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CHAPTER 5

The Relationship Between Inmate Misconduct, Institutional Violence, and Administrative Segregation: A Systematic Review of the Evidence

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CHAPTER 5

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Introduction

Maintaining safe and orderly institutions is a high priority for prison and jail administrators, but institutional misconduct and violence often threaten the safety and order of an institution (DiIulio, 1987; Gendreau, Goggin, & Law, 1997; Steiner & Wooldredge, 2009; Steiner, Butler, & Ellison, 2014; Toch, Adams, & Grant, 1989). Segregation — transferring an inmate from the general prison population to an isolation cell in a more secure area of the prison — is a common response to inmate misconduct or violence that corrections officials use to regulate inmate behavior and promote order and

safety within their institutions (Browne, Cambier, & Agha, 2011; DiIulio, 1987; Reassessing Solitary Confinement II, 2014). However, the practice has recently drawn the attention of civil rights advocates, the U.S. Congress, and President Obama, who want to ensure that it is used equitably and that it is effective as both a deterrent and a consequence of prisoner misconduct and violence (e.g., Amnesty International, 2014; Obama, 2015; U.S. Senate Committee on the Judiciary, Subcommittee on the Constitution, Civil Rights and Human Rights, 2014). Yet, despite the increased national attention on segregation and the frequency with which it is used (Reassessing Solitary Confinement II, 2014; Riveland, 1999), few researchers have examined the factors that influence who is placed in segregation (e.g., inmates with a history of violence) or whether it is effective in reducing subsequent problem behaviors.

This white paper reviews the evidence pertaining to the use of segregation and its effects on offenders' subsequent behavior, and provides critical information about the evidence for researchers and practitioners. It also identifies gaps in the extant research that should be useful for expanding the evidence base related to the use of segregation and its behavioral effects. The paper begins by discussing the extent of misconduct, violence, and the use of segregation in correctional facilities. Next, it reviews the leading theories about predictors that indicate when corrections officials use segregation and its effects on offender behavior. The study methodology and its results follow. The paper concludes with a discussion of the implications of the findings and identifies directions for future research related to the relationship between inmate misconduct, institutional violence, and segregation.

The Extent and Predictors of Inmate Misconduct and Violence in U.S. Correctional Facilities

Inmate misconduct includes deviations from the formal rules that govern and regulate an inmate's behavior in a correctional institution. Violence in a prison or jail can take several forms: intrapersonal (e.g., self-harm), interpersonal (e.g., offending, victimization), or collective violence (e.g., riots). The Bureau of Justice Statistics (BJS) routinely collects national-level data from inmates and correctional administrators to assess the extent of misconduct and violence in U.S. correctional facilities. Based on data from its most recent assessments — the 2005 Census of Adult State and Federal Correctional Facilities (BJS, 2010) and the 2014 Annual Survey of Jails (BJS, 2015a) — correctional facilities typically experience high rates of misconduct (about 949 incidents of misconduct per 1,000 prison inmates). Average rates of inmate-on-inmate assaults are also two to three times higher than arrest rates for assaults among adults in the U.S. general population (compare to Federal Bureau of Investigation, 2006, 2015).

Incidents of misconduct and assault are not distributed randomly across facilities, however. In most prisons and jails, rates of misconduct and assault are below the national average for these facilities. An assault against a staff member occurs in only 30 percent of prisons and 5 percent of jails. Less than 6 percent of prisons experience a major disturbance — an incident involving serious injury, property damage, or loss of control of a portion of the facility, requiring extraordinary measures to regain control.

Based on self-report data from the 2004 Survey of Inmates in State and Federal Correctional Facilities (BJS, 2007) and the 2002 Survey of Inmates in Local Jails (BJS, 2012a), about 50 percent of prison inmates and 16 percent of jail inmates engage in misconduct during their incarceration. Twelve percent of prison inmates and 3 percent of jail inmates physically assault another inmate, while 3 percent of prison inmates and less than 1 percent of jail inmates physically assault a staff member. These data also show that 15 percent of prison inmates and 7 percent of jail inmates are intentionally injured by another person during their incarceration. Other researchers have found that from 7 percent to 20 percent of prison inmates report that they were violently victimized in the past six months (Wolff, Blitz, Shi, & Bachman, 2007; Wooldredge, 1994, 1998; Wooldredge & Steiner, 2014). In addition, data collected during the 2011-2012 National Inmate Survey (BJS, 2015b) show that approximately 4 percent of prison inmates and 3 percent of jail inmates were sexually victimized in the past year (Beck, Berzofsky, Caspar, & Krebs, 2013). Although these estimates reflect the prevalence of events over different periods of time, it is worth noting that less than 2 percent of the U.S. population age 12 and older experienced a physical assault in the past year, and less than 1 percent were sexually assaulted (Catalano, 2005, 2006; Rand, 2009).

Despite the tenuous nature of some of the comparisons made above, the rate of violence and the likelihood of experiencing violent victimization appear to be higher in correctional facilities than in the U.S. population.¹ The data also suggest that rates of misconduct and institutional violence vary across facilities. Researchers have also found that the likelihood of engaging in misconduct, perpetrating violence, and experiencing violent victimization varies across inmates (e.g., Beck & Harrison, 2010; Camp, Gaes, Langan, & Saylor, 2003; Steiner, 2009; Steiner & Wooldredge, 2008a, 2008b; Wolff et al., 2007; Wooldredge, 1998; Wooldredge & Steiner, 2014). This finding suggests that misconduct and violence are not random processes. That is, differences between inmates and their facility environments contribute to variation in institutional misconduct and violence.

¹ An exception to this conclusion is the likelihood of being a homicide victim. The U.S. homicide rate was 5.6 homicides per 100,000 persons in 2002 (Federal Bureau of Investigation, 2003), while the homicide rate in state prisons was four homicides per 100,000 inmates (Mumola, 2005).

Considerable research has focused on understanding the various individual- and facility-level sources of institutional misconduct and violence. Findings from two recent systematic reviews show that the background characteristics of inmates, their institutional routines and experiences, and the characteristics of the facilities in which they are confined are each relevant to an explanation of misconduct and violence (Steiner et al., 2014; Steiner & Cain, in press). The factors associated with an increased risk of misconduct and violence perpetration are age (younger), a history of antisocial behavior (e.g., drug use, prior criminal justice involvement), antisocial peers or gang involvement, and mental health problems. Other factors include a history of victimization (except for sexual victimization) prior to incarceration, a higher security risk classification, and a sentence of five years or less. Inmates with low self-control and inmates from disadvantaged neighborhoods are at higher risk for misconduct, while inmates incarcerated for a sex offense are less at risk. An inmate's gender (male) and incarcerating offense (i.e., a property offense) also are risk factors for violence perpetration (Steiner et al., 2014; Steiner & Cain, in press).

The institutional routines and experiences linked to a higher risk of misconduct and violence perpetration include a history of misconduct and a greater amount of time served, whereas involvement in prison work is associated with less risk of misconduct and violence. Inmates involved in religion-based programs also are at lower risk for misconduct, but inmates involved in a prison program are at higher risk (Steiner et al., 2014; Steiner & Cain, in press).

