmate population, increased gang activity, and difficulties associated with maintaining order in severely crowded prisons necessitate supermax facilities (Riveland, 1999). This article explores the roots of these controversial institutions, explains how they operate, and examines their potential effects on inmate populations. Although limited, the extant empirical research on supermax facilities demonstrates that these institutions have the potential to damage inmates’ mental health while failing to meet their purported goals (e.g., deterring inmates in the general prison population from committing criminal acts inside prison), resulting in added problems for correctional administrators and increased economic costs to public budgets without apparent benefits.

SUPERMAX PRISONS: THEIR RISE, CURRENT PRACTICES, AND LEGAL ISSUES

THE ORIGINS AND RISE OF SUPERMAX PRISONS

Supermax institutions separate the most serious and chronic troublemakers from the general prison population (Henningesen, Johnson, & Wells, 1999). These institutions house inmates in solitary confinement, with minimal contact with other humans and virtually no educational, religious, or other programs. Their general purpose is to increase control over inmates who are known to be violent, assaultive, major escape risks, or likely to promote disturbances in the general prison population (National Institute of Corrections, 1997; Riveland, 1999). The rationale behind supermax facilities is to segregate the most dangerous inmates to protect prison staff members and inmate populations. Furthermore, proponents of supermax facilities

assert that the threat of the harshness of supermax prisons deters other inmates from committing criminal acts inside the walls (Fellner & Mariner, 1997).

Correctional scholars and practitioners alike consider order and safety to be very important in managing prisons (Dilulio, 1987; Logan, 1992; Reisig, 1998; Riveland, 1999; Useem & Reisig, 1999). This is why prisons have historically had "jails within prisons" to securely house violent and disruptive inmates (Barnes, 1972; Riveland, 1999). Some assert that Alcatraz, which was the home of the most publicized disobedient inmates of the early and mid-1900s, paved the way for modern-day supermax prisons (King, 1999). Alcatraz followed a "concentration model," which refers to the creation of specific units or facilities to manage specific types of troublesome inmates (King, 1999; Riveland, 1999). In 1963, the Bureau of Prisons (BOP) decided to close Alcatraz and replace it with a new, special, high-security prison in Marion, Illinois; however, the prison was not completed by the time of Alcatraz's closure. As a result, the BOP dispersed Alcatraz's inmates to facilities throughout the federal prison system. As time elapsed, practitioners noticed that the new dispersion approach appeared to "work." As a result, the BOP embraced the dispersion approach. This approach is generally referred to as the "dispersion model" because inmates who are considered troublemakers are spread throughout the system to prevent them from enticing others into collective misconduct (Riveland, 1999).

In the early 1970s, the level of assaults and violence directed toward staff members and other inmates escalated (Bureau of Prisons, 1973b; King, 1999). This increase in violence prompted the BOP to begin sending troublesome prisoners to the high-security prison in Marion, which was originally intended to replace Alcatraz, and to once again embrace the concentration model. In 1972, the BOP built the H unit at Marion, which was designed to separate offenders whose behavior seriously disrupted the orderly operation of the institution from the general prison population. The mission of the H unit ironically fell within the purview of "reform." It was designed to assist individuals in changing their attitudes and behaviors to facilitate their return to the general prison population (Bureau of Prisons, 1973a; King, 1999).

The escalating violence in BOP institutions continued into the mid-1970s, with an increase of 45.5% in assaults on prison staff members by inmates (Henderson, 1979; King, 1999). As a result, in 1979, the BOP recommended the addition of a new administrative maximum-level unit to the classification system for prisons. Later that year, Marion became the first Level 6 (super-maximum-security) prison (Bureau of Prisons, 1979; King, 1999). Its mission was to provide long-term segregation within a controlled setting for prisoners throughout the federal system who threatened or injured

other inmates or staff members, possessed deadly weapons or dangerous drugs, disrupted the orderly operation of a prison, or escaped or attempted to escape (Bureau of Prisons, 1979; King, 1999).

