Colorado Department of Corrections
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Analysis of Colorado's Administrative Segregation

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EXECUTIVE SUMMARY

Born out of the necessity to provide safety to the public, staff, and inmates, prison systems have rapidly expanded the use of administrative segregation or supermax facilities. In 1983, the federal system opened the first modern-day supermax; by 1999, 32 states were operating or planned to open supermax facilities (National Institute of Corrections, 1997). Supermax facilities, based on the consolidation model of concentrating the most dangerous criminals together (Hershberger, 1998), provide tight controls to ensure reductions in violence and serious prison disruptions.

The nature of administrative segregation, primarily solitary confinement, has alarmed many individuals and groups, including the Human Rights Watch (1997, 2000). Still, greater concern is devoted to the belief that solitary confinement is psychologically damaging to mentally ill inmates. Further speculation holds that solitary confinement may even produce symptoms of mental illness in inmates who had no mental health symptoms when they were placed in administrative segregation.

The constitutionality of administrative segregation has been challenged many times over in courts. Although judges have vocalized their contempt for long-term solitary confinement, none determined that supermax facilities violate the "cruel and unusual punishment" clause of the Eighth Amendment. In brief, courts have generally deemed administrative segregation unsuitable for many types of inmates, such as mentally ill, developmentally disabled, or mere nuisance inmates.

There exists no empirical evidence that supermax confinement either is or is not psychologically harmful. Despite the preponderance of supermax literature, it is largely theoretically driven rather than empirically based. The extreme polarity among researchers reveals their inherent biases, making it nearly impossible to draw meaningful conclusions from the literature. There exists a void of even basic statistics on supermax inmates; even less is known about the psychological profiles of inmates confined to supermax.

The present study seeks to inform the design for a subsequent prospective research project while providing basic statistics about Colorado administrative segregation. This study first compared Colorado Department of Corrections' (CDOC) administrative segregation population to the overall prison population, across demographic characteristics, criminal history, institutional behavior, needs levels, and standardized psychological assessments. The purpose was to understand who are the inmates serving their sentences under administrative segregation conditions. Secondly, this study included a longitudinal design to examine length of stay, return to administrative segregation, recidivism rates, and institutional behavior. Finally, an analysis of administrative segregation hearings was conducted.

Study 1: Population Comparisons

The present study compared 981 administrative segregation inmates to the overall prison population (*N* = 16,171), excluding inmates under community supervision. Administrative segregation inmates were identified through classification levels on June 30, 2003. Demographic, criminal history, and needs assessment data were obtained from administrative information in the CDOC database.

- **Demographics**. Compared to the general prison population, inmates in administrative segregation were more likely to be male, Hispanic, younger, and not married.
- **Criminal History**. Inmates in administrative segregation were more likely to be violent, have longer incarcerations, and have higher Level of Service Inventory – Revised (LSI-R) scores.
- **Pre-segregation Custody Levels**. Prior classification levels were 70% close custody, 17% medium, 8% maximum (new cases or parole violators), 4% minimum-restrictive, and 1% minimum.
- **Institutional Behavior**. Administrative segregation inmates had more than triple the rate of disciplinary infractions and punitive segregations than general population inmates. Administrative segregation inmates accounted for 24% of the disciplinary violation even though they represent only 6% of the population.
- **Needs**. Inmates in administrative segregation presented with greater needs in psychological, mentally retarded / developmentally disabled, assaultive, and self-destruction areas.
- **Security Threat Group (STG)**. The incidence of STG involved inmates in administrative segregation was 66% versus 26% in the general population. There were fewer inmates involved with

Crips, White Supremacists, and Bloods in administrative segregation than in population, but more Surenos-13, Gallant Knight, and Prison Gang. STG involved inmates have equal or less needs than other inmates in administrative segregation.

- **Offenders with Mental Illness (OMI)**. OMIs not only appeared at a greater rate in administrative segregation, but they were found to have more serious psychiatric symptoms than the mentally ill in the general population. In addition to their mental health needs, this group presented with greater academic, vocational and medical needs.
- **Primary Determinants of Placement.** A logistic regression was conducted to determine offender characteristics that might predict administrative segregation placements. STG involvement was the strongest predictor; the odds ratio indicated that inmates with STG involvement were 4.5 times more likely to be placed in administrative segregation than those with no involvement. Violent, Hispanic, single, and OMI inmates had significantly greater odds of such a placement than inmates without those traits.

Study 2: Longitudinal Analysis

The longitudinal sample consisted of 3,003 inmates who were placed in administrative segregation between January 1995 and December 2003. All data were downloaded from the CDOC administrative database.

- **Segregation Durations**. The median length of stay in administrative segregation was 18.83 months. OMIs had shorter durations than inmates with no diagnosis, while STG members had longer durations than those with no affiliation.
- **Release Types.** The majority (59%) of inmates released from administrative segregation back into to the general prison population. The remainder release directly to the community: 20% mandatory parole, 13% sentence discharge, and 8% discretionary parole.
- **Return to Segregation**. 12% of inmates returned to administrative segregation within 1 year of their release (either to prison population or community) and 20% return within 2 years.
- **Recidivism**. Recidivism rates for offenders in administrative segregation were higher than the overall CDOC 3-year rate of 50%. Inmates releasing directly to the community averaged a 66% recidivism rate and inmates releasing to prison prior to the community averaged a 60% rate.
- **Role of Institutional Behavior**. Disciplinary violations not only decreased as a result of administrative segregation, they were also related to offenders' release from segregation. Clearly, disciplinary violations did not represent the only factor dictating release decisions; the other factors remain yet unmeasured.
- **Trend of Segregating OMIs**. Five year prison and administrative segregation populations showed that OMIs have been over-represented in administrative segregation. The rate increased substantially as of July 2003, coinciding with a dramatic decline in mental health professionals and rehabilitation programs that were a casualty of budget cuts.

Study 3: Administrative Segregation Hearings

Inmates who are determined to be a threat to the facility are removed from population and placed in a segregation cell. They attend an administrative segregation hearing where it is determined whether such a placement is warranted. The case is next reviewed by the warden who has the opportunity to affirm, reverse or modify the decision. Lastly, each case is reviewed by CDOC's Offender Services staff prior to reclassification and transfer. Data from 842 hearings from August 2003 to July 2004 were used for this study.

- **Rate of Placement**: 90% of hearings resulted in an administrative segregation placement. On average, 69 inmates were placed in administrative segregation per month.
- **Reasons for Placement.** The most common reasons for placement included multiple disciplinary violations, advocating facility disruption, STG activity, and assaults.

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Just as prison is society's solution to errant citizens, supermax is prisons' answer to contentious inmates. Born out of the necessity to provide safety to the public, staff and inmates, prison systems have expanded the use of administrative segregation, or supermax, facilities. By the year 1998, nearly 2% of the entire prison population was housed in administrative segregation (Human Rights Watch, 2000; King, 2000). Administrative segregation facilities provide tight controls to ensure reductions in violence and serious prison disruptions.

The nature of administrative segregation, primarily solitary confinement, has alarmed many individuals and groups including the Human Rights Watch (1997, 2000). Still, greater concern is devoted to the belief that solitary confinement is psychologically damaging to mentally ill inmates. Further speculation holds that solitary confinement may even produce symptoms of mental illness in inmates who had no mental health symptoms when they were placed in isolation. The following literature review highlights the controversial issues and reviews empirical studies on administrative segregation.

History of Administrative Segregation

Toch (2003) described early antecedents to today's supermax facilities, in which experiments of social isolation and stimulus deprivation were conducted, emanating in the early 1800's. These concepts were reportedly abandoned because of their negative effect on inmates' psychological functioning, which subsided with the lessening of those conditions. Administrative segregation for the "worst of the worst" would appear to have been forsaken until circa 1930.

Alcatraz Island Prison emerged in 1934, offshore from San Francisco, as the first modern-day supermax facility, operated by the Department of Justice. The island, surrounded by icy, dangerous waters, provided an ideal setting to impose solitary confinement on its tenants, the most ruthless predators, escape artists, and racketeers following the post-Prohibition, post-Depression American era. Alcatraz served as the first large-scale model of concentrating difficult prisoners in one facility. The demise of Alcatraz Island was attributed to decaying conditions and a shift towards a rehabilitation philosophy rather than a failed concept of super-maximum confinement (Hershberger, 1998).

The Federal Bureau of Prisons (BOP) next commissioned the prison in Marion, Illinois in 1963 to replace Alcatraz. In actuality, all but 10 Alcatraz prisoners were transferred to various facilities other than Marion, which consequently was not run as a supermax facility until 20 years later (King, 2000). In 1983, the prison went into permanent "lockdown" or solitary confinement status, following a stream of serious incidents culminating in the inmate murder of two correctional officers. The BOP followed up the Marion Prison concept with the Administrative Maximum Prison in Florence, Colorado in 1994. Both the Marion and Florence prisons operate today as administrative segregation facilities.

At the same time the Florence facility was materializing, state systems produced a proliferation of supermax facilities. The National Institute of Corrections (NIC, 1997) indicated that 34 states were either operating supermax housing or planned to open supermax facilities by 1999. While some prisons were retrofitted to meet administrative segregation standards, many supermax facilities were newly constructed. Despite the seemingly virtual explosion of supermax prisons, administrative segregation and control units have operated on a smaller scale for decades (Zinger, Wichman, & Andrews, 2001).

NIC (1999) noted the heterogeneity across different jurisdictions' definition of supermax. *Supermax* is considered a generic term; many facilities became known under a variety of titles, including *control units*, *security housing units* or *SHUs, intensive management unit*, and *security controls unit* (Haney, 2003; NIC). Additionally, a supermax *facility* may refer to an entire facility or a distinct unit within a facility. However, administrative segregation is differentiated from *punitive segregation, disciplinary segregation* or *segregation*; these are a time-limited response to a disciplinary infraction after due process hearings resulting in a finding of guilt.