Regarding the predictors that an inmate may become a victim of violence while incarcerated, pre-incarceration employment, a higher security risk classification, and a history of victimization prior to incarceration (both physical and sexual) are associated with increased risk for victimization in prison and jail. Some institutional routines and experiences can reduce an inmate's risk. Inmates involved in recreational activities and housed in the general population — and who perceive the institution to be safer and view the institutional staff more favorably — are at lower risk of becoming victims of violence. However, inmates with a history of misconduct are generally at greater risk of victimization (Steiner & Cain, in press).

Facilities that are at risk for higher rates of institutional misconduct and violence (both perpetration and victimization) among inmates include higher-security institutions, those with larger populations, and those with higher densities of black inmates or inmates younger than age 25. Minimum-security facilities typically have lower levels of misconduct and violence. Institutions with higher concentrations of inmates incarcerated for violent offenses have lower misconduct rates. In addition, facilities with a higher density of inmates classified as maximum security, a higher percentage of officers who perceive the facility's rules as underenforced, and facilities in the southern region of the U.S. typically have higher levels of institutional violence (Steiner et al., 2014; Steiner & Cain, in press).

Taken together, the findings from these two reviews of predictors of inmate misconduct and institutional violence highlight that there are numerous inmate background characteristics (e.g., age, criminal history), institutional routines and experiences (e.g., history of misconduct, time served), and facility characteristics (e.g., inmate population, higher security level) that explain variation in institutional misconduct and violence. The relevant background characteristics could be useful in risk- or needs-assessment instruments. Institutional routines and experiences reflect inmates' behavior after incarceration or interventions by correctional officials. Facility characteristics represent either structural characteristics or characteristics of the inmate or staff population (e.g., proportion of black inmates). Information regarding an institution's structural characteristics (e.g., facility security level) might be used by officials involved in facility planning and design. Officials could use information about the composition of inmate or staff populations to help them place particular types of inmates or staff appropriately within a facility.

The Extent of Segregation Use in U.S. Correctional Facilities

Segregation and solitary confinement are terms that describe different types of restrictive housing used in prisons and jails (Browne et al., 2011). Disciplinary segregation, for instance, is typically a short-term punishment for inmates who violate the institution's rules (misconduct). Inmates are sometimes housed in segregation prior to a hearing about a rule violation or while officials determine the best placement for an inmate who is new to the facility (temporary confinement). Inmates deemed a threat to an institution's security are often placed in long-term administrative segregation to remove them from the institution's general population. Protective custody is segregated housing used to keep inmates considered at risk for victimization or self-harm in the general population. Finally, supermax confinement is long-term, restrictive housing typically used for inmates who are deemed a threat to other inmates or staff (Browne et al., 2011). Conditions of confinement in segregated housing vary across states and across types of restrictive housing, but often include placement in cells that are more sterile than those of the general prison population. These conditions may include limited time outside the cell (e.g., one hour per day), restricted social contact with other inmates or staff, limited access to recreational or program opportunities, and restricted opportunities for visitation or telephone calls (Baumgartel, Guilmette, Kalb, Li, Nuni, Porter, & Resnik, 2015; Browne et al., 2011).

Results from a national survey of state departments of corrections conducted by the Liman Program at Yale Law School, in collaboration with the Association of State Correctional Administrators, revealed that 2.5 percent of the custodial population within each state (range = 0.1 percent-7.5 percent) is typically held in segregation for administrative reasons, not including protection or discipline, whereas 6.6 percent of the custodial population within each state is held in some

form of segregation (range = 2.1 percent-14.2 percent) (Baumgartel et al., 2015). Other studies have yielded estimates indicating that from 5 percent to 8 percent of the state prison population is held in some form of segregation (Shames, Wilcox, & Subramanian, 2015).

Data from the 2011-2012 National Inmate Survey (BJS, 2015b) show that nearly 20 percent of prison inmates and 18 percent of jail inmates have lived in some form of segregated housing in the past year (or since coming to their current facility, if less than one year ago). Approximately 10 percent of prison inmates and 5 percent of jail inmates spend 30 days or longer in segregation; however, there is significant variability in the use of segregation across facilities. Less than 10 percent of inmates spend time in segregation in 39.6 percent of prisons and 24.8 percent of jails, whereas more than 25 percent of inmates spend time in segregation in 28.1 percent of prisons and 24.2 percent of jails (Beck, 2015).

The evidence suggests that prison officials use segregation with some frequency, and that a notable percentage of all prison and jail inmates spend time in some form of segregation during their incarceration. Just as the extent of misconduct and institutional violence varies among facilities, the use of segregation also varies across facilities. Several theories, discussed below, reveal why prison and jail officials impose segregation more frequently in response to certain rule violations, for particular inmates, or in particular facilities. An understanding of these theories contributes to a more reasonable explanation of why particular incident, inmate, and facility characteristics may influence officials' use of segregation. Such understanding also may help to curb disparate treatment of inmate groups that may result from officials' decision-making regarding the use of segregation. In addition, two competing theories, described below, address the effects of segregation on inmates' subsequent behavior. They also highlight why particular behavioral consequences may result from placement in segregation.

Theories About How Corrections Officials Use Segregation

Violations of the rules of conduct (misconduct) in a correctional facility are subject to disciplinary procedures that determine guilt and impose punishment (Howard, Winfree, Mays, Stohr, & Clason, 1994; Flanagan, 1982). Disciplinary hearings are closed to the public. Inmates are afforded only minimal procedural protections during the adjudicatory stage of the disciplinary process (Crouch, 1985). Few inmates succeed in challenging the allegations against them (Flanagan, 1982; Thomas, Mika, Blakemore, & Aylward, 1991). The punishment phase within prisons and jails, however, is similar to criminal sentencing. Much like criminal court judges, prison and jail officials can impose a range of sanctions (including segregation) once an inmate has been found guilty of misconduct. The severity of the misconduct typically determines the range of sanctions that can be imposed (Metcalf, Morgan, Olikier-Friedland, Resnik,

Spiegel, Tae, Work, & Holbrook, 2013). Given the similarities between the punishment process within correctional facilities and criminal sentencing, it seems reasonable to discuss the use of disciplinary segregation by considering the theoretical and empirical literature on decision-making during the criminal sentencing process.

Researchers often use two theories to explain why certain factors affect judicial decision-making: causal attribution theory (e.g., Albonetti, 1991; Farrell & Holmes, 1991; Hawkins, 1987) and focal concerns theory (Steffensmeier, Ulmer, & Kramer, 1998). Both are also used to explain the sanctioning decisions of other justice system officials during administrative proceedings (e.g., parole revocation), where offenders have fewer rights than criminal defendants (e.g., Huebner & Bynum, 2006; Lin, Grattet, & Petersilia, 2010; Steiner, Travis, Makarios, & Meade, 2011).