Violence at Marion escalated during the early 1980s. From 1980 to 1983, there were 14 escape attempts, 10 group disturbances, 54 serious assaults on inmates, 28 assaults on staff members, and eight prisoners and two corrections officers killed by inmates in its supermax unit (King, 1999). These incidents led to a complete lockdown of Marion during the fall of 1983. The warden and correctional officers at Marion claimed that this act reduced assaults and made the environment safer in the prison (Fellner & Mariner, 1997).

As a result of such claims, many states followed in Marion's footsteps. The NIC (1997) reported that as of 1997, approximately 34 jurisdictions in the United States operated 1 or more supermax facilities or were in the process of opening one. As of 1997, over 55 supermax facilities or units were operating nationwide (National Institute of Corrections, 1997). At the end of 1998, about 20,000 prisoners, or 1.8% of all those serving sentences of 1 year or more in state and federal prisons, were housed in such facilities (King, 1999).

THE OPERATION OF SUPERMAX FACILITIES

In a survey distributed to correctional institutions nationwide, the NIC (1997) found that jurisdictions vary considerably in the operation and management of supermax facilities. Nevertheless, they found that all supermax prisons share certain defining features. For example, inmates are confined in their cells for 22 to 23 hours a day (Fellner & Mariner, 1997; NIC, 1997; Riveland, 1999). These institutions limit human contact to instances when medical staff members, clergy members, or counselors stop in front of inmates' cells during routine rounds. Physical contact is limited to being touched through security doors by correctional officers while being put in restraints or having restraints removed. Most verbal communication occurs through intercom systems (Riveland, 1999).

Placement of inmates in a supermax prison. In most jurisdictions, admission into a supermax facility or unit does not depend on a formal disciplinary hearing but is rather based on the criminal and behavioral history of an inmate while incarcerated (Committee to End the Marion Lockdown, 1992; Riveland, 1999). The inmates in these institutions are not those who committed the worst crimes in society but those whom correctional staff members deem as threats to the safety, security, or orderly operation of the facilities in which they are housed (National Institute of Corrections, 1997; Riveland,

1999). Placement in a supermax institution is not a penalty but an administrative decision based on a pattern of dangerousness or unconfirmed but reliable evidence of pending disruption (e.g., a prisoner is a leader of a gang or other radical movement) (Committee to End the Marion Lockdown, 1992; Riveland, 1999).

Inmate programming. Jurisdictions vary in the extent of the programs and activities they offer to their inmates. Some jurisdictions allow inmates to have televisions in their cells and provide education and self-help programs through intrainstitutional cable television. Other jurisdictions provide inmates with instructors that assist inmates through cell-front visits. During these visits, instructors stand in front of inmates' cells and talk to them through openings in the cell doors. Other jurisdictions, however, provide no programs to inmates.

The amount of exercise allowed to inmates in supermax facilities is generally limited to 3 to 7 hours per week in indoor spaces or small, secure, attached outdoor spaces within the facilities (National Institute of Corrections, 1997; Riveland, 1999). Inmates exercise one at a time, and at least two correctional officers escort inmates to and from the exercise spaces. Group exercise occurs only in transition programs (programs designed to reintegrate inmates into the general prison populations or society), which only some facilities provide.

Visitation privileges also vary from facility to facility (National Institute of Corrections, 1997; Riveland, 1999). Some institutions allow only 1 hour of visitation per month, whereas others allow several hours per month. Even so, inmates typically have no direct contact with visitors; their visitation consists of video visiting, which means that inmates and visitors communicate and see each other through a 13-inch, black-and-white television (Chacon, 2000). In other jurisdictions, inmates sit in small cubicles separated by clear partitions from their visitors and communicate through intercoms (National Institute of Corrections, 1997).

Physical coercion. Correctional officers in supermax institutions may use proportionate and reasonable force to subdue inmates when dangerous situations erupt. For example, guards are allowed to conduct cell extractions—the forceful removal of prisoners from their cells—when inmates refuse to come out of their cells or cover the glass windows in their cell doors (Fellner & Mariner, 1997). Correctional administrators justify cell extractions as a procedure for reducing the harm to staff members that could occur with less intrusive means. Quick-response teams carry out this procedure. In most facilities, teams consist of five correctional officers wearing body armor, hel-

mets with visors, neck support, and heavy leather gloves. Each member is responsible for subduing a specific part of an inmate's body. Other correctional staff members, including a supervising sergeant, an officer with a video camera who records the extraction, and a medical assistant, accompany the extraction team. Guards usually administer chemical sprays (mace and pepper spray) into inmates' cells through openings in the doors prior to the extraction, rush in when the cell door opens, gain control of inmates, and then place them in restraints (Fellner & Mariner, 1997).