Recognizing the difficulty NIC experienced in its 1997 survey of supermax facilities, King (2000, p. 171) defined three essential elements of supermax housing:

(i) accommodation which is physically separate, or at least separable, from other units or facilities, in which

(ii) a controlled environment emphasizing safety and security, via separation from staff and other prisoners and restricted movement, is provided for

(iii) prisoners who have been identified through an administrative rather than a disciplinary process as needing such control on grounds of their violent or seriously disruptive behavior in other high security facilities.

Role of Administrative Segregation in Today's Prisons

Despite accusations that supermax prisons are a needlessly harsh deterrent tactic and an answer to politicians' "tough on crime" platforms, prison officials find administrative segregation a necessary component of effective prison management. Their increasing popularity is a direct result of their success in maintaining order within the larger prison environment.

Traditionally, prisons have employed the dispersion model (Hershberger, 1998; NIC, 1999). As such, problem inmates are scattered throughout the correctional system, distributing the burden across facilities and staff. Often these inmates are moved around the prison system to disrupt their alliances and provide temporary staff relief (Hershberger). This model is obviously limited by the number of prisons available at the proper custody level (NIC). In contrast, the concentration or consolidation model centralizes high risk, dangerous inmates in a tightly controlled facility (Hershberger; NIC). The supermax concept is the archetype of this model.

Circumstances under which inmates are placed in administrative segregation may be either involuntary or voluntary. Inmates who exhibit violent or disruptive behavior while incarcerated among the general prison population are placed in administrative segregation involuntarily. Inmates who are at risk of being harmed by other inmates are also placed in administrative segregation. The second type is called protective custody, and they are housed under the same rules and privileges as involuntary cases. One study found that in 90% of the cases, protective custody inmates themselves requested to be placed into administrative segregation (Carriere, 1989).

Involuntary administrative segregation placements are usually made based on observable behavior. NIC (1999, p. 6) indicated that "inmates who have demonstrated that they are chronically violent or assaultive, who present a serious escape risk, or who have demonstrated a capacity to incite disturbances or otherwise are threatening the orderly operation of the general population institution may become target populations." The greater challenge to prison administrators is to identify inmates as a risk *prior* to a serious incident, with the understanding that prediction strategies are unreliable and subjective. Therefore, threats are viewed as objective behavior that may provide the foundation for an administrative segregation decision.

Supermax is characterized as a "minimum privilege, maximum control facility" (Hershberger, 1998, p. 56) in which solitary confinement is the primary security measure. Most supermax facilities confine inmates to their cells for 23 hours per day, allowing just 1 hour for personal hygiene and exercise. Inmate movement is severely restricted, with multiple restraints placed on inmates before leaving their cell. Personal contact is kept to a minimum. Even contact with staff is limited; therapy and worship services may be provided through videoconferencing or secure barrier. Visitations are allowed on a limited basis, but are generally no-contact, meaning there is a physical barrier between inmates and visitors.

Even though staff contact and inmate movement is severely restricted, administrative segregation facilities are equipped with more staff and security devices than typical prison facilities. Many of the supermax facilities boast state-of-the-art prison technology (Berge, Geiger, & Whitney, 2001; Hershberger, 1998), thereby reducing personal contact even further. Nonetheless, more staff are needed due to multiple-officer escorts, increased supervision and searches, and individualized services (e.g., providing meals) at cell doors (NIC, 1999).

Newer supermax facilities tend to be self-contained in order to circumvent transportation issues. Many prisons deliver a range of programs and services at the inmates' cell or within the facility. The usual prison capacity for medical and dental services may be expanded for emergency medicine and minor surgeries to keep inmates within the confines of the facility (Berge et al., 2001; Kurki & Morris, 2001; Shepperd & Geiger, 1996).

Release procedures may vary by supermax facility, but behavioral compliance with institutional rules generally dictates the conditions under which an inmate may be released (NIC, 1999). In order to move to lower custody situations, inmates are informed of the conditions under which they may be released. NIC

recommends regular assessments to provide adequate rationale for retaining inmates within an extended control facility.

Supermax facilities are more costly to operate, but those costs are offset by simplified staff training as well as staff and inmate perceptions of increased safety (Hershberger, 1998). A lessening of rigid controls within the general prison population affords those individuals greater freedom and access to programs. It is believed that administrative segregation is also a deterrent to other inmates, promoting increased safety among the remaining population (Ward, 1999).

Objections to Administrative Segregation

Administrative segregation is inarguably the most restrictive environment used to incarcerate inmates, giving way to concerns about prisoner's psychological adaptation to solitary confinement. Prison officials are criticized for resorting to this tactic to maintain safety. The decline of the rehabilitation movement, coupled with inadequate staff training, is believed to be strongly correlated with the increase in administrative segregation (King, 2000; Toch, 2001). Critics also suggest that the need for super-maximum facilities was overestimated, resulting in pressures to fill expensive high custody beds with lower risk inmates (King; Kurki & Morris, 2001).

The Human Rights Watch (2000) suggests that four factors related to supermax confinement potentially violate a person's constitutional rights. Human Rights Watch does not outwardly oppose solitary confinement of all inmates. Instead, their argument focuses on loose eligibility criteria, extreme harshness of conditions, duration of confinement, and abuse by staff.

Correctional authorities have been accused of using vague or broad placement criteria. It is not required that corrections afford inmates the same due process as punitive segregation because it is an administrative decision rather than a disciplinary action, bringing into question the appropriateness of placements. Administrative segregation is suitable for violent, dangerous inmates who present imminent risk. Mentally ill inmates may find themselves placed in administrative segregation, because of a lack of other suitable placements, protective custody reasons, or disruptive behavior related to their mental illness. However, less restrictive environments are advised for nuisance inmates, inmates with an accumulation of minor, nonviolent disciplinary infractions or those in need of protective custody (Human Rights Watch, 2000; Kurki & Morris, 2001; NIC, 1999; Toch, 2001). Some even contend that placement based on gang member status is inappropriate (Haney, 2003; Toch).

Many find the conditions of solitary confinement to be excessively harsh and inhumane (Haney, 2003; Human Rights Watch, 1997, 1999, 2000; King, 2000; Kurki & Morris, 2001; Toch, 2001). The list of the unacceptable conditions, although not exclusive, includes: lack of windows, 24-hour lighting, lack of exercise in general and outdoor recreation in particular, limited personal contact, denial of reading materials or other meaningful activity, and limited therapeutic services. It is believed that many of these conditions are in place for punishment rather than actual security reasons.

The duration of administrative segregation typically outlasts disciplinary segregation, extending years rather than months. The related concerns are broadly outlined as extreme solitary confinement and limited sensory stimulation that leave the inmate ill-equipped to reintegrate into the prison culture or society at large (Human Rights Watch, 2000). Furthermore, lengths of stay may be extended due to minor infractions of the rules, resulting in a punishment disproportionate to the seriousness of the behavior. Ultimately, corrections staff have complete discretion over an inmate's release from administrative segregation.

Supermax facilities are characterized by the complete control exerted over inmates by correctional staff (Hershberger, 1998; Human Rights Watch, 2000). The typical "we-they" prison dynamic between inmates and staff is exacerbated in supermax settings where inmates have little control over their environment (Human Rights Watch; Kurki & Morris, 2001; NIC, 1999), thereby introducing staff abuse into the realm of possibilities. Prisoner abuses have been discovered and punished in administrative segregation settings (Kurki & Morris), but in other situations Human Rights Watch (p. 4) found that "management has tacitly condoned the abuse by failing to investigate and hold accountable those who engage in it."

Constitutionality of Supermax

Most of the legal challenges surrounding administrative segregation have been on the grounds of a Fourteenth or Eighth Amendment violation. The Fourteenth Amendment of the U.S. Constitution guarantees the rights of its citizens, stating "…nor shall any State deprive any person of life, liberty, or property, without due process of law; nor deny to any person within its jurisdiction the equal protection of the laws." Therefore, the state must adhere to certain procedures in deciding to deprive inmates of their liberty interest (Collins, 2004). The greater the potential loss of liberty (e.g., involuntary medication), the more stringent are the due process procedures required.

The need for procedural due process rests on the answer to whether administrative segregation creates a liberty interest. Pursuant to a 1983 Supreme Court decision, due process was necessitated if the institutional rules were written such that they created a liberty interest (*Hewitt v. Helms*). Unfortunately, this rule discouraged institutions from delineating the conditions under which an inmate would be placed in segregation (Collins, 2004). Subsequently the Supreme Court created a new rule in 1995 that a liberty interest is created only when there is an "atypical and significant deprivation in relation to the normal incidents of prison life" (*Sandin v. Conner*). Hence, segregation that does not pose an atypical and significant hardship is not subject to due process, including such confinement that may occur during a period of investigation into inmates' misconduct (*Jones v. Baker*, 1998).

At what point is administrative segregation considered an atypical and significant hardship? The most compelling challenge of this phrase occurred with a class action suit against the Ohio State Penitentiary (*Austin v. Wilkinson*, 2002) which produced a ruling contrary to previous cases. The judge ruled in favor of the plaintiffs stating that their due process and liberty interest had been violated. Segregation was deemed atypical and a significant hardship because the combination of conditions were significantly more restrictive than other Ohio state correctional facilities (e.g., isolation, lack of control over heating and lighting, no outside recreation) and because of the length of confinement. The court upheld the *Hewitt v. Helms* decision (1983) that these inmates were entitled to minimal procedural requirements, specifically timely notice of an administrative segregation evidentiary hearing, reason for confinement, and sufficient opportunity to respond.