Causal Attribution Theory

Some scholars theorize that justice system officials base sanctioning decisions on their beliefs regarding individuals' prospects for reform (e.g., Albonetti, 1991; Bridges & Steen, 1998). Yet, these officials rarely have all the necessary information regarding individuals' risk of future criminality. To reduce the uncertainty involved in these decisions, officials develop patterned responses shaped by their preconceptions of the personal and environmental causes of criminal behavior (Albonetti, 1991; Bridges & Steen, 1998; Hawkins, 1987), an approach known as causal attribution theory. They may sanction individuals more harshly if they perceive the individuals' actions as more the result of personal, rather than environmental, factors because officials consider these individuals more culpable and, therefore, at higher risk of reoffending (Bridges & Steen, 1998). For instance, the more misconduct — and sanctions received for misconduct — in inmates' pasts, the more culpable they seem because they have demonstrated an unwillingness to respond to previous sanctions. Similarly, the overrepresentation of minorities, men, and younger individuals in the incarcerated population may lead correctional officials to perceive these individuals as more culpable, leading to harsher sanctions for this population (see Wooldredge, Griffin, & Rauschenberg, 2005, for a parallel argument pertaining to judges).

Focal Concerns Theory

Butler and Steiner (in press) applied the focal concerns theory to disciplinary decision-making in prison; this perspective recognizes that, although justice system officials have an interest in controlling crime, they make sanctioning decisions with limited information about offenders' prospects for reform (Steffensmeier et al., 1998; Ulmer & Johnson, 2004; Wooldredge et al., 2005).

To reduce the uncertainty involved in these decisions, officials develop a perceptual shorthand based on stereotypes that they associate with specific individuals and cases (Johnson, 2006; Steffensmeier et al., 1998). However, the focal concerns perspective further theorizes that three domains of reference guide officials: (1) an offender's blameworthiness, (2) an offender's risk to the community, and (3) the practical consequences of the punishment imposed for both the individual and the justice system (Lin et al., 2010; Steffensmeier et al., 1998).

Blameworthiness is associated with the retributive philosophy of punishment, such that an offender's punishment corresponds directly to his or her culpability for the crime and the degree of injury inflicted (Johnson, 2006; Steffensmeier & Demuth, 2000; Steffensmeier et al., 1998). Blameworthiness might be reflected by the severity of the rule violation and the inmate's experience with the disciplinary process. Offenses designated as more severe, for example, generally involve a greater level of culpability and the potential for more significant harm to the victim or the institution (e.g., assault, possession, or manufacture of dangerous contraband) (Flanagan, 1982).

Justice system officials' concerns about an offender's risk to the community are linked to the incapacitation and deterrent functions of punishment, and involve predictions about future dangerousness based on attributions associated with characteristics of the case and the offender (Steffensmeier et al., 1998). The perceptions of prison and jail officials regarding which inmates are at risk for subsequent misbehavior could be shaped by case characteristics such as the nature of offense(s) for which inmates are convicted (e.g., violent versus nonviolent) and individual characteristics such as their violation history, criminal history, and social (e.g., gang involvement) and demographic (e.g., age) background. For instance, corrections officials might consider inmates involved in gangs to be at higher risk of reoffending (e.g., Bales & Miller, 2012; Griffin & Hepburn, 2006).

Practical consequences and constraints associated with the organization and individuals also influence officials' sanctioning decisions (e.g., Johnson, 2006; Steffensmeier et al., 1998; Ulmer & Johnson, 2004). Corrections officials must maintain working relationships in an interdependent justice system (e.g., Dixon, 1995; Eisenstein, Flemming, & Nardulli, 1988; Johnson, 2006; Ulmer & Johnson, 2004), and they also understand the consequences of imposing segregation on particular individuals (e.g., those with dependent children) (Daly, 1987; Griffin & Wooldredge, 2006; Koons-Witt, 2002). For example, they may be less likely to place inmates who are parents in segregation because its more restrictive visitation policies would further disrupt any remaining bond between an incarcerated parent and his or her children (see Cochran & Mears, 2013, for a discussion of the effect of incarceration on the parent-child bond).

Although the perspectives discussed above apply to disciplinary proceedings in prisons and jails, they may also be relevant to decision-making related to

long-term administrative segregation or supermax housing. Inmates are housed in segregation based on the threat they pose to the general prison population. However, these decisions are often made with limited information about the actual threat that an inmate poses to the facility. Prison and jail officials may manage their uncertainty by developing patterned responses — a perceptual shorthand — based on their preconceptions of higher-risk inmates. The practical consequences and constraints of a specific prison or jail bureaucracy may also affect placement decisions.

Theories About the Effects of Time in Segregation on Inmates' Subsequent Behavior

Two opposing theories frame discussions about segregated housing: deterrence theory and labeling/deviance amplification theory. Officials use punitive segregation to punish inmates by isolating them and restricting privileges, believing that time spent in segregation will deter inmates from engaging in misbehavior when they return to the general prison population. Officials expect administrative segregation to both incapacitate inmates and deter them from subsequent misbehavior (Mears, 2013). However, some theorists would predict that sanctions such as punitive or administrative segregation might amplify inmates' tendencies to misbehave (Lemert, 1951; Marx, 1981; Smith & Paternoster, 1990; Wilkins, 1964).

Deterrence Theory

Segregation is, essentially, a prison or jail within a correctional institution (Browne et al., 2011) where inmates are isolated in a single cell, unable to participate in programming, and offered limited social and recreational opportunities (Pizzaro & Stenius, 2004; Riveland, 1999). It is an unpleasant experience that should deter inmates from reoffending (see Nagin, Cullen, & Jonson, 2009, for a parallel discussion pertaining to imprisonment). Deterrence theorists emphasize the importance of the certainty, celerity, and severity of sanctions such as segregation. Individuals' estimates of the certainty of sanctions (such as segregation) and the severity of those sanctions form the basis for their calculation of the costs of offending (Becker, 1968; Grasmick & Bursik, 1990; Nagin & Paternoster, 1993). The celerity with which sanctions are applied affects individuals' associations of sanctions with related behavior (Taxman, Soule, & Gelb, 1999).

Formal policy in most prisons and jails mandates that sanctions be applied with similar certainty and celerity, regardless of the type of rule violated or sanction imposed (Metcalf et al., 2013). However, segregation is more severe than other sanctions, and longer sentences in segregated housing are more severe than shorter terms. Thus, imposing segregation and longer periods of segregation

are expected to deter inmates from misconduct after they return to the general prison population (see Nagin et al., 2009, for a parallel argument regarding imprisonment), and could also deter offenders from reoffending when they are released from prison and return to their home communities (Mears, 2013).

Labeling/Deviance Amplification Theory

In contrast to deterrence theory, proponents of the labeling/deviance amplification perspective (hereafter, deviance theory) would expect exposure to segregation to increase offenders' likelihood of future misbehavior. Inmates often cannot participate in prison programming such as self-help programs while in segregated housing and are often labeled troublesome or problematic (King, Steiner, & Breach, 2008; Riveland, 1999). In turn, inmates may begin to identify with this label, associate with other problematic inmates, and ultimately engage in subsequent misconduct (secondary deviance). The official response to inmates who have served time in segregation may also intensify, increasing the likelihood of subsequent misconduct (Lemert, 1951; Marx, 1981; Wilkins, 1964). Thus, sending an inmate to segregation could increase his or her subsequent misbehavior in prison or jail.