Supermax institutions also use the four-point restraint as a security method (Fellner & Mariner, 1997). This technique uses the leather restraints with which inmates' beds are equipped to immobilize prisoners by strapping and holding their arms and legs secure. This procedure may be used only if offenders present themselves as imminent threats to themselves or others (Fellner & Mariner, 1997).

Release from supermax prisons. In most jurisdictions, the criteria for release from supermax facilities are not published or revealed to prisoners. In fact, only 23 jurisdictions have written criteria under which inmates can earn transfer from supermax prisons (National Institute of Corrections, 1997). Furthermore, the amount of time inmates serve in supermax facilities also varies across jurisdictions (Riveland, 1999). Some jurisdictions have determinate periods to be served, but most have indeterminate placement. The amount of time served may depend on the perceived risk an inmate presents, any behavioral changes that may take place, the amount of time left on his or her sentence, changes in his or her physical and psychological conditions, and his or her willingness to renounce allegiance to gangs (Riveland, 1999). An inmate may be either returned to the general prison population or, if his or her court-ordered sentence is up, released into the community.

THE COST OF RUNNING SUPERMAX INSTITUTIONS

Riveland (1999) noted that "in most jurisdictions, operating costs for extended control facilities are generally among the highest when compared to those of other prisons" (p. 21). For example, in 1999, the average daily cost for inmates at the Colorado State Penitentiary (a supermax facility) was \$88.72, whereas the cost at the maximum-security facility (the Colorado Correctional Center) was \$50.82. When compared annually, the average cost to house an inmate in the supermax facility in Colorado was \$32,383, whereas in the maximum-security facility, it was \$18,549 (Rosten, 1999). In addition, the construction of supermax facilities is very costly because of the need for high-security components. These institutions are composed of

high-security doors, fortified walls, and sophisticated electronic systems. Although construction costs are high, the cost of staffing these facilities is even higher because correctional officers provide services to inmates and perform maintenance work within the facilities (Riveland, 1999).

LEGAL AND ETHICAL ISSUES WITH SUPERMAX PRISONS

The overall constitutionality of supermax prisons remains unclear (Riveland, 1999). The Eighth Amendment, which prohibits cruel and unusual punishment, requires that prisoners be afforded a minimum standard of living (Law Information Institute, 2001). Many argue that the living conditions and treatment provided to inmates in supermax facilities do not meet the standards of the Eighth Amendment (Fellner & Mariner, 1997). Federal court judges, however, have repeatedly ruled that prolonged segregation is cruel and unusual punishment only for the mentally ill (Rogers, 1993). U.S. district courts maintain that although the conditions in these institutions are horrible, they are necessary for security reasons and therefore do not violate inmates' constitutional rights (Henningsen et al., 1999).

CONSEQUENCES OF SUPERMAX CONFINEMENT

PAINS OF IMPRISONMENT

In his classic work *The Society of Captives*, Gresham Sykes (1958) asserted that life in a maximum-security prison is a painful experience that influences inmates' behavior and psychological well-being. In addition to restricting inmates' behavior and autonomy, incarceration punishes them emotionally and psychologically through what Sykes called the "pains of imprisonment." These include the feelings of deprivation and frustration caused by the (a) loss of liberty, (b) loss of autonomy, (c) lack of heterosexual relationships, (d) deprivation of goods and services, and (e) lack of personal security and safety. Inmates in supermax facilities suffer these pains in addition to almost complete isolation, although personal security and safety may be greater for inmates in supermax facilities than for those in general populations because they do not have contact with other inmates. The addition of isolation, however, suggests that the pains of imprisonment in supermax facilities are more severe than those in maximum-security prisons. Consequently, any negative emotional or psychological reactions to imprisonment should be greater in supermax facilities than in lower security facilities.