The bounds of the Fourteenth Amendment have been questioned in other circumscribed lawsuits. A New York court found that periodic review of inmates' confinement is required (*McClary v. Kelly*, 1998); extended confinement in segregation without a review hearing is a constitutional violation. Furthermore, in *Wright v. Smith* (1994), a New York court ruled that inmates who refuse protective custody or are denied their request for it will be provided a hearing within 14 days.

Despite these rulings, there is awareness at the judicial level that prison officials should be afforded enough flexibility and latitude to swiftly manage a volatile environment. The reluctance to unilaterally impose procedural due process for administrative segregation placements represents a legal balancing act between the needs of the institution and individuals' interests. The courts must simultaneously ensure fair treatment of all inmates.

The Eighth Amendment ensures prisoners protection from cruel and unusual punishment. Because this concept is subjective, the Supreme Court has established the following standards as the yardstick: (a) shocks the conscience of the Court, (b) violates the evolving standards of decency of a civilized society, (c) punishment that is disproportionate to the offense, and (d) involves the wanton and unnecessary infliction of pain (Collins, 2004). Furthermore, prison officials must be shown to demonstrate "deliberate indifference" to a prisoner's basic human need. Cases concerning conditions of confinement, which fall under the Eighth Amendment, must consider the totality of circumstances where each individual condition might not be a violation but the combination of conditions might constitute one.

Madrid v. Gomez (1995) was a landmark case that found California state officials in violation of the Eighth Amendment by housing mentally ill inmates in the SHU at Pelican Bay State Prison. Although the SHU was not considered a violation for all inmates, the totality of conditions for certain subgroups in this particular setting over extended periods of time did. The unit in question was considered a modern forerunner of supermax prisons; unsanitary conditions or antiquated buildings were not in question. The court reasoned however: "For [mentally ill] inmates, placing them in the SHU is the mental equivalent of putting an asthmatic in a place with little air to breathe…Such inmates are not required to endure the horrific suffering of a serious mental illness or major exacerbation of an existing mental illness before obtaining

relief." Not only was it ruled cruel and unusual punishment to place mentally ill inmates in the SHU, those at reasonably high risk of suffering mental illness as a result of SHU conditions were also restricted.

In another benchmark case regarding conditions of confinement (*Ruiz v. Johnson*, 1999), a Texas judge ruled that the "extreme deprivations and repressive conditions of confinement of Texas' administrative segregation units…violate the Constitution of the Unites States' prohibition against cruel and unusual punishment, both as to the plaintiff class generally and to the subclass of mentally ill inmates housed in such confinement." Although administrative segregation itself was not deemed unconstitutional, the deprivation of "even the most basic psychological needs" such as human contact, psychological stimulation, and human dignity was. Mentally healthy individuals would decompensate under such conditions; the symptoms and responses are exacerbated for mentally ill inmates. Upon investigation into the plaintiffs' claims, experts testified on "a world in which smeared feces, self-mutilation, and incessant babbling and shrieking are almost everyday occurrences." Warehousing mentally ill offenders in administrative segregation was found an obvious violation of the U.S. Constitution.

Even more despairing was the evidence from this trial that Texas officials acted with sufficient culpability in regards to housing mentally ill inmates in administrative segregation. Judge Justice wrote in his ruling: "Whether because of a lack of resources, a misconception of the reality of psychological pain, the inherent callousness of the bureaucracy, or officials' blind faith in their own policies, [Texas Department of Correctional Justice] has knowingly turned its back on this most needy segment of its population."

A class action suit brought against the Wisconsin prisons was settled out of court in 2001 (*Jones 'El v. Berge*). Similar to the *Ruiz v. Johnson* (1999) case, individual conditions did not constitute cruel and unusual punishment, but the totality of the circumstances did (e.g., cell temperatures, nocturnal lighting, lack of outdoor recreation). State officials agreed to a number of conditions (e.g., regulated cell temperatures, reducing nocturnal lighting by 60%, inmate choice of indoor or outdoor recreation, minimum of 5 hours per week out of cell activity), which included not placing severely mentally ill inmates in supermax as a routine procedure and providing adequate mental health services to ameliorate the effect of the setting on an inmate's illness.

Finally, another lawsuit – *Rasho v. Snyder* – has been filed against the Tamms Prison in Illinois, stating violations of mentally ill offenders' rights under the Eighth and Fourteenth Amendments: exposing mentally ill prisoners to excessively harsh conditions amounts to cruel and unusual punishment and unlawful discrimination. This case is currently pending trial in the Illinois Southern District court.

Effects of Supermax on Psychological Functioning

Certainly, this discussion evokes a strong emotional response from proponents and opponents alike. Despite the preponderance of supermax literature, it is more theoretically-driven than empirically-based. There exists a void of even basic statistics on supermax inmates. Still less is known about the psychological consequences of solitary confinement. Furthermore, the limited empirical studies available are wrought with methodological flaws.

The extreme polarity of researchers makes it nearly impossible to interpret research findings; weak designs or findings are prone to subjective interpretations that support researchers' beliefs. External researchers often tend to be advocates for inmates; internal researchers typically operate from an equally biased, albeit opposing, perspective (Ward, 1995). University researchers perhaps offer the greatest opportunity for objective research, but they may be perceived as naïve and easily swayed by either inmates or staff (Ward).

A significant body of literature devoted to administrative segregation is qualitative in nature (Benjamin & Lux, 1975; Human Rights Watch, 1997, 1999; King, 2000; Kurki & Morris, 2001), using case study designs and personal accounts. These studies usually involve prolonged periods of on-site observation and interviews with staff and inmates. They provide the reader with minute details of every day life in solitary confinement and descriptions of psychological anguish that force the reader to consider issues and perspectives they might not otherwise obtain.

Case study and similar designs are perhaps most useful for developing theories that can be tested empirically. Nonetheless, there are serious limitations to be considered. Small sample sizes, as are the norm in case studies, mean findings may not generalize to all, or even most, segregated offenders. Particularly

concerning is that sampling procedures are often not discussed, suggesting that special care was not taken to select a representative sample. Additionally, these approaches do not provide a relative comparison of the subjects' behavior in other settings. Inmates who report serious psychological difficulties in segregation may experience those same problems in other prison settings or in the community at large.

Researchers may reference older studies that used inadequate study groups, environments, or experimental stimulus to support their claims that segregation is or is not psychologically harmful (see Benjamin & Lux, 1975; Pizarro & Steinus, 2004; Suedfeld, Ramirez, Deaton, & Baker-Brown, 1982; Zinger et al., 2001). Inmates in supermax settings have been compared to prisoners of war (POWs), yet the situation of isolated and tortured POWs held indefinitely without trial with barred communication does not adequately portray modern-day prison inmates or their experiences. College students or inmates who volunteer to time-limited segregation stays neither represent the typical inmates placed in segregation against their will nor are they subjected to indeterminate or lengthy periods of segregation (Benjamin & Lux). Furthermore, studies conducted in field or laboratory settings that try to emulate a segregation unit, particularly sensory deprivation and isolation studies, have more severe conditions than those found in today's supermax settings. When research participants, study environments, and experimental stimulus differ so radically from the true environment in question, it is difficult to generalize the findings to the population in question.

Direct studies of solitary confinement, conducted with inmates in administrative segregation, are more valuable for understanding the population, although they are not without their limitations.

Haney (2003) randomly selected 100 SHU prisoners at Pelican Bay Prison for assessments by interview. He found elevated symptoms of psychological trauma (e.g., anxiety, headaches, impending nervous breakdown, lethargy) within the sample as compared to a national probability sample. This study also demonstrated a greater prevalence rate of psychopathological features (e.g., ruminations, social withdrawal, irrational anger) than the population at large. However, this study involved only one study group, measured at a single interval. It is not surprising that prisoners as a whole, not just those in segregation, would differ dramatically from a non-clinical, non-incarcerated sample. Furthermore, because change over time was not assessed in this design, it can not be determined whether segregation produced an increase in symptoms.

Comparison groups are necessary to determine whether the differences are attributable to the experimental stimulus (supermax confinement). Studies conducted on administrative segregation which include an inmate control group provide a better comparison. In one study, segregated prisoners were not found to differ in significant ways from a control group, although prisoners in general were different from standardized samples across multiple measures (Suedfeld et al., 1982). The researchers reported a moderate correlation of length of stay in segregation to depression ($r = .35$) and hostility ($r = .47$), however they did not specifically examine differential change in groups over time. In another study, Canadian offenders in segregation were compared to randomly selected non-segregated offenders (Motiuk & Blanchette, 2001). This study found that the segregated group had more criminal justice system involvement, poor education, skills deficits, family dysfunction, antisocial attachments, chemical dependencies, thinking problems, and antisocial attitudes than non-segregated offenders. Furthermore, segregated offenders had a higher recidivism rate than the non-segregated offenders. A third study found that severe mental disorders were higher among segregation populations than the general population, particularly schizophrenia and bipolar disorder (Hodgins & Cote, 1991). Major depression was lower in segregation than the general population, and suicide attempts were of equal proportion between samples.

Establishing differences between groups is important for understanding the population and the types of services needed in administrative segregation, but it does little to explain whether the supermax environment is making them worse or if those with the greatest psychological disturbances are sent to supermax. If the goal is to determine the harm that supermax prisons inflict, then it is necessary to evaluate their psychological functioning over the course of their confinement. Longitudinal studies, therefore, are essential to assess change over time.