Long-term consequences also may result from the labeling and isolation experienced by inmates exposed to segregation (Haney, 2003; Haney, Weill, Bakhshay, & Lockett, 2016; Smith, 2006; Toch, 2001). In fact, prolonged isolation may result in increased anger, frustration, mental health problems, and an adaptive response to isolated conditions, each of which could amplify the likelihood that offenders will recidivate (Haney, 2003; Haney et al., 2016; Kupers, 2008; Smith, 2006). Such effects also may be particularly evident among offenders exposed to longer periods of segregation.

An Examination of Existing Studies

The preceding discussion underscores the finding that rates of violence are higher in correctional institutions than in the general U.S. population, and that corrections officials often use segregation to control violence and misconduct. Causal attribution theory and focal concerns theory provide explanations for why prison and jail officials may impose segregation for certain rule violations, for particular inmates, or in certain facilities. However, evidence about the applicability of these theories to disciplinary or administrative proceedings in prisons and jails is limited. Officials who use segregation assume that it deters inmates' subsequent misbehavior in prison and jails and may reduce recidivism, but labeling theory would suggest the opposite effects. Few studies have investigated which (if either) of these theories is empirically supported.

To synthesize the existing literature on these topics and identify gaps in the extant research into the use and behavioral effects of segregation, a systematic review of the scientific evidence follows, focusing on four areas:

- Predictors of officials' use of segregation in correctional institutions.
- Effects of segregation on offenders' subsequent behavior (e.g., misconduct).
- Gaps in the research pertaining to the relationship between inmate misconduct, institutional violence, and segregation.
- Directions for future research into the relationship between inmate misconduct, institutional violence, and segregation.

Research Design and Method

As discussed above, segregation describes several types of restrictive housing used in prisons and jails (Browne et al., 2011). This study focuses on the following types of segregation: disciplinary segregation, long-term and temporary administrative segregation, protective custody, and supermax confinement. Distinctions between the types of confinement are made when possible because their goals differ (Browne et al., 2011).

Keyword searches were used to find relevant studies in databases such as the National Criminal Justice Reference Service, PsychInfo/PsychLit, and Sociological Abstracts. The National Institute of Corrections and the National Institute of Justice libraries were searched for technical reports that have not been published in peer-reviewed journals or books. Finally, the references of the relevant articles and reports were examined to determine whether there were additional studies that should be included.

The review was restricted to studies of segregation administered in correctional institutions for adults. The literature review was further restricted to only those studies that focused on offenders' subsequent behavior as it related to the effects of segregation. The criteria excluded studies of segregation used in juvenile facilities and those that examined the effects of segregation on nonbehavioral outcomes, such as mental health. The review also excluded studies that provided only a description of the population sent to segregation or the extent of a particular behavior found among individuals exposed to segregation (e.g., McGinnis, Austin, Becker, Fields, Lane, et al., 2014). Finally, the review was restricted to studies published after 1974, when the U.S. Supreme Court's decision in *Wolff v. McDonnell* altered the disciplinary process in most state and federal correctional facilities (Babcock, 1981).

Findings

The review revealed 26 studies, 10 of which focused on the predictors of officials' use of segregation; the remaining 16 studies examined its behavioral effects. Among the studies of the predictors of officials' use of segregation, eight focused on the use of disciplinary segregation. Of the remaining two, one study examined the predictors of placement in long-term administrative segregation; the other focused on supermax confinement.

Three studies examined the effect of disciplinary segregation on subsequent inmate behavior, and three others assessed the relationship between the rate at which disciplinary segregation is used and rates of misconduct and violence. Seven studies focused on the effects of supermax confinement: four examined the effects of supermax confinement on offender behavior and three focused on the effects of supermax confinement on levels of violence. Finally, three studies assessed the effects of any type of administrative segregation on offender behavior.

Predictors of How Corrections Officials Use Segregation

Disciplinary segregation is used in correctional facilities to respond to inmates who commit a violent act or chronically violate the institutions' rules (misbehave), whereas long-term administrative segregation is for inmates who cannot live in the general prison population because they pose a threat to the safety of other inmates, staff, and the institution (Browne et al., 2011; Riveland, 1999). Ten studies focused on the predictors for placement in segregation, but many of these studies are dated, and their samples and analytical techniques vary considerably. Although the findings are discussed here, the literature base is not sufficient to determine whether the appropriate factors, such as violent misconduct, affect corrections officials' decisions to place inmates in segregation or whether these officials administer segregation equitably.

Most researchers discovered that inmates found guilty of more serious offenses and inmates with longer histories of misconduct are more likely to be placed in segregation (e.g., Butler & Steiner, in press; Crouch, 1985; Flanagan, 1982; Lindquist, 1980; Schafer, 1986), although Howard and colleagues (1994) did not find such effects. Some researchers found that younger inmates are placed in segregation more frequently than are older inmates (Butler & Steiner, in press; Flanagan, 1982; Lindquist, 1980), but Howard and colleagues (1994) found a nonsignificant age effect. Butler and Steiner (in press), Lindquist (1980), and Stephan (1989) found that women are less likely to be placed in segregation than are men, whereas McClellan (1994) found the opposite to be true — that women are more likely to be placed in segregation. Howard and colleagues (1994) found a nonsignificant gender effect. No studies of disciplinary segregation have uncovered significant race effects (Butler & Steiner, in press; Crouch, 1985; Flanagan, 1982; Howard et al., 1994; Lindquist, 1980; Stephan, 1989). No other

variables were examined frequently enough to draw meaningful conclusions. It is also worth reiterating that there was considerable variability in the samples and analytical techniques used across these studies. Howard and colleagues (1994), for instance, examined cases processed in a federally operated prison, whereas Butler and Steiner (in press) and others examined cases from state-operated prisons (Crouch, 1985; Flanagan, 1982; Lindquist, 1980; McClellan, 1994; Stephan, 1989). Some analyses involved only one control variable (Flanagan, 1982; Lindquist, 1980; McClellan, 1994), whereas Butler and Steiner (in press), Crouch (1985), and Howard and colleagues (1994) included at least 10 variables in their multivariate analyses.

O’Keefe (2007) examined the factors associated with placement in long-term administrative segregation in Colorado. She found that men, Hispanic inmates, those incarcerated for a violent offense, inmates with a mental illness, members of security threat groups, those with a higher number of disciplinary infractions, and those often placed in disciplinary segregation were more likely to be placed in administrative segregation. Neither inmates’ risk/need scores nor their education levels predicted segregation placement.

When Mears and Bales (2010) assessed the predictors of placement in supermax confinement in Florida, they found that certain inmates were more likely to be confined: younger inmates, those incarcerated for a violent offense, those with a higher number of prior violent convictions or a higher number of prior escape convictions, those who had served more time, and those with a higher number of disciplinary infractions for violent behavior, defiant behavior, or contraband. Inmates’ race, ethnicity, and number of prior convictions and disciplinary infractions for threat behavior had no effect on supermax placement.