THE EFFECT OF SUPERMAX INCARCERATION ON INMATES' HEALTH

A major concern voiced by critics of supermax facilities is their potential effect on inmates' mental health because of isolation and the lack of activity. Early U.S. experiments with isolation in Pennsylvania and New York in the 1800s demonstrated the severe impact that isolation has on inmates' psychological and physical health (Toch, 2001). As a result, prison administrators quickly abandoned solitary confinement as a general correctional tool and used isolation as only a temporary form of punishment.

Although the conditions in prisons today are certainly quite different from those in the first penitentiaries, the impact of isolation on inmates' psyches is likely to be quite similar. Despite the increased use of modern supermax facilities, no research to date has directly examined the effect of supermax confinement on inmates' psychological and physical health. Inferences about the impact of these facilities on inmates' mental and physical health are based primarily on research examining the effects of temporary solitary confinement or administrative segregation within regular prisons. Although this research is informative, differences in the scope of restrictions and deprivations, as well as the duration of the isolation, must be considered (see Bonta & Gendreau, 1990). For example, spending a specified number of days in isolation is quite different from serving the remainder of one's sentence, possibly years, in a supermax facility. Similarly, spending 23 hours a day in isolation with no activities is not comparable to spending 23 hours a day in isolation with meaningful activities.

Isolation research supports the notion that greater levels of deprivation contribute to more psychological and emotional problems (Brodsky & Scogin, 1988; Grassian, 1983; Grassian & Friedman, 1986; Miller, 1994; Scott & Gendreau, 1969). As inmates face greater restrictions and social deprivations, their levels of social withdrawal increase (Miller, 1994; Scott & Gendreau, 1969). Scott and Gendreau (1969) argued that increasing inmates' restrictions by limiting human contact, autonomy, goods, or services requires more intense activity programming to counteract the adverse effects of these restrictions. Imposing more restrictions without appropriate activity programming is detrimental to inmates' health and rehabilitative prognoses. Potentially beneficial programming includes educational, recreational, and psychological services. More recent studies support these contentions in that increasing restrictions, namely through segregation, tends to result in such forms of psychological distress as depression, hostility, severe anger, sleep disturbances, physical symptoms, and anxiety (Brodsky & Scogin, 1988; Miller, 1994). Although the types of restrictions and outcomes measured

vary across studies, the general consensus is that increasing the level of restrictions increases the risk for psychological and emotional problems. The extent of the effects of these restrictions depends not only on the nature of the confinement and deprivations but also on inmates' characteristics (Grassian & Friedman, 1986). Given the high rates of mental health problems within the inmate population, the potential for adverse effects is especially high (Ditton, 1999).

Overall, the research suggests that solitary confinement has potentially serious psychiatric risks (Brodsky & Scogin, 1988; Grassian, 1983; Grassian & Friedman, 1986; Korn, 1988; Kupers, 1999; Miller, 1994). Isolation can produce emotional damage, declines in mental functioning, depersonalization, hallucination, and delusion (Brodsky & Scogin, 1988; Grassian, 1983; Korn, 1988; Kupers, 1999; Miller, 1994; Scott & Gendreau, 1969). Inmates in isolation, whether for the purpose of protective custody or punishment, suffer from numerous psychological and physical symptoms, such as perceptual changes, affective disturbances (notably depression), difficulties in thinking, concentration and memory problems, and problems with impulse control (Brodsky & Scogin, 1988; Grassian, 1983; Grassian & Friedman, 1986; Miller, 1994).

Interviews with inmates in high-security facilities have demonstrated similar findings. In particular, Korn (1988) found that women living in a high-security unit experienced claustrophobia, chronic rage reaction, depression, hallucinatory symptoms, defensive psychological withdrawal, and apathy. Korn attributed these problems to factors such as depersonalization, the denial of individuality, the denial of personal initiative, and humiliation. Similarly, Kupers (1999) argued that inmates placed in an environment as stressful as that in a supermax prison begin to lose touch with reality and exhibit symptoms of psychiatric decomposition. He indicated that the majority of the inmates he had interviewed in administrative segregation units had difficulty concentrating, heightened anxiety, intermittent disorientation, and a tendency to strike out at people.