Danish inmates in solitary confinement were compared to non-segregated offenders (Andersen, Sestoft, Lillebaek, Gabrielsen, Hemmingsen, & Kramp, 2000), and the results indicated that psychiatric disorders were higher among offenders in solitary confinement than those not segregated. However, those disorders included primarily adjustment and depressive disorders rather than psychotic disorders. Because of releases and transfers from solitary confinement, the 228 subjects at the beginning of the study declined to 14

within 3 months. In another longitudinal study, Zinger and his colleagues (2001) found that mental health and psychological functioning did not deteriorate over time, although segregated offenders had psychological indices that were often elevated over non-segregated offenders. This study was limited to a 60-day period, and it suffered a 40-44% refusal rate (depending on group) and a 56% attrition rate. Although longitudinal design has many advantages over others, extremely high refusal and attrition rates bring into question the generalizeability of its findings to administrative segregation overall. Additionally, short durations may not fully represent the experiences of most offenders in long-term solitary confinement.

Taken together, these findings suggest that inmates in administrative segregation are different from their peers in the general prison population, particularly in regards to their psychological functioning. What is still not known is if these differences are attributable to harmful effects of solitary confinement or if inmates with more serious psychological problems are being placed into administrative segregation at a disproportionately high rate.

Administrative Segregation in Colorado

Colorado began large-scale use of administrative segregation with the genesis of Colorado State Penitentiary (CSP) in 1993. In 1998, Colorado reported 5.6% of its population was housed in administrative segregation as compared to the national average of 1.8% (King, 2000). Only three other states reported a higher concentration of inmates in supermax beds; even the BOP had less than 1% in administrative segregation. A major contributing factor to Colorado's high rates include its zero-tolerance policy towards prison gang activity, as established by Colorado Revised Statute 17-1-109. This statute empowers wardens to take reasonable measures to confine persons with known gang associations and to prevent recruitment of new members.

Despite Colorado exceeding national averages, another larger prison modeled after CSP is scheduled for construction. Yet, it remains unknown how many potential violent acts have been diverted with administrative segregation as a management tool.

At a national level, corrections professionals are not making as strong a case for administrative segregation as opponents are making against it. The constitutionality of it remains in question, with NIC (1999) issuing strong cautions to corrections regarding its use and the judicial system voicing acrimonious reactions against its implementation. NIC (p. 22) reports "Typically, 'new' programs in the field of corrections are not based on extensive research. Some are born of emerging needs; some are created in reaction to a crisis or emergency; others are the result of political agendas."

Colorado's liberal use of administrative segregation coupled with national outcries against supermax underscore the critical need for empirically-based research. None of the debates are grounded in rigorous scientific theory because virtually no empirical data exists. It is in the best interest of corrections to conduct internal research to understand the nature of administrative segregation; doing so can reduce the likelihood of the court system making decisions about prison operations as well as ensure that best practices are implemented.

The corrections community needs to carry a stronger voice at a national and local level, by initiating unbiased empirical research that is not tainted by the political underpinnings inherent in previous studies. Research needs to explore who is assigned to administrative segregation and for what reasons, the impact of solitary confinement for long durations, effects on special populations, and the adherence of operating procedures to nationally recognized standards.

Present Study

A prospective research design is recommended to specifically examine changes in psychological functioning of mentally ill and non-mentally ill inmates as a result of administrative segregation placements. The nature of that study will require extensive planning, resources, and collaboration; a repeated measures design with a carefully selected comparison group(s) is recommended. It is further recommended that a process evaluation be conducted for the two larger administrative segregation facilities in Colorado.

The present study seeks to inform the design for a subsequent prospective research project while providing basic statistics about Colorado administrative segregation. This study first compared Colorado

Department of Corrections' (CDOC) administrative segregation population to the overall prison population, across demographic characteristics, criminal history, institutional behavior, needs levels, and standardized psychological testing. The purpose was to understand who are the inmates serving their sentence under administrative segregation conditions. Secondly, this study included a longitudinal design to examine length of stay, return to administrative segregation, recidivism rates, and institutional behavior. Finally, an analysis of administrative segregation hearings was conducted.

STUDY 1: POPULATION COMPARISONS

Method

Participants. The present study compared 981 administrative segregation inmates to the overall prison population (N = 16,171), excluding inmates under community supervision. Administrative segregation inmates were identified through classification levels on June 30, 2003. Of these, 11 were on the waitlist and not yet placed in administrative segregation. The remaining administrative segregation inmates were in one of four facilities: CSP, Sterling Correctional Facility (SCF), San Carlos Correctional Facility (SCCF), and Denver Women's Correctional Facility (DWCF).

Materials. The Level of Service Inventory – Revised (LSI-R; Andrews & Bonta, 1995) is a semi-structured interview that assesses criminal risk. Information obtained in the interview is verified through official offender records and other sources. Each item is scored using a coding system of either 0 or 1, with a 1 indicating that an item is true. The resulting overall LSI-R score can range from 0 to 54 and is used to assign the level of supervision for community-based offenders and to determine allocation of services (Motiuk, Motiuk, & Bonta, 1992). The LSI-R showed moderately strong predictive validity (r = .31) for 1-year recidivism rates with Colorado parolees (O'Keefe, Klebe, & Hromas, 1998).

The MCMI-III (Millon, Davis, & Millon, 1997) consists of 175 true/false items. The inventory provides diagnostic information in the areas of personality disorders and clinical syndromes. Internal consistency for the clinical scales ranges from .66 to .90 with 20 of the 26 scales having alpha coefficients in excess of .80. Test-retest reliability coefficients for the subscales ranged from .82 to .96 (Millon et al.). The MCMI-III was only administered to inmates incarcerated after 1995.

The Culture Fair Intelligence Test (CFIT; Cattell & Cattell, 1973) is a non-verbal measure designed to assess general mental capacity in terms of fluid ability, meaning the ability to perceive relationships, to analyze, and to reason in abstract or novel situations. The goal of this measure is to use items which are free of cultural bias usually associated with language, cultural background, and educational level. The CFIT is a multiple-choice paper and pencil test administered in group settings. It consists of four subtests, each measuring a different area; these areas require the examinee to make classifications, complete series, solve matrices, and evaluate conditions, all of which are perceptual tasks. CDOC uses a version of the CFIT which is designed for adults in the average range of intelligence. Conversion tables are used to change the raw CFIT scores into normalized standard IQ scores. Internal consistency reliability estimates vary between high .70s to .90s depending on the scale. Test-retest reliabilities run in the low .80s and equivalent-forms reliabilities range from .58 to .72 (Koch, 1992; Tannenbaum, 1965). The CFIT's convergent validity with other intelligence tests has an average correlation of .70 (Koch).

The Brief Psychiatric Rating Scale (BPRS; Overall & Gorman, 1962) is a 24-item scale most commonly used to assess patients with psychiatric disorders. It is designed to allow for the rapid review of changing symptoms (Lukoff, Nuechterlein, & Ventura, 1986; Ventura, Lukoff, Nuechterlein, Liberman, Green, & Shaner, 1993). It measures positive symptoms, general psychopathology and affective symptoms. Some items can be rated after observation of the patient; others require clinical interview to obtain the patient's self report information. Each of the 24 symptom constructs are rated on a 7 point scale of severity ranging from 1 (*not present*) to 7 (*extremely severe*). If a specific symptom is not rated, 'NA' is marked indicating it was not assessed. The research conducted, on both the older 18 item BPRS and the newer 24 item expanded version, has indicated that there are five factors (or scales) to which the individual items are associated; these are thinking disorder, withdrawal, anxiety/depression, hostility/suspicion, and activity (Burger, Calsyn, Morse, Klinkenberg, & Trusty, 1997; Hedlund & Vieweg, 1980). A study measuring the psychological disability of clients attending self help agencies found the 24-item scale had internal consistencies of .79 at baseline and .74 after a 6 month follow up (Segal & Silverman, 2002).

The Tests of Adult Basic Education (TABE) – Forms 7 and 8 are designed to measure adult proficiency in reading, mathematics, language and spelling. Assessment using the TABE gives the information needed to place learners in the appropriate lessons for their particular skill deficiencies (CTB/McGraw-Hill, 1994). The tests have five levels of difficulty ranging from *limited literacy* to *advanced*. Each level consists of 263 items which yield seven subscale scores. Examinees first take the "locator test" which is made up of 25

vocabulary items and 25 mathematics items; the raw scores from this initial test are then used in determining what level of the test should be administered. Final scoring of the tests can be done using different systems which generate grade equivalent (GE) scores and percentile-rank scores. Although the percentile-rank scores yield more accurate results of the examinees abilities, the GE scores are most easily interpreted. The GE scores were developed equating TABE standard scores to GE scores on the California Achievement Tests. Technical aspects of the TABE — Forms 5 and 6 (an older version of the tests) shows Kuder-Richardson Formula 20 (KR_{20}) reliabilities ranging from .71 to .94 (Bauernfeind, 1992). A technical report examining the TABE 7 and the 2002 Tests of General Educational Development (GED) shows correlations between the scores on corresponding content areas on the TABE and GED as ranging from .52 to .57. The correlation between the TABE total battery score and the GED average score was .63 (CTB/McGraw-Hill, 2004).

Procedure. Demographic, criminal history, and needs assessment data were obtained from administrative information in the CDOC database. Inmates are routinely processed through the diagnostic unit, and data is gathered through various sources including official records, diagnostic interview, and pencil-and-paper tests. Resulting from the diagnostic assessment process are ratings across different needs levels, including academic, vocational, sex offender, substance abuse, medical, psychological, assaultiveness, self-destruction, and mental retardation or developmental disabilities (MR/DD). Each level is rated on a 5-point scale, where scores of three and higher are indicative of problem areas. Levels may be reevaluated during offenders' incarceration.