Although it is difficult to draw substantive conclusions from the limited number of studies available, a few general patterns emerge. First, regardless of the type of segregation used, officials base their decisions on inmates’ criminal histories and institutional misbehavior. Inmates convicted of more serious offenses (e.g., violent), those with more significant prior records, and those with a history of serious (e.g., violent) or chronic institutional rule violations are more likely to be placed in segregation. Second, most studies found that racial and ethnic minorities are no more likely to be placed in segregation than are white inmates. Taken together, these findings suggest that corrections officials use segregation for inmates with a history of serious or chronic institutional misbehavior, or for inmates who pose a risk to the safety of an institution. However, some extralegal factors (e.g., age, mental illness) also affect corrections officials’ use of segregation.

Effects of Segregation on Offenders’ Subsequent Behavior

The 16 studies of the effects of segregation on offenders’ behavior differ significantly by research design and in the participants and outcomes examined.

Although a number of studies are methodologically strong, the paucity of research on this topic prevents any determination of whether segregation deters, amplifies, or has no effect on offenders' subsequent misbehavior (e.g., violence). Nonetheless, the relevant findings are reviewed here.

Wolff, Morgan, and Shi (2013) examined the effect of disciplinary segregation on aggression among men and women in prisons in a single state who would be released within the next 24 months. They found that the more days that men spent in segregation, the more their aggression increased; however, there was no significant effect on aggression in women. Labrecque (2015) assessed the effect of disciplinary segregation and its duration on different types of misconduct (e.g., violent, drug) among Ohio inmates who had spent at least one year in prison and served time in disciplinary segregation. He found that neither placement nor length of time in segregation affected inmates' subsequent misconduct. He also found that gang members and inmates with mental health problems who were placed in segregation — or spent more time there — were more likely to commit subsequent misconduct and to do so more frequently. Morris (2016) found that when Texas inmates who had served at least three years in prison were placed in disciplinary segregation for violent misconduct, the placement had no effect on subsequent violent misconduct or the amount of time to their next violent act. Other scholars have examined the effect of an institution's rate of disciplinary segregation use on its rates of misconduct and violence (Huebner, 2003; Steiner, 2009; Wooldredge & Steiner, 2015). For the most part, these studies show that using disciplinary segregation does not have a significant effect on inmates' rates of misconduct or violence.

Researchers who have examined the effect of supermax confinement on recidivism have found that placement in supermax confinement has no effect on recidivism (Lovell & Johnson, 2004; Lovell, Johnson, & Cain, 2007; Mears & Bales, 2009; Butler & Steiner, in press). However, Lovell and Johnson (2004) and Mears and Bales (2009) found that offenders placed in supermax confinement in Washington and Florida had higher rates of violent recidivism than did offenders who did not spend time in segregation. Offenders released from prison directly from supermax confinement in Washington were more likely to reoffend than were offenders not exposed to supermax confinement (Lovell et al., 2007), but offenders in Florida were not (Mears & Bales, 2009).

Briggs, Sundt, and Castellano (2003) examined the effect of opening supermax prisons in Arizona, Illinois, and Minnesota on rates of systemwide inmate-on-inmate and inmate-on-staff assaults. They found that opening the new facilities had no effect on rates of inmate assaults on other inmates. Briggs and colleagues (2003) found that the rate of inmate assaults on staff did not change in Minnesota, whereas Arizona experienced a temporary increase and Illinois experienced a permanent decrease. A subsequent study by Sundt, Castellano, and Briggs (2008) revealed no change in the rate of inmate-on-inmate assaults in Illinois, but the rate of inmate-on-staff assaults decreased. Dye (2010) examined

data collected from state and privately operated prisons via the 2000 Census of State and Federal Correctional Facilities. She found that supermax prisons had a greater number of suicides than did minimum-security prisons.

Motiuk and Blanchette (2001) assessed the effect of placement in any type of administrative segregation on recidivism among Canadian offenders. They found that those with time in administrative segregation were more likely to return to custody after they were released. They were also more likely than offenders not placed in segregation to return for a new offense. Lanes (2009) examined the effects of protective custody and long-term administrative segregation on self-injuring among Michigan inmates. He found that protective custody had no effect on inmates' self-injuring behavior, but that inmates housed in administrative segregation were more likely to self-harm. When Kaba and colleagues (2014) assessed self-harm among inmates in a New York jail, they found that the likelihood of self-harm, and potentially fatal self-harm, was higher among inmates exposed to solitary confinement.

In conclusion, the limited evidence suggests that exposure to any type of segregation does not affect offenders' misbehavior while in correctional facilities (e.g., misconduct), and has little to no effect on their behavior after release from prison (e.g., recidivism). A greater use of segregation (e.g., disciplinary housing, supermax housing) is not associated with reductions in facility or systemwide misconduct and violence. However, exposure to segregation increases the risk of self-harm among inmates, and supermax facilities experience more suicides than do minimum-security facilities.

Discussion

Institutional safety is a high priority for correctional administrators, but inmate misconduct and violence threaten the safety and order of an institution (DiIulio, 1987; Gendreau et al., 1997; Steiner & Wooldredge, 2009). Segregation is an intervention used by correctional administrators in response to inmate misconduct or violence. Administrators also use segregation to isolate violence-prone or problematic inmates from an institution's general population (Browne et al., 2011; Riveland, 1999). Yet, few studies have examined the factors that affect the use of segregation or whether it is effective in reducing offenders' subsequent problem behaviors (e.g., misconduct, violence). To synthesize the extant research pertaining to these topics and provide direction for future research, the reviewers systematically assessed the evidence pertaining to the use of segregation and to the effects of segregation on offenders' subsequent behavior.

The reviewers found 26 studies: 10 focused on the predictors of officials' use of segregation, and 16 examined segregation's effects on offender behavior. These studies reveal that, regardless of the type of segregation used (e.g., disciplinary, administrative), corrections officials place inmates convicted of more serious

offenses (e.g., violent), those with more significant criminal records, and those with more rule infractions in segregation more frequently than inmates with less significant criminal histories and fewer institutional infractions. The evidence also showed that inmates who are members of racial and ethnic minority groups are no more likely than white inmates to be placed in segregation. Thus, corrections officials are using segregation primarily for inmates with histories of serious or chronic institutional misbehavior and those who pose a risk to the safety or security of an institution.

It is important to reiterate that these conclusions are derived from only 10 studies that focused on different types of segregation. Moreover, many of the studies are dated (e.g., Crouch, 1985; Flanagan, 1982; Howard et al., 1994; Lindquist, 1980; McClellan, 1994; Schafer, 1986; Stephan, 1989) and are limited to relatively small samples of men or women processed in one or two facilities (e.g., Crouch, 1985; Lindquist, 1980; McClellan, 1994; Schafer, 1986). Prison and jail populations have increased dramatically over the past several decades, and the percentage of minority and female inmates is notably higher today than in the 1970s, 1980s, or 1990s (Blumstein & Beck, 2005). Therefore, it may no longer be appropriate to generalize results gleaned from earlier work to inmates processed in contemporary correctional environments. Examination of data collected from small samples from one or two facilities also limits the ability to generalize study results and has prevented researchers from including adequate control variables in their statistical models. Moreover, some of the samples examined were selected for other purposes (e.g., behavior patterns of long-term inmates); therefore, they are not representative of the inmates who violated prison rules in the respective facilities. Finally, no studies have examined the predictors of officials' use of segregation in jails; all 10 studies have focused on prison officials' decision-making.