Since isolation was abandoned as an effective means of reforming offenders, it has primarily been used as a means of punishment within correctional institutions or as an administrative tool to protect individual inmates or others in the general prison population. As such, the goal of using solitary confinement is generally to induce behavioral change within an institution. Although most research does not support the claim that isolation results in desirable behavior modification, a couple of studies have supported this assertion (Suedfeld & Roy, 1975; Suedfeld, Ramirez, Deaton, & Baker-Brown, 1982). Suedfeld and Roy (1975) found that "short-term" segregation is an effective tool for dealing with disruptive inmates because it aids in

modifying their behavior and produces beneficial psychological and behavioral effects (e.g., inmates become more pleasant, optimistic, self-confident, and compliant with institution rules). In addition, Suedfeld et al. (1982) found no support for the claim that solitary confinement is adverse, stressful, or damaging. It is important to note, however, that Suedfeld et al. conducted this research on simulated solitary confinement units with inmates who volunteered to take part in the experiment. Accordingly, the implications of this research for supermax facilities are limited given the differences in the duration of the confinement and status of the inmates. Isolation in supermax facilities is not short term, nor are inmates there on a voluntary basis.

In sum, the vast majority of research suggests that inmates placed in restricted environments, such as in solitary confinement, for prolonged periods of time tend to develop psychological problems. Most, if not all, of these studies, however, are weak methodologically. For example, using inmates who volunteer to be placed in solitary confinement could lead to erroneous results because the inmates know that the situation is not real and that they can get out of the situation whenever they want to (Suedfeld et al., 1982). The studies that examined inmates involuntarily placed in segregation failed to administer pretests or to look at the inmates' past psychological and behavioral records (Brodsky & Scogin, 1988; Korn, 1988; Kupers, 1999; Miller, 1994; Suedfeld & Roy, 1975). In the absence of information on inmates' pre-segregation psychological status, it is difficult to make valid assessments of changes in status, because inmates could have been suffering from psychological problems before being placed in isolation. Finally, some of the studies drew inferences on the basis of inmates under special circumstances, such as class-action suits against jurisdictions for the treatment they received in isolation (Grassian, 1983; Grassian & Friedman, 1986), which makes their results difficult to generalize to other populations. Making general inferences from studies using small sample sizes is similarly problematic (Korn, 1988; Grassian, 1983; Grassian & Friedman, 1986; Suedfeld & Roy, 1975).

Despite these problems and limitations, the research suggests that inmates placed in supermax facilities are likely to suffer some form of psychological distress. Although the available research is limited in its applicability to supermax facilities and flawed methodologically, the research suggests that solitary confinement has a detrimental impact on individuals' mental health, although the extent and specific nature of this impact are unclear. As Robins (1978) noted,

In the long run, the best evidence for the truth of any observation lies in its replicability across studies. The more the populations studied differ, the wider

the historical eras they span; the more the details of the methods vary, the more convincing becomes the replication. (p. 611)

Although none of the studies is perfect, taken together, they suggest that solitary confinement negatively influences individuals' psychological and/or emotional well-being. The implications for supermax facilities are not clear, apart from purporting that confinement within these facilities is likely to contribute to the development of mental health problems and/or exacerbate any existing problems. Given the differences in the lengths and conditions of confinement between research participants, relatively short periods of confinement, and supermax inmates, one would expect a greater detrimental impact among the latter population than the reviewed studies suggest. Similarly, the effects should be larger for inmates housed in supermax units that have more restrictions and less, or no, programming. The research suggests that inmates housed in supermax facilities for longer periods of time, without programming and with more restrictions on human contact, should be the most adversely affected by supermax confinement; however, this is a function of inmates' characteristics.

SUPERMAX PRISONS AS A DETERRENT

Prison administrators assert that supermax prisons serve as a general deterrent within the correctional population—that their presence curbs violence and disturbances within penal institutions. General deterrence may occur as individuals observe the imposition of the threatened punishment on others or solely by the knowledge that a given behavior carries a given punishment. This theory asserts that if punishment is distributed with certainty, adequate (and appropriate) severity, and celerity, rates of offending should be low (Beccaria, 1764/1994; Bentham, 1789/1992; Zimring & Hawkins, 1973).