The psychological needs level has two parts – the 5-point rating scale as well as a qualifier. Similar to the other scales, a rating of three or greater indicates the need for mental health services. Offenders who have an elevated psychological rating need a diagnostic assessment, have been identified as mentally ill, or are experiencing serious emotional distress not related to a pervasive mental illness (e.g., divorce, grief over loss of child). The qualifier on the psychological needs rating clarifies whether a qualifying CDOC mental illness exists ('C' for chronic or 'O' for organic), further assessment is warranted ('T' for temporary or rule-out diagnosis), or a non-qualifying disorder is present ('N' for non-qualifying).

Within CDOC, a C or O qualifier denotes an offender with mental illness (OMI) and includes the following disorders: bipolar mood disorders, major depressive disorder, depressive disorder not otherwise specified, dysthymia, paranoid/delusional disorders, schizophrenic disorders, schizophreniform disorder, schizo-affective disorder, psychotic disorder not otherwise specified, induced psychotic disorder, brief reactive psychosis, dissociative identity disorder, post-traumatic stress disorder (PTSD), and cluster A personality disorders (schizoid, schizotypal, and paranoid). These disorders, selected from the Diagnostic and Statistical Manual – IV (American Psychiatric Association, 1994), characterize individuals who experience the greatest perceptual distortions or mood disorders, which require more frequent monitoring and treatment than other psychiatric diagnoses.

Several standardized tests are administered in the diagnostic unit to obtain a baseline measure: the LSI-R , MCMI-III, CFIT, and TABE. Violent offenders are defined as serving their current prison term for a violent crime as defined in CDOC's annual statistical report (Rosten, 2004, p.70).

Institutional behavior, such as violations of the code of penal discipline (COPD) and involvement in security threat groups (STG), are recorded electronically over the course of an offender's incarceration. There are three levels of STG involvement: member, associate, and suspect. Levels are ascertained by field intelligence officers who rate offenders' involvement across 11 items (e.g., self admission, moniker, gang tattoos, identification by law enforcement). Each item carries a weight ranging from 5 to 20 points, and summative scores determine STG involvement.

Psychological data, such as the BPRS and psychological needs level, are updated periodically during an offender's incarceration. The BPRS is administered only to diagnosed mentally ill offenders, ideally at 6-month intervals or more often as needed. The psychological needs level may or may not change, depending on the degree of psychological disruption an inmate displays.

Results and Conclusions

Population Comparisons. Descriptive statistics were generated for the entire prison population, for the administrative segregation sample, and for each administrative segregation facility sample (see Table 1). One-way chi-square and *t* tests were conducted between each sample and the general population, using an alpha level of .01. Significant differences are highlighted.

Table 1. Population Comparisons across Demographic, Criminal History & Institutional Behavior Factors

	Population (N = 16,171)	Ad Seg (n = 981)	CSP (n = 734)	SCF (n = 180)	SCCF (n = 26)	DWCF (n = 30)
Gender						
Male	93%	97%	100%	100%	100%	0%
Female	7%	3%	0%	0%	0%	100%
Ethnicity						
Caucasian	45%	37%	36%	41%	39%	33%
African American	22%	17%	17%	15%	15%	37%
Hispanic	30%	42%	43%	40%	42%	27%
Other	3%	4%	4%	4%	4%	3%
Mean age *(SD)*	35.4 (10.4)	31.6 (8.4)	31.8 (8.5)	30.2 (7.8)	33.6 (9.2)	32.0 (8.4)
Marital status						
Single	41%	59%	58%	58%	85%	52%
Married/common law	36%	26%	27%	30%	4%	24%
Div/sep/wid	23%	15%	15%	12%	11%	24%
High school						
Diploma	21%	9%	9%	9%	9%	25%
Equivalency test	48%	59%	62%	55%	35%	21%
Neither	31%	32%	29%	36%	56%	54%
Highest grade completed						
Grade school	8%	9%	8%	13%	14%	18%
Less than 12th grade	23%	23%	21%	23%	41%	36%
12th grade	59%	62%	65%	57%	45%	32%
Beyond high school	10%	6%	6%	7%	0%	14%
Prior incarcerations						
None	73%	71%	71%	74%	65%	70%
One	19%	22%	22%	22%	27%	23%
Two or more	8%	7%	7%	4%	8%	7%
Status type						
New commitment	85%	89%	91%	88%	88%	74%
Revocation	14%	9%	7%	11%	12%	23%
Other	1%	2%	2%	1%	0%	3%
STG member status						
Member	11%	40%	43%	37%	4%	3%
Associate	5%	5%	5%	7%	8%	0%
Suspect	10%	21%	22%	23%	8%	17%
None	74%	34%	30%	33%	80%	80%
Violent offender	48%	65%	69%	51%	69%	40%
% with previous ad seg	10%	32%	33%	22%	69%	17%
Mean # COPDs this incarceration *(SD)*	4.4 (7.8)	16.9 (16.0)	17.6 (16.5)	14.2 (12.4)	20.5 (24.6)	13.7 (11.5)
Mean # punitive seg this incarceration *(SD)*	2.4 (4.6)	8.5 (7.6)	8.2 (7.5)	9.4 (8.0)	9.8 (7.1)	7.9 (8.1)
Mean years served this incarceration (*SD*)	4.2 (4.6)	5.8 (4.4)	6.2 (4.3)	4.6 (3.8)	7.4 (8.1)	3.5 (2.9)
Mean LSI-R *(SD)*	30.0 (8.2)	33.6 (7.4)	33.6 (7.2)	32.5 (7.4)	35.2 (7.7)	37.7 (8.9)

Note. Highlighted values indicate the sample is statistically different (α = .01) from the CDOC inmate population.

In comparison with the population, administrative segregation inmates tended to be male, Hispanic, younger, not married, violent, possess a GED as opposed to high school diploma, have STG involvement, and spent a longer period under CDOC supervision for the current incarceration. They were three times

more likely to have had a prior placement in administrative segregation than were inmates in the general population. Their frequency of COPD infractions and punitive segregations over this incarceration was more than triple of the general population. Furthermore, administrative segregation inmates had higher LSI-R scores. Other significant differences were found; however, the differences were slight and appeared to be of limited practical significance.

The ways that inmates in individual administrative segregation facilities differed from the general population was also explored. Gender was an obvious difference because prisons are gender-specific. The SCCF sample was dramatically different on marital status from other groups, being highly unlikely to be in a married relationship. CSP had a significantly higher rate of violent offenders and an overall longer time under CDOC supervision. It should be noted that SCCF and DWCF may not vary statistically from the general population as a function of their low sample size.

Prior classification levels were examined to determine where administrative segregation decisions were most likely to occur. It was found that 70% were close custody, 17% medium, 8% maximum (new cases or parole violators), 4% minimum-restrictive, and 1% minimum. These figures indicate that the bulk of placements were already housed in high security units.

The 981 administrative segregation inmates accumulated a total of 16,598 COPD convictions over their current incarceration, accounting for 24% of COPDs even though they represent only 6% of the population. Disciplinary actions were examined by type, with class I disciplinary violations representing the most serious and class III the least (see Table 2). They had a greater frequency of class I disciplinary convictions compared to the overall population. This finding held true for inmates in three of the four segregation facilities.

The most frequent COPD convictions are listed in Table 3, which represent an accumulation over the current incarceration through June 30, 2003. A distinction is not made here whether the violations occurred prior to or during administrative segregation placement. This relationship is explored more fully in study 2.

Table 2. COPD Convictions by Class Type

	Population		Ad Seg		CSP	SCF	SCCF	DWCF
	N	%	*n*	%	%	%	%	%
Class I	7,281	10%	2,519	15%	15%	13%	27%	13%
Class II	57,419	81%	13,089	79%	79%	79%	71%	82%
Class III	5,983	9%	990	6%	6%	8%	2%	6%
TOTAL	70,683	100%	16,598	100%	100%	100%	100%	100%

Note. Highlighted values indicate the sample is statistically different (α = .01) from the CDOC inmate population.

Table 3. Most Frequent COPD Convictions

		Population (*N* = 70,683)		Ad Seg (*n* = 16,598)	
Description	Class	# Counts	Percent	# Counts	Percent
Disobeying a lawful order	IIB	11,798	16.7%	2,856	17.2%
Unauthorized possession	IIA	6,373	9.0%	1,324	8.0%
Violating posted operational rule	III	4,592	6.5%	705	4.2%
Verbal abuse	IIB/III	4,318	6.1%	1,307	7.9%
Advocating facility disruption	IIA	3,719	5.3%	1,426	8.6%
Possession or use of dangerous drugs	II	3,176	4.5%	357	2.2%
Unauthorized absence	IIB/III	3,120	4.4%	464	2.8%
Fighting	IIA	3,035	4.3%	500	3.0%
Threats	IIA	2,899	4.1%	1,056	6.4%
Tattooing and/or possession	IIA	2,859	4.0%	502	3.0%
Assault	I	2,752	3.9%	1,149	6.9%
Refusal to work	II	2,534	3.6%	316	1.9%
Bartering/selling goods	IIB	2,408	3.4%	359	2.2%
Damage to property	IIA	1,730	2.4%	770	4.6%
Other	I - III	15,370	21.8%	3,507	21.1%

Inmates in administrative segregation had more class I violations, which represent a serious threat or disruption to prison security, than the general population; 83% had at least one class I violation. For the remainder (n = 167), total number of violations ranged from 0 to 46 with a median of 4. A file review was conducted for 82 cases that had fewer than the median number of violations. The results indicated that 46 inmates were immediately classified to administrative segregation upon incarceration for the following reasons: high profile trial, murder conviction, assault on peace officer, prison escape and/or attempts, behavior in county jail, interstate transfer, or death penalty. Nine cases had previously discharged their sentence from administrative segregation and review of their cases upon reincarceration warranted placement at the same custody level. Finally, 27 offenders were placed in administrative segregation for their institutional behavior on the current incarceration. Reasons for these placements primarily included gang activity or fewer than four class II disciplinary violations (i.e., fighting, advocating facility disruption, threats).