The primary implication of the findings from this review of the research on the predictors of officials' use of segregation is that there simply have not been enough studies related to this topic to draw any meaningful conclusions. As noted above, only 10 studies of the predictors of officials' use of segregation have been conducted in the past 40 years. Many studies are outdated, lack scientific rigor, and have limited generalizability. An understanding of the relationship between institutional misconduct, violence, and segregation requires an evidence base of the factors that influence corrections officials' decisions to use segregation. Although segregation is designed for inmates who have a history of serious or chronic institutional misbehavior, or inmates who pose a risk to the safety or security of an institution (Browne et al., 2011; Riveland, 1999), it is unclear whether segregation is being used for only these inmates. The equitable use of segregation is of high importance to correctional administrators, civil rights advocates, the U.S. Congress, and President Obama, but it is unclear whether corrections officials use it equitably. If corrections officials use segregation inappropriately, or if disparate treatment of offender groups results from its use, some offender groups may endure a harsher confinement experience than others. This unfair treatment can also undermine the legitimacy

of a prison organization, which could influence inmates' willingness to defy prison rules and those of other legal authorities (Liebling, 2004; Sparks, Bottoms, & Hay, 1996; Useem & Kimball, 1989).

This review finds that, for the most part, placement in any type of segregation does not affect offenders' likelihood of institutional misconduct or their recidivism after their release from prison. In addition, using segregation at a higher rate or opening a supermax facility has little effect on rates of misconduct and violence across facilities or state prison systems. However, placement in segregation does increase inmates' risk for self-harm (e.g., mutilation), and supermax facilities tend to have more suicides than do minimum-security facilities.

It is also worth noting that the conclusions drawn here were based on only 16 studies. These studies focused on different types of segregation (e.g., disciplinary segregation versus supermax confinement), different outcomes (e.g., misconduct versus self-harm), and different levels of analysis (e.g., individual versus facility). In addition, some of the samples were collected for other purposes (e.g., offenders under post-release supervision), so they may not accurately represent the inmate populations needed for these studies. Moreover, only one study examined the effects of segregation on jail inmates' behavior.

Once again, 16 studies across 40 years is too small an evidence base to inform practice. In particular, these studies were conducted at different levels of analysis, focused on different types of segregation, and examined different outcomes. An understanding of the relationship between institutional misconduct, violence, and segregation requires an evidence base related to the behavioral effects of exposure to different types of segregation. Corrections officials use segregation to reduce inmates' problem behaviors (e.g., misconduct), but it is unclear whether it achieves this objective. The frequency with which segregation is used in prisons and jails — coupled with the desire of correctional administrators, civil rights advocates, the U.S. Congress, and President Obama for it to be used effectively — requires a knowledge base of the behavioral effects of the different types of segregation.

The limited research into the factors that affect corrections officials' use of segregation or the effects of segregation on offender behavior means that it is difficult to draw conclusions regarding the empirical support for the theories discussed above. Some study findings of corrections officials' decision-making regarding the use of segregation seem to support both causal attribution theory and the focal concerns perspective discussed in this paper. Offenders with more significant criminal and misconduct histories, for example, would be considered more blameworthy and a greater risk to institutional safety. On the other hand, the findings regarding the effect of an inmate's race and ethnicity would not support these perspectives. Findings pertaining to the nonsignificant effects of segregation on subsequent misbehavior also do not support deterrence theory or labeling/deviance amplification perspectives. There are simply too few studies of either the use or behavioral effects of segregation to draw any meaningful

conclusions about the applicability of these theories. However, these perspectives may be useful for guiding future research.

Several limitations of this study should be noted. Each potential limitation stems from differences between the studies reviewed herein. Some limitations of the studies included in the review are compounded by a synthesis of the findings from those studies. First, some researchers who examined the predictors of corrections officials' use of segregation included a large number (e.g., "more than 10") of variables in their final models, while others examined only the relative effects of a few variables. Differences in the number of variables included in models could contribute to study differences in scientific rigor (e.g., tenth-order partial correlation versus a third-order partial correlation). Second, some researchers who studied the effects of segregation on offender behavior used rigorous, quasi-experimental designs to match segregated inmates to inmates not exposed to segregation, while other researchers relied on multivariate regression analysis to control for observed differences between these two groups. Differences in the scientific rigor between these two types of studies may have influenced the findings. Finally, the findings were derived from the results of studies that involved different sample sizes and, occasionally, samples of different subpopulations (e.g., men) of the relevant inmate population (jail or prison). However, the findings from each study were evaluated equally in this review.

Setting aside the limitations discussed above, this white paper is the most comprehensive review to date of the evidence related to the use and behavioral effects of segregation. Although the review uncovered some consistent patterns across the results of the studies included here, the data are not sufficient to place much faith in the findings. To be sure, the most important finding is the dearth of rigorous scientific research on these topics. The gaps in the research pertaining to the use of segregation and its effects on offender behavior are clear; additional research should be devoted to each of these topics. An understanding of the link between institutional misconduct, violence, and segregation requires knowledge of the types of offenses (e.g., violent) and offenders (e.g., those with more significant criminal histories) that influence corrections officials' decisions regarding their use of segregation, and whether segregation affects inmates' likelihood of perpetrating subsequent misconduct or violence. Once an evidence base related to the predictors of the use and behavioral effects of segregation is developed, future studies might pursue more nuanced topics related to the practice. Some avenues for future research are discussed below.

Conclusions and Directions for Future Research

Prison and jail officials are responsible for protecting society from the incarcerated population, but they are also legally responsible for protecting the individuals confined in their institutions (Park, 2000). Incarcerating people in prisons and jails, however, essentially gathers together people and property that

are potential targets and persons who are likely to offend (Wooldredge & Steiner, 2014). Indeed, rates of violence and violent victimization are higher in correctional facilities than in the general U.S. population, and corrections officials often respond to this violence and misconduct (or the threat of it) by using segregation to maintain order and safety. At any time, between 5 percent and 8 percent of the state prison population is held in some form of segregation (Baumgartel et al., 2015; Shames et al., 2015). At least 20 percent of prison inmates and 18 percent of jail inmates spend time in segregation during their incarceration (Beck, 2015), yet scholars know very little about the incidents, inmates, and facility characteristics that affect the use of segregation or whether segregation is effective in reducing problem behaviors (e.g., misconduct, recidivism).