For deterrence strategies to be effective, offenders must not only be aware of the sanctions but also believe that they will get caught and punished with the threatened sanctions. What is important in the efficacy of sanctions as deterrents is not their actual certainty or severity but individuals' perceptions of their certainty and severity (Paternoster, 1987). It is unlikely that supermax facilities serve as a deterrent because of the certainty of punishment, placement in these facilities is relatively rare and often based on administrative decisions using risk factors over which inmates have little control (Riveland, 1999; Toch, 2001). The perceived certainty of placement in supermax facilities is likely to be low and become increasingly so as inmates engage in and observe disruptive or violent behavior that does not result in

placement in a supermax institution. "Experiential effects" suggest that threatening inmates with placement in supermax institutions for specified behavior and then failing to follow through may actually increase problematic behavior (Claster, 1967; Jensen, 1969; Paternoster, 1987). Additionally, increasing the severity of punishment has generally been found to be a less effective means of achieving deterrence than increasing its certainty (Zimring & Hawkins, 1973). The argument that the severity of supermax confinement acts as a deterrent does not find support in the deterrence literature, especially if inmates question the certainty of such confinement for violent or disruptive behavior.

Furthermore, Sherman (1993) argued that individuals abstain from offending according to four key concepts in emotional responses to the sanctioning experience: legitimacy, social bond, shame, and pride. Legitimacy is the perceived degree of respectfulness and procedural fairness of an enforcing agent by an individual. Social bond is conceptualized as the relationship an offender has with a sanctioning agent. Shame is whether an offender acknowledges or bypasses a sanction. Finally, pride is how an offender feels in the aftermath of a sanction. If an offender perceives sanctioning as illegitimate or unfair, has social weak bonds with a sanctioning agent and the community that the agent represents, and denies his or her shame, then the sanctioning could cause future involvement in crime. Moreover, Sherman pointed out that the level of deterrence achieved through sanctions varies as a function of the offender. The effects depend on an offender's personality type, social bonds, and perceptions of legitimacy. As a result, sanctions may deter crime among some groups but increase crime in others.

Arguably, supermax facilities are not a deterrent for institutional misconduct, because inmates generally neither have bonds with sanctioning agents nor believe that they will be treated fairly. Because the deterrence perspective targets only those who would otherwise engage in the proscribed behavior, the threat of placement in supermax facilities is unlikely to serve as a deterrent. Disruptive and violent inmates may be less likely than other inmates to be concerned about the consequences of their actions, to have bonds with sanctioning agents, or to feel shame or pride over their behavior. If supermax facilities are effective in deterring only inmates who would otherwise not engage in misconduct, then they do not add any deterrent value.

In addition, Barak-Glantz (1983) argued that solitary confinement plays a minimal role in deterring inmates' behaviors. Existing empirical evidence does not suggest that the placement of problematic inmates in supermax prisons decreases prison violence. Research in the area of deterrence indicates that in most cases, deterrence as a correctional policy does not work (Clear, 1994; Cullen, 1995; Paternoster, 1987; Sherman, 1993). Deterrence research

in conjunction with theory and empirical evidence on inmates' behavior suggests that supermax facilities are unlikely to be effective as a general deterrent for violence and disturbances in prisons.

CONCLUSION AND POLICY IMPLICATIONS

Since the 1970s, the U.S. correctional system has undergone dramatic changes. Prison populations have skyrocketed in response to changing sentencing policies and crime rates, which has contributed to numerous problems within facilities, such as overcrowding and violence. In the face of inmate violence, lawsuits, federal oversight, and other problems, prison administrators have sought—and continue to seek—means of addressing these issues. Supermax facilities present one solution whose growing popularity has made them “one of the most dramatic features of the great American experiment with mass incarceration during the last quarter of the 20th century” (King, 1999, p. 163). As of 1998, 1.8% of all those serving sentences of 1 year or more in state and federal prisons were housed in such facilities (King, 1999). This number is likely to increase, because many practitioners have classified supermax facilities as an effective tool in the management of problematic prisoners despite the lack of empirical evidence demonstrating such effectiveness (King, 1999).