Summary statistics on standardized tests administered at the Diagnostic Unit are presented in Table 4. Administrative segregation inmates scored similarly on the Culture Fair IQ test as the overall inmate population. Although their math and total TABE scores were statistically lower, the difference was slight.

Table 4. Population Comparisons across Standardized Testing

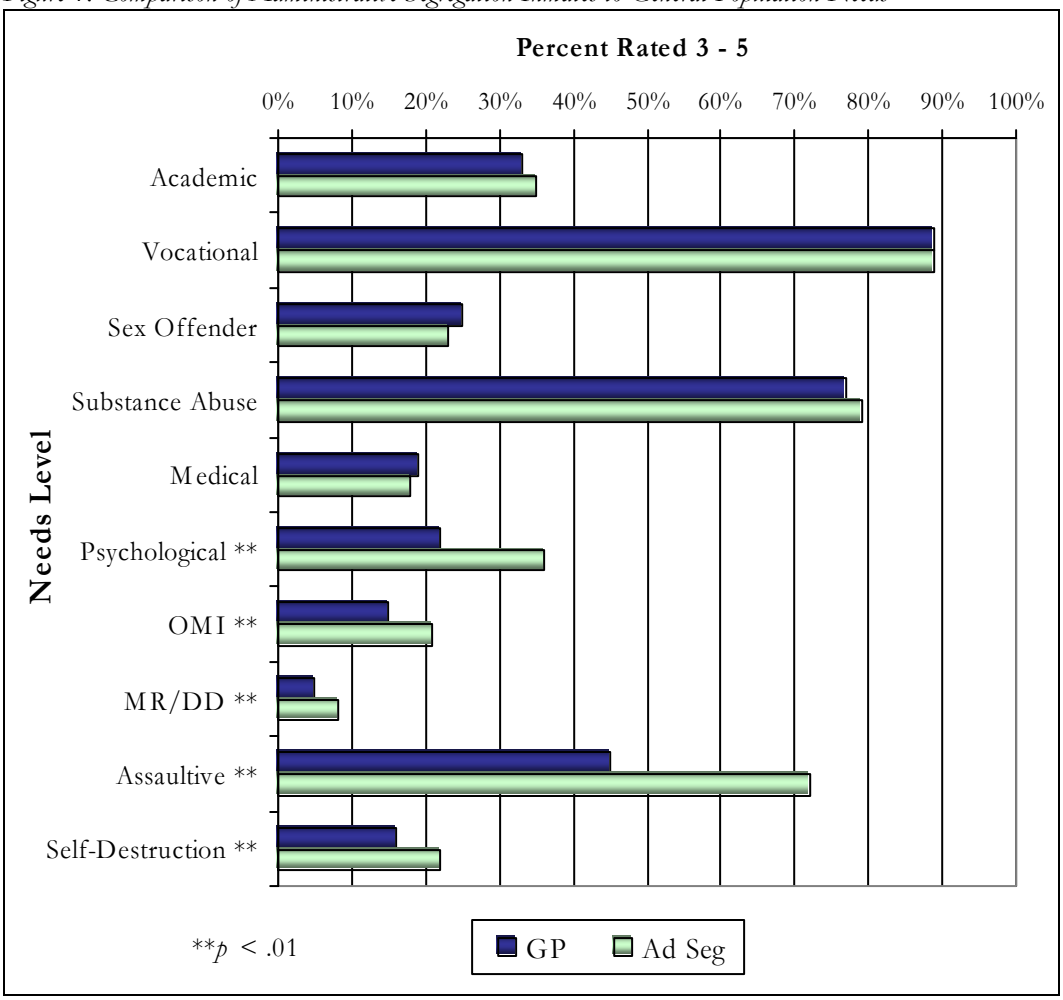
	Population (N = 13,347)		Ad Seg (N = 666)		
	M	*SD*	*M*	*SD*	*p*
Culture Fair Intelligence Test	101.3	13.4	100.4	13.5	n.s.
TABE Reading	8.8	3.7	8.6	3.6	n.s.
TABE Math	7.2	3.2	6.9	3.1	<.01
TABE Language	7.5	4.0	7.1	4.0	n.s.
TABE Total	7.9	3.6	7.6	3.6	<.01
	Population (N = 11,681)		Ad Seg (N = 567)		*p*
MCMI–III Personality Patterns (% Base Rate Scores > 75)					
1- Schizoid	13%		19%		<.001
2a- Avoidant	25%		28%		n.s.
2b- Depressive	19%		19%		n.s.
3- Dependent	15%		15%		n.s.
4- Histrionic	9%		7%		n.s.
5- Narcissistic	17%		19%		n.s.
6a- Antisocial	22%		29%		<.001
6b- Aggressive	15%		21%		<.001
7- Compulsive	6%		3%		<.01
8a- Passive-aggressive	23%		33%		<.001
8b- Self-defeating	12%		14%		n.s.
s- Schizotypal	6%		10%		<.001
c- Borderline	8%		13%		<.001
p- Paranoid	7%		12%		<.001
MCMI–III Clinical Syndromes (% Base Rate Scores > 75)					
a- Anxiety	35%		41%		<.01
h- Somatoform	2%		2%		n.s.
n- Bi-polar: manic disorder	4%		5%		n.s.
d- Dysthymic disorder	16%		18%		n.s.
b- Alcohol dependence	23%		27%		n.s.
t- Drug dependence	16%		19%		n.s.
r- Post traumatic stress	8%		10%		n.s.
ss- Thought disorder	3%		5%		<.01
cc- Major depression	5%		7%		n.s.
pp- Delusional disorder	4%		9%		<.001

Inmates in administrative segregation demonstrated more traits associated with personality-related (Axis II) disorders than the inmate population. They had higher MCMI-III scores on schizoid, antisocial, aggressive, passive-aggressive, schizotypal, borderline and paranoid personality disorders and lower scores on compulsive personality disorder. There were also differences across three clinical syndromes, specifically anxiety, thought disorder, and delusional disorder. Interestingly, all of the cluster A personality disorders (paranoid, schizoid, and schizotypal) were elevated in the administrative segregation sample; cluster A characterizes individuals who evidence clear signs of oddness or eccentricity, prefer social isolation, and have difficulty relating to others.

Figure 1 shows the occurrence of CDOC inmates who present with specific needs across 10 domains. Many of the diagnostic levels may change throughout an offender's incarceration to reflect current needs, such as the psychological level, while others (e.g., substance abuse) remain unchanged because they are used merely as a screening tool. For the levels that are assessed in a dynamic way, the current level as of June 30, 2003 was used.

Administrative segregation inmates did not vary from the prison population on academic, vocational, substance abuse, sex offender, or medical needs areas. However, they presented with significantly greater mental health needs, including broad psychological or emotional distress, mental illness as defined by CDOC, MR/DD, assaultive behavior, and self-destruction or suicide tendencies. Because these particular levels fluctuate over time, it can not be determined from these comparisons whether their needs were elevated prior to administrative segregation placement.

Figure 1. Comparison of Administrative Segregation Inmates to General Population Needs



Note. OMI status is denoted by a psychological code qualifier of C or O.

Needs levels are presented by segregation facility in Table 5. Percentages indicate inmates scoring three or higher on the needs level, except the OMI category which is denoted by a 'C' or 'O' qualifier on the psychological level. Again, some differences may not be statistically significant because of small SCCF and DWCF samples, but they may have practical importance.

This data highlights some interesting differences between the populations housed within each facility. Although the entire administrative segregation sample did not vary from the general population across five needs areas, females presented substantially greater academic and medical needs and encompassed fewer sex offenders. The SCCF sample also had greater academic needs than typical inmates. The population at SCCF was not composed entirely of OMIs because some offenders may have a non-qualifying mental illness, mental retardation, or developmental disorder, or they may be undergoing diagnostic assessments to rule-out diagnoses and malingering. Overall, administrative segregation inmates had elevated psychological needs levels, but the prevalence of OMIs was not elevated at CSP. However, CSP had a higher rate of MR/DD and self-destructive inmates, as did SCCF, than was the norm. Taken together, these findings may have important implications for allocation of mental health resources.

Table 5. Needs Levels by Administrative Segregation Facility

	Population (N = 16,171)	CSP (n = 734)	SCF (n = 180)	SCCF (n = 26)	DWCF (n = 30)
Academic	33%	33%	38%	62%	57%
Vocational	89%	87%	91%	100%	97%
Sex Offender	25%	23%	22%	35%	3%
Substance Abuse	77%	78%	81%	70%	86%
Medical	19%	17%	13%	23%	47%
Psychological	22%	31%	37%	100%	80%
OMI	15%	17%	23%	89%	67%
MR/DD	5%	8%	6%	27%	7%
Assaultive	45%	77%	57%	77%	55%
Self-Destruction	16%	22%	18%	50%	25%

Note. Highlighted values indicate the sample is statistically different (α = .01) from the CDOC inmate population.

STG Involvement. Inmates involved in a STG constituted a disproportionately large number of the administrative segregation sample. Table 6 presents the most common STG groups in CDOC. A higher rate of Surenos-13 and Gallant Knights were found in administrative segregation; fewer Crips, Bloods, and White Supremacists reside in segregation than the general population.