This systematic review of the evidence found that, regardless of the type of segregation designated (e.g., disciplinary, administrative), corrections officials use segregation primarily for inmates with a history of serious (e.g., violent) or chronic institutional misconduct or those who pose a risk to the institutions' safety or security. The researchers also found evidence that placement in segregation has no effect on offenders' subsequent misbehavior (e.g., misconduct, recidivism), but that offenders placed in segregation are more at risk for self-harm. These findings should be interpreted with caution, however, given the relatively small number of studies conducted on these topics. The researchers also observed numerous limitations of these studies and between-study differences in the research methods used, which further lessens any confidence in the results. However, the review did uncover some important gaps in the evidence base from which the following questions were identified for future research.

1. What are the predictors of corrections officials' use of segregation?

Over the past 40 years, only 10 studies have examined the factors that influence corrections officials' decisions to use segregation; eight of those studies focused on disciplinary segregation. Most of this research is dated and has limited generalizability.² This review finds a clear need for research into the factors that influence corrections officials' decision-making related to the use of segregation.

The equitable use of segregation is of high importance to correctional administrators, civil rights advocates, the U.S. Congress, and President Obama,

² Prison and jail populations have increased dramatically over the past several decades (Blumstein & Beck, 2005; Western, 2006), so it may no longer be appropriate to generalize the results to inmates processed in contemporary prison and jail environments. Many of the studies also involved analysis of data collected from small samples drawn from one or two facilities, which limits the generalizability of study results and prevents researchers from including adequate control variables in their statistical models or from examining potential facility-level effects. Furthermore, some samples were selected for other purposes (e.g., the examination of behavior patterns of long-term inmates), so they do not represent the population of inmates who violated prison rules in the respective facilities.

but it is unclear whether corrections officials use segregation equitably. For instance, segregation is designed for inmates who have a history of serious or chronic institutional misbehavior or inmates who pose a risk to institutional safety (Browne et al., 2011; Riveland, 1999), but there is not enough evidence to determine whether segregation is being reserved for these inmates. If corrections officials use segregation improperly, or if disparate treatment of offender groups results from its use, then some inmate groups may endure a harsher confinement experience than will others. This unfair or disparate treatment can also undermine the legitimacy of a correctional organization, which could influence inmates' willingness to defy institutional rules and those of other legal authorities (Liebling, 2004; Sparks et al., 1996; Useem & Kimball, 1989).

Moving forward, researchers should focus on the factors that affect corrections officials' use of each type of segregation: disciplinary segregation, long-term administrative segregation, protective custody, temporary confinement, and supermax confinement. Researchers should also collect reasonably sized, representative samples of inmates who violate the rules of a corrections facility. Existing research should guide the selection of predictor variables to be considered in future studies, but given the parallels between the disciplinary process in correctional facilities and the criminal sentencing process, researchers might also draw on the theories discussed above, which have often been applied to criminal sentencing (e.g., focal concerns theory). Furthermore, these perspectives have already been used to explain sanctioning decisions made by other justice system officials during administrative proceedings (e.g., parole revocation) where offenders enjoy fewer rights than criminal defendants, including prison disciplinary proceedings (e.g., Butler & Steiner, in press; Huebner & Bynum, 2006; Lin et al., 2010; Steiner et al., 2011). Applying causal attribution theory or the focal concerns perspective to the punishment process in correctional institutions permits an assessment of whether these theories are general to decision-making related to criminal punishment. The theories also contribute to a more reasonable explanation of why particular incidents, inmates, and facility characteristics may influence officials' use of segregation. Such an understanding could lead to strategies designed to curb disparate treatment of inmate groups that may result from officials' decision-making regarding the use of segregation.

Finally, researchers might consider conducting multisite studies to increase the generalizability of their results and to permit analysis of facility-level effects, but only if inmates from enough facilities are included. Research on criminal courts has uncovered various sentencing outcomes across court organizations (Eisenstein et al., 1988; Ulmer, 2012; Ulmer & Johnson, 2004; Wang & Mears, 2010), and similar variation in case outcomes may exist across prisons (Butler & Steiner, in press).

2. Do an inmate's gender, race, or ethnicity moderate the effects of predictors of corrections officials' use of segregation?

Prison and jail populations have increased dramatically over the past several decades. The percentage of racial and ethnic minorities and female inmates is notably higher today than in the 1970s, 1980s, or 1990s (Blumstein & Beck, 2005; Western, 2006). Yet, no studies have examined the moderating effects of gender, race, and ethnicity on the influences of corrections officials' use of segregation, even though such examinations are relatively common in studies of judicial sentencing decisions (e.g., Baumer, 2013; Brennan, 2006; Brennan & Spohn, 2009; Griffin & Wooldredge, 2006; Steffensmeier & Demuth, 2006; Wooldredge et al., 2005). There may be race, ethnic, or gender group differences in the effects of particular case (e.g., violent offense) or individual characteristics (e.g., misconduct history) on officials' decisions to use segregation. Indeed, researchers of criminal sentencing outcomes have uncovered these hidden disparities (e.g., Griffin & Wooldredge, 2006; Steffensmeier & Demuth, 2006; Wooldredge et al., 2005). However, evidence that an inmate's gender, race, and ethnicity can have a moderating effect on corrections officials' use of segregation is nonexistent.

The equitable use of segregation is of high importance to correctional administrators, civil rights advocates, the U.S. Congress, and President Obama. An examination of whether an inmate's gender, race, or ethnicity moderates the effects of the predictors of segregation use would shed light on possible hidden disparities in corrections officials' use of segregation. Determining whether these disparities exist is important for understanding the relationship between institutional misconduct, violence, and segregation. For instance, if committing a violent misconduct is associated with placement in segregation, then this relationship should be similar in magnitude for men and women, and across different racial and ethnic groups. If the magnitude of the violent misconduct-segregation relationship differs across these groups, then there are unwanted disparities in the treatment of some inmate groups. Such unfair or disparate treatment of inmate groups can undermine the legitimacy of a correctional organization, which could influence inmates' willingness to defy institutional rules and those of other authorities (Sparks et al., 1996; Useem & Kimball 1989).

3. What are the effects of segregation on inmate behavior?

Over the past four decades, only 16 studies were conducted regarding the effects of segregation on inmate behavior. They examined the effects of different types of segregation (e.g., disciplinary, long-term administrative segregation), different outcomes (e.g., recidivism, self-harm), and different levels of analysis (e.g., individual, state). In some, the samples were collected for other purposes, so they do not accurately represent the inmate populations needed for these studies.

Institutional misconduct and violence threaten the safety and order of a correctional institution. Corrections officials frequently respond to these behaviors by placing inmates in segregation. A notable percentage of inmates are held in segregation at any given time, and a significant number of inmates spend some time in segregation during incarceration (Baumgartel et al., 2015; Beck, 2015; Shames et al., 2015); yet, few studies have assessed whether segregation is effective in reducing offenders' problem behaviors. There is a clear need for studies that examine the effects of different types of segregation (e.g., disciplinary segregation, long-term administrative segregation) on offender behavior.