Research on supermax facilities and solitary confinement within prisons is limited and generally lacking in sound methodology, which makes it difficult to draw clear conclusions regarding what effect these facilities may have on inmates' behavior and mental health. Given that existing isolation research examines the effects of deprivations that are arguably less restrictive and shorter in duration than supermax confinement, one expects that the risk for psychological harm and other detrimental impacts is greater in supermax facilities than the research suggests. In terms of controlling behavior, the available research does not support the assertion that supermax facilities are effective management tools for controlling violence and disturbances within prisons. Although no research has looked at the deterrent effect of supermax facilities on behavior within prisons, deterrence research suggests that supermax facilities are not effective in reducing violence or disturbances within the general population. In conjunction with the potential for a detrimental impact on the mental health of inmates placed in supermax prisons, the implications of existing deterrence literature suggest that supermax prisons should not be used for their current purpose.

In addition to the lack of apparent benefit from placing inmates in supermax facilities, doing so imposes costs on society. Foremost is the expense of

operating supermax facilities. Advocates claim that the cost is worthwhile because these facilities serve as a general deterrent and ensure security in the general prison population, but these assertions are not empirically supported, making it difficult to justify the costs of constructing and operating these facilities. The impact of solitary confinement and the lack of activities or programming on inmates' psychological well-being presents additional costs to society by necessitating psychiatric care within institutions and potentially leading to more disruptive behavior and violence against staff members.

The costs associated with supermax facilities are not limited to incarceration costs. If these inmates have been abused, treated violently, and confined in dehumanizing conditions that threaten their mental health, then they may leave prison angry, dangerous, and far less capable of leading law-abiding lives than when they entered prison (Fellner & Mariner, 1997). It is probable that inmates who have spent prolonged periods in solitary confinement have a more difficult time adjusting to life outside of prison, especially given the potential for the development or exacerbation of psychological problems. Supermax inmates may be more likely than comparable inmates serving sentences in regular institutions to recidivate (or to escalate their offending). Furthermore, the presence of psychological problems means that the release of these individuals into society poses additional burdens on communities trying to effectively deal with mentally ill offenders.

An additional question arises as to whether it is worthwhile to place someone in a supermax facility for the sake of reducing violence and disturbances within prisons (which research suggests is not accomplished), only to release that individual into society as less capable of normal social functioning than when he or she was sent to prison. Research in this area is sorely lacking, but given the increasing popularity of supermax facilities, the implications of supermax confinement need careful consideration, because most of the inmates housed in such facilities are returned either to the general prison population or to society. Do the benefits, if any, of placing inmates in supermax facilities outweigh or justify the costs? Available research suggests that they do not, in which case, one must ask why supermax prisons are so popular and whether they are justifiable. Policy makers and prison administrators need to consider why they favor supermax institutions and carefully weigh the consequences of expanding the use of supermax prisons.

Nearly 200 years ago, prison administrators abandoned the first experiments with solitary isolation as a practice, not just a temporary punishment, solely on the basis of its detrimental effects on inmates. Although conditions within institutions are certainly different today, one must ask why this practice, which was once dropped because it was deemed inhumane, is once again justifiable. If it cannot be justified on the basis of current purposes, then

the aims of supermax facilities need reconsideration. Current research, which is certainly limited, suggests that it is difficult to justify them for utilitarian purposes (e.g., effective inmate management, deterrence). It is, however, possible to justify them on punitive grounds. Their increasing popularity may mirror the increased punitiveness seen in sentencing across the United States since the 1970s, in which case the arguments surrounding their use are quite different, focusing more on theoretical and moral justifications for their existence, as opposed to their ability to help correctional administrators manage the inmate population.

Regardless of the rationale for using, or not using, supermax facilities, more research is needed to better understand their use, the impact that they have on inmates while in the facilities as well as after release, and ultimately the implications for affected communities. In the absence of more empirical evidence, the conclusions that can be drawn regarding supermax facilities, although informative, are limited. We hope that the conclusions presented here demonstrate just how much is not known about the impact of these increasingly popular facilities as well as point out some areas in need of further exploration, both empirically and philosophically.

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