Table 6. STG Affiliation

Name	Population		Ad Seg		CSP	SCF	SCCF	DWCF
	n	%	*n*	%	(n = 511)	(n = 121)	(n = 5)	(n = 6)
Crips	768	18%	66	10%	10%	9%	0%	33%
White Supremacists	657	16%	79	12%	12%	17%	0%	0%
Surenos-13	573	14%	153	24%	25%	19%	20%	17%
Bloods	429	10%	38	6%	5%	8%	20%	0%
Gallant Knights	262	6%	64	10%	10%	11%	0%	17%
Security Threat *	233	6%	20	3%	3%	3%	0%	0%
Prison Gang	141	3%	46	7%	7%	5%	0%	33%
Folk	141	3%	15	2%	3%	2%	0%	0%
Other	1,045	25%	170	26%	25%	26%	60%	0%
Total	4,249	100%	651	100%	100%	100%	100%	100%

** Non-specific STG threat to facility.*

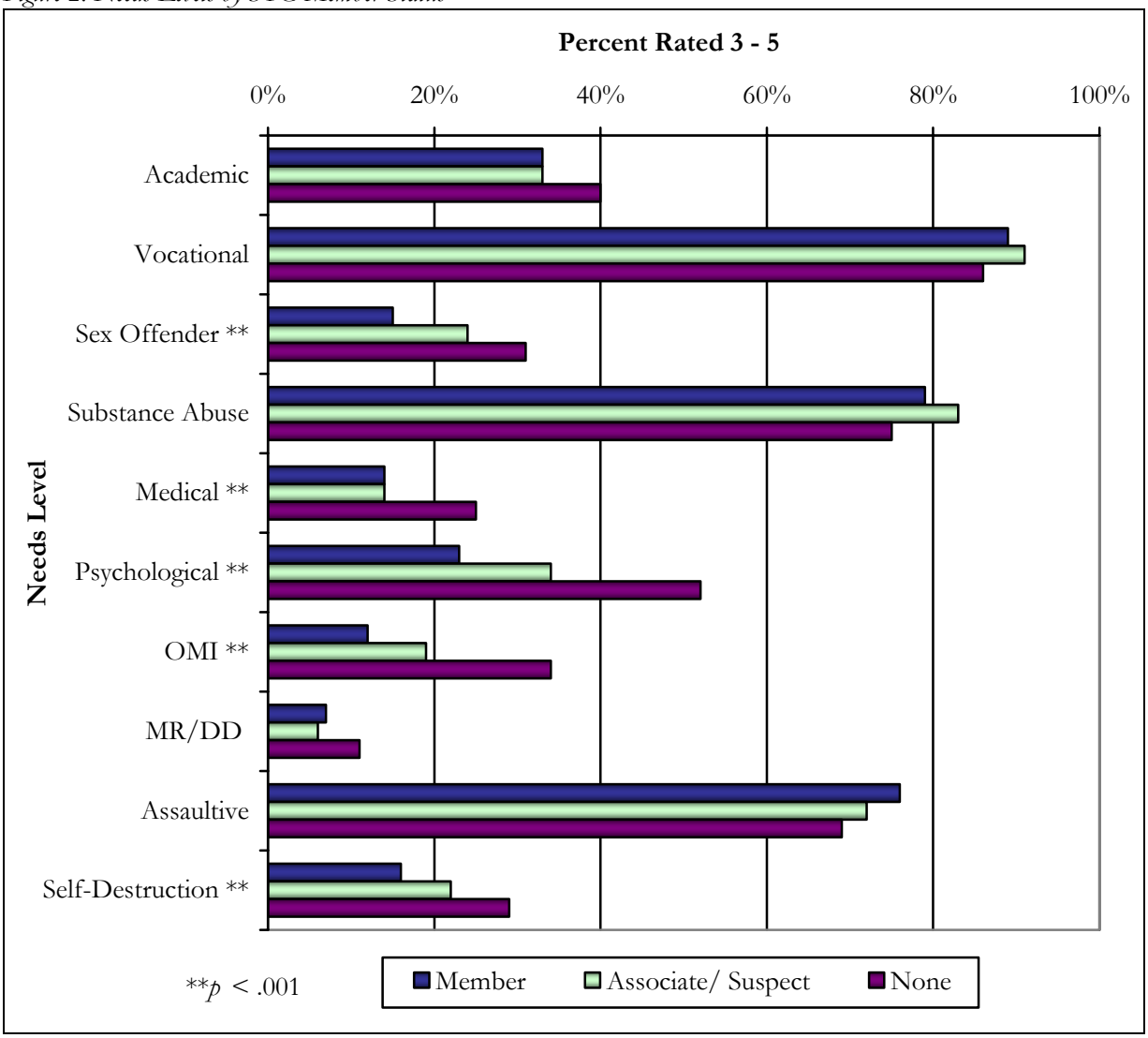
Descriptive data were examined by STG status (see Table 7). Because the number of associates (n = 51) was so small, they were grouped with the suspect category for analytical purposes. Differences among STG groups centered primarily on demographics rather than criminal history or institutional behavior, although inmates with STG involvement have been under CDOC supervision for less time than those with no involvement. Members were exclusively male and tended to be Hispanic, younger, and single. Inmates with any STG involvement were more likely to attain a GED than a high school diploma.

Table 7. Demographic, Criminal History & Institutional Behavior by STG Member Status

	Member (n = 391)	Associate/ Suspect (n = 260)	None (n = 330)	p
Gender				<.001
Male	100%	98%	93%	
Female	0%	2%	7%	
Ethnicity				<.001
Caucasian	26%	41%	47%	
African American	13%	15%	24%	
Hispanic	57%	39%	26%	
Other	4%	5%	3%	
Mean age *(SD)*	28.3 (5.7)	30.4 (7.8)	36.4 (9.3)	<.001
Marital status				<.01
Single	63%	55%	57%	
Married/common law	26%	31%	22%	
Div/sep/wid	11%	14%	21%	
High school				<.01
Diploma	6%	9%	15%	
Equivalency test	62%	60%	52%	
Neither	32%	31%	33%	
Highest grade completed				n.s.
Grade school	10%	9%	9%	
Less than 12th grade	23%	21%	24%	
12th grade	64%	64%	57%	
Beyond high school	3%	6%	10%	
Prior incarcerations				n.s.
None	74%	67%	71%	
One	20%	24%	22%	
Two or more	6%	9%	7%	
Status type				n.s.
New commitment	90%	88%	90%	
Revocation	9%	12%	7%	
Other	1%	0%	3%	
Violent offender	68%	60%	64%	n.s.
% with previous ad seg	34%	30%	31%	n.s.
Mean # COPDs this incarceration *(SD)*	16.5 (13.3)	16.1 (14.2)	18.1 (19.9)	n.s.
Mean # punitive seg this incarceration *(SD)*	9.0 (7.7)	8.3 (7.3)	8.0 (7.7)	n.s.
Mean years served this incarceration (*SD*)	5.3 (3.2)	5.4 (3.9)	6.6 (5.7)	<.001
Mean LSI-R *(SD)*	34.2 (6.9)	33.6 (6.8)	32.7 (8.3)	n.s.

Figure 2 presents comparisons by group across the 10 need levels. Inmates with STG involvement have similar or lesser needs than those with no involvement. Specifically, they are less likely to be a sex offender, have mental health or self-destructive concerns, or have medical issues.

Figure 2. Needs Levels by STG Member Status



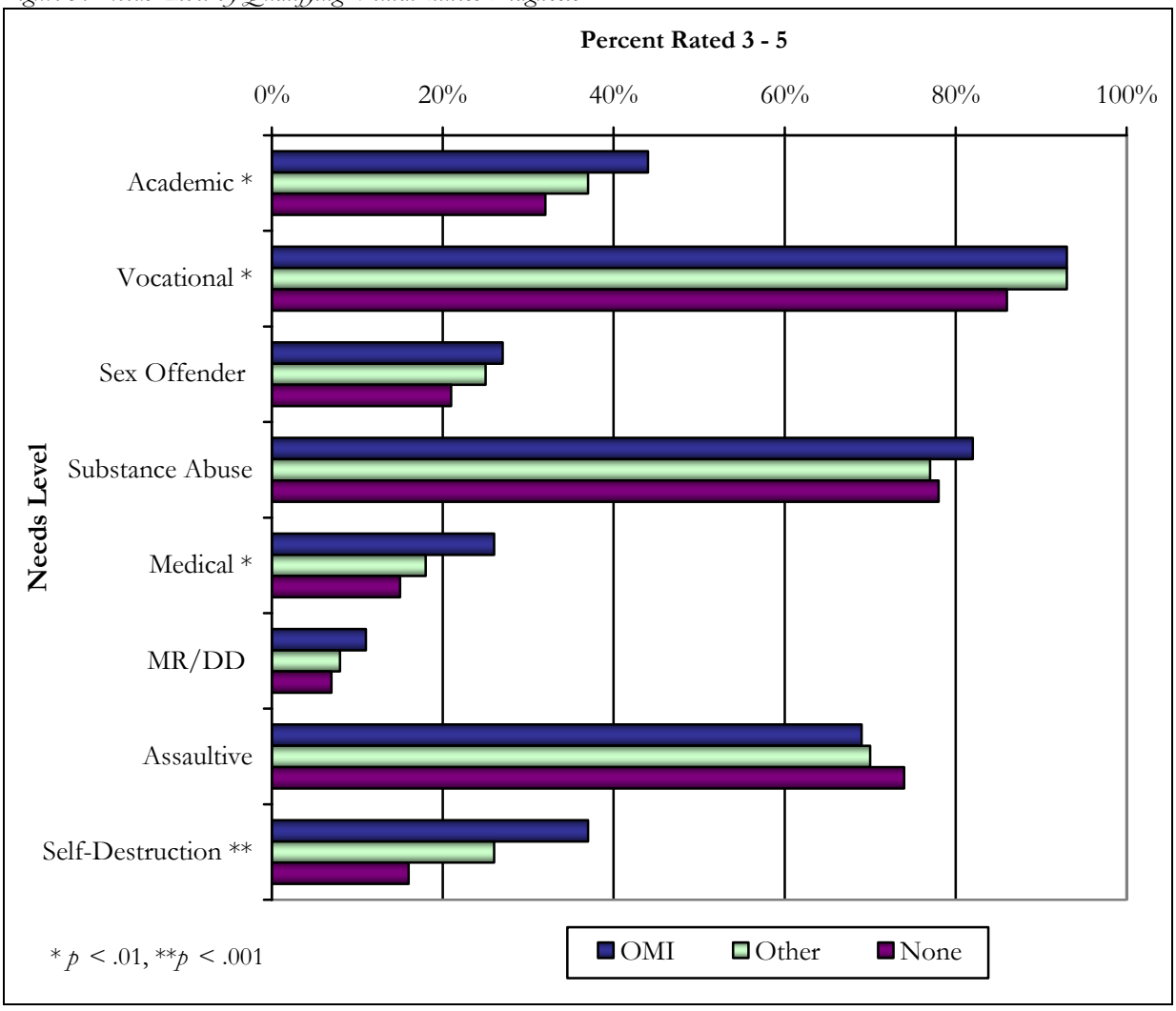
Mentally Ill. Due to concerns regarding mentally ill inmates in administrative segregation, characteristics of this population were examined in depth. Administrative segregation inmates were grouped into three categories based on the existence of a qualifying diagnosis. The first category included OMIs, the second had an other or non-qualifying diagnosis, and the third had no diagnosis. Inmates categorized with no diagnosis may indeed have an Axis I diagnosis, but without accompanying mental health needs that warrant increased attention.