An experimental design for such a study is not possible for ethical reasons — inmates cannot be randomly assigned to segregation (Mears, 2008, 2013; O'Keefe, 2008). Instead, researchers should examine large samples of inmates who are eligible for segregation, and should consider using rigorous quasi-experimental designs that involve matching techniques (e.g., propensity score matching) to estimate the effects of segregation on offender behavior. Researchers should also focus on different behavioral outcomes, including those that tap subsequent criminality (e.g., misconduct, recidivism), along with other measures of institutional violence (e.g., self-harm).

An understanding of the behavioral effects of segregation would help to determine whether the theories discussed above (e.g., deterrence) could be applied to its use in prisons and jails. Knowledge about whether segregation — or different lengths of segregation — will deter or amplify an offender's problem behaviors (e.g., misconduct, violence) would be immediately useful to corrections officials who rely on segregation to regulate inmate behavior in their facilities. If segregation is effective in curbing inmate misconduct, for example, then corrections officials might use it more often. Similarly, if five days in segregation has the same misconduct-reducing effect as 10 days, then corrections officials might reduce the time that inmates spend in segregation. These are critical questions for both theory and practice, but the current evidence base is insufficient for drawing conclusions.

4. Are there inmate and facility characteristics that moderate the effects of segregation on inmate behavior?

Labrecque (2015) observed that the effects of disciplinary segregation and length of time spent there were affected by inmate mental health and gang involvement. That is, inmates with mental health problems and inmates involved with gangs who were placed in segregation, or spent longer periods in segregation, were more likely to commit subsequent misconduct and to do so with greater frequency. Other studies of possible moderating effects are nonexistent, however. Researchers who have examined the effects of criminal justice sanctions (e.g., arrest, prosecution) on recidivism have discovered that sanctions are more effective with individuals who are good risks or those who have a greater stake in conforming (e.g., Berk, Campbell, Klap, & Western, 1992; Dejong, 1997;

Sherman, Smith, Schmidt, & Rogan, 1992; Thistlethwaite, Wooldredge, & Gibbs, 1998; Wooldredge & Thistlethwaite, 2002). It seems reasonable, therefore, that particular groups of inmates (in addition to those with mental health problems and gang involvement) may be at higher risk for subsequent misbehavior or maladjustment from being placed in segregation. However, inmates with other characteristics may have a lower risk of misbehavior or maladjustment after time in segregation. In addition, a multisite study could uncover facility characteristics that influence the effects of segregation on inmate behavior. All of these avenues are fruitful areas for future inquiry. Researchers might begin by examining the potential moderating effects of the causes and correlates of inmate misconduct and violence identified by the recent systematic reviews of the literature discussed above (Steiner et al., 2014; Steiner & Cain, in press).

Information pertaining to differential effects of segregation on inmate behavior could be important for informing both theory and practice. From a theoretical perspective, a finding that inmate or facility characteristics moderate the behavioral effects of segregation would align with researchers' findings related to conditional deterrent effects in the broader criminological literature (e.g., Berk et al., 1992; Dejong, 1997; Sherman et al., 1992; Thistlethwaite et al., 1998; Wooldredge & Thistlethwaite, 2002). Practitioners could use this information to determine which inmates might be more suitable for segregation, rather than an alternative sanction. The importance of institutional safety to corrections officials underscores the need for research that not only identifies whether sanctions such as segregation are effective in curbing misconduct and violence, but also whether these sanctions are more effective or less effective for particular inmates or in particular facility environments.

5. What are the predictors of officials' use of segregation in jails, and of the effects of jail segregation on individuals' subsequent behavior?

Although each of the questions for future research identified above applies to prisons, each also applies to jails, and the need for this research in jails merits additional discussion (see also Haney et al., 2016). This is not to say that research in jails should take priority over research in prisons. It is only to reiterate that the findings from this review suggest that research into segregation use in jails is considerably more scarce than similar research into its use in prisons. In fact, only one study included in this review focused on jail inmates.

Approximately one-third of the U.S. incarcerated population is confined in local jails. The volume of people who enter jails each year is far greater than the number who enter prisons (Glaze & Kaeble, 2014). Nearly one-fifth of jail inmates spend time in some form of restrictive housing during incarceration (Beck, 2015); yet, this review uncovered no studies of the predictors of officials' use of segregation in jails and only one study of the behavioral effects of jail segregation. To paraphrase Haney and colleagues (2016:131), segregated housing

in jails is among the least-studied components of the criminal justice system, even though jails affect more people per year than do prisons and segregation is experienced by a significant percentage of people incarcerated in jails. More research on this topic is clearly needed. Study findings pertaining to the use of segregation in jails and the effects of jail segregation on individuals' subsequent behavior (e.g., misconduct, violence) could provide useful insights for practitioners working within jails.

In conclusion, institutional misconduct and violence threaten the safety and order of a correctional facility, making both behaviors high priorities for correctional administrators (DiIulio, 1987; Gendreau et al., 1997; Steiner & Wooldredge, 2009; Steiner et al., 2014; Toch & Grant, 1989). Corrections officials often use segregation in response to inmate misconduct and violence, expecting the experience to regulate inmate behavior and promote order and safety within their institutions (Browne et al., 2011; DiIulio, 1987; Reassessing Solitary Confinement II, 2014). If segregation is used in response to serious (e.g., violent) or chronic institutional misconduct and is effective in curbing institutional misconduct and violence, then there is a logical relationship when an inmate's misconduct and violence (or a propensity to engage in these behaviors) initiates the use of segregation, which in turn reduces these problem behaviors. If other factors (e.g., age, mental health) initiate the use of segregation or exposure to segregation amplifies an inmate's risk for perpetrating misconduct or violence, then the relationship is less straightforward.

This systematic review of the literature finds that corrections officials use segregation primarily for inmates who have a history of serious (e.g., violent) or chronic institutional misconduct, or for those who pose a risk to the safety or security of an institution. It also reveals that exposure to segregation has no effect on offenders' subsequent misbehavior (e.g., misconduct, violence, recidivism), but does increase their risk for self-harm. It is also clear that very few studies have examined the factors that affect the use of segregation or its effectiveness in reducing inmates' problem behaviors (e.g., misconduct). These are clear gaps in the knowledge base related to the relationship between institutional misconduct, violence, and segregation. This review identifies important questions for future research in light of the emphasis that correctional administrators place on institutional safety (Gendreau et al., 1997; Steiner & Wooldredge, 2009; Steiner et al., 2014), how frequently segregation is used to promote safety (Beck, 2015), and how much additional cost is involved in housing inmates in segregation relative to housing the general prison population (e.g., American Civil Liberties Union of Texas, 2015; Briggs et al., 2003; Butler, Steiner, Makarios, & Travis, in press; Metcalf, Resnik, & Quattlebaum, 2015; Shames et al., 2015). The equitable and effective use of segregation is also a high priority for civil rights advocates, the U.S. Congress, and President Obama (e.g., Amnesty International, 2014; Reassessing Solitary Confinement II, 2014; Obama, 2015; U.S. Senate Committee on the Judiciary, Subcommittee on the Constitution, Civil Rights and Human Rights, 2014), and so the need for this research is great.

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