Table 8 presents descriptive data for the administrative segregation sample, grouped by mental health status. Chi-square analyses showed that OMIs had a greater rate of female offenders than the other two categories. OMIs and inmates with non-qualifying disorders tended to be Caucasian, had a slightly lower education level and were significantly less likely to have STG involvement. Inmates with no qualifying diagnosis had fewer COPDs than those with a qualifying diagnosis. Furthermore, they had lesser needs in academic, vocational, and medical areas as well as lower self-destruction levels (see Figure 3).

Table 8. Demographic, Criminal History & Institutional Behavior by Mental Health Status

	OMI (*n* = 210)	Other (*n* = 137)	None (*n* = 634)	*p*
Gender				<.001
Male	90%	98%	99%	
Female	10%	2%	1%	
Ethnicity				<.001
Caucasian	47%	52%	30%	
African American	18%	15%	18%	
Hispanic	31%	30%	48%	
Other	4%	3%	4%	
Mean age *(SD)*	33.0 (8.8)	31.6 (8.7)	31.1 (8.1)	n.s.
Marital status				n.s.
Single	55%	53%	61%	
Married/common law	23%	31%	26%	
Div/sep/wid	22%	16%	13%	
High school				<.01
Diploma	13%	8%	9%	
Equivalency test	46%	57%	63%	
Neither	41%	35%	28%	
Highest grade completed				<.01
Grade school	14%	10%	8%	
Less than 12th grade	27%	26%	20%	
12th grade	50%	60%	66%	
Beyond high school	9%	4%	6%	
Prior incarcerations				n.s.
None	71%	69%	72%	
One	20%	24%	22%	
Two or more	9%	7%	6%	
Status type				n.s.
New commitment	89%	86%	91%	
Revocation	10%	11%	8%	
Other	1%	3%	1%	
STG member status				<.001
Member	22%	31%	48%	
Associate	9%	7%	4%	
Suspect	15%	21%	23%	
None	54%	41%	25%	
Violent offender	63%	58%	66%	n.s.
% with previous ad seg	70%	72%	67%	n.s.
Mean # COPDs this incarceration *(SD)*	19.2 (18.4)	18.9 (18.2)	15.8 (14.5)	<.01
Mean # punitive seg this incarceration *(SD)*	9.2 (6.7)	9.2 (9.8)	8.1 (7.3)	n.s.
Mean years served this incarceration (*SD*)	5.7 (4.8)	5.2 (4.0)	5.9 (4.3)	n.s.
Mean LSI-R *(SD)*	35.0 (7.6)	34.0 (7.8)	33.0 (7.1)	n.s.

Figure 3. Needs Level by Qualifying Mental Illness Diagnosis



Axis I diagnoses, as assigned by mental health clinicians, were examined for the entire CDOC population; the most frequent diagnoses are listed in Table 9 for the population as well as the administrative segregation sample. Axis I disorders of administrative segregation inmates ranked similarly to those occurring within the prison population, except for lower prevalence rates of major depression and other depressive disorders. Although drug use and dependence are ranked as the top Axis I diagnoses in CDOC, this is an underestimation of actual substance abuse problems. Because CDOC has a separate assessment process to identify substance abusers, clinicians oftentimes do not assign a substance abuse diagnosis where one is warranted.

Mentally ill inmates are routinely assessed on the BPRS, typically at 6-month intervals or more frequently. Table 10 lists mean BPRS scale and total scores for mentally ill inmates system-wide by custody level. Overall, it should be noted that scores were very low given the possible range of scores from 24 to 168. OMIs at close and administrative segregation custody levels had higher BPRS total, thinking disorder, hostility suspicion, and activity scale scores than the remainder of inmates. Administrative segregation inmates scored significantly higher than close custody inmates on thinking disorder and hostility suspicion scales.

Mean BPRS scores were examined by facility: 33.99 (SD = 8.18) for CSP, 34.38 (SD = 6.74) for SCF, 43.58 (SD = 11.26) for SCCF and 39.44 (SD = 10.77) for DWCF. A one-way analysis of variance (ANOVA) found that SCCF inmates had significantly higher scores than the other facilities and DWCF had higher scores than CSP and SCF, $F(4, 417) = 13.09$, $p < .001$.

These findings indicate inmates in administrative segregation present more psychiatric symptoms than inmates at lower custody levels, particularly in areas suggestive of psychotic behavior (i.e., grandiosity, hallucinations, unusual thoughts), hostile and suspicious behavior, and greater activity levels (i.e., tension, excitement, motor hyperactivity). These findings, compounded by those of the MCMI-III, indicate a relatively higher prevalence of psychosis, as well as inmates who perhaps prefer solitude, among the administrative segregation sample.

*Table 9. Axis I Diagnoses for Mentally Ill Inmates (N = 4,317)**

	Population		Ad Seg	
Diagnostic and Statistical Manual – IV Categories	*N*	%	*n*	%
Drug Use/ Dependence	1,067	25%	93	25%
Major Depression/ Depressive Disorders	760	17%	43	11%
Bipolar Disorders	684	16%	58	15%
Dysthymic Disorders	469	11%	50	13%
Schizophrenia/ Psychotic Disorders	394	9%	41	11%
Anxiety Disorders/ PTSD/ Phobias	336	8%	22	6%
Alcohol Use/ Dependence	269	6%	15	4%
Other Disorders	172	4%	33	9%
Sexual and Gender Identity Disorders	118	3%	14	4%
Disorders Usually Diagnosed in Childhood	48	1%	7	2%

** Sample size reflects diagnoses rather than inmates; inmates may have multiple diagnoses.*

Table 10. BPRS Scores by Custody Level (N = 2,498)

BPRS Scale (*score range*)	Ad Seg (*n* = 313)	Close (*n* = 612)	Medium (*n* = 584)	Min-Restr (*n* = 647)	Minimum (*n* = 342)	
	M (SD)	*M (SD)*	*M (SD)*	*M (SD)*	*M (SD)*	*p*
Thinking Disorder (*5 - 35*)	6.66 (2.68)	6.26 (2.68)	5.82 (1.80)	5.87 (2.14)	5.80 (1.97)	<.001
Withdrawal (*6 - 42*)	7.45 (2.09)	7.43 (2.20)	7.28 (1.90)	7.35 (1.81)	7.35 (2.07)	n.s.
Anxiety-Depression (*5 - 35*)	8.83 (3.13)	8.94 (3.66)	9.39 (3.75)	9.38 (3.59)	9.23 (3.70)	n.s.
Hostility Suspicion (*3 - 21*)	5.27 (2.59)	4.88 (2.66)	4.21 (1.92)	3.98 (1.64)	3.83 (1.40)	<.001
Activity (*5 - 35*)	6.70 (2.51)	6.80 (2.50)	6.36 (2.04)	6.18 (1.96)	6.15 (2.07)	<.001
BPRS Total (*24 - 168*)	36.35 (8.81)	35.22 (9.47)	33.97 (7.85)	33.83 (8.01)	33.54 (7.88)	<.01

Logistic Regression. A logistic regression was conducted to determine offender characteristics that might predict administrative segregation placements. The dependent variable was administrative segregation (yes, no); inmates in the general population who had previously been in segregation were excluded to maximize group differences. The following variables, which differentiated administrative segregation inmates from the general population in the univariate comparisons, were added to the logistic regression equation in three blocks: (1) gender (male, female), age, Hispanic (yes, no), high school diploma (yes, no), single (yes, no), and OMI (yes, no); (2) LSI-R score, STG involvement (yes, no), number of punitive segregations, number of disciplinary violations, and violent offender (yes, no); and (3) base rates scores on MCMI-III schizoid, antisocial, aggressive, passive-aggressive, schizotypal, borderline, paranoid, and delusional disorder scales.

Table 11 gives the results of the analysis; only variables found to be a significant predictor are presented here. The equation correctly classified inmates at a rate of 80%. STG involvement was the strongest predictor; the odds ratio indicated that inmates with STG involvement were 4.5 times more likely to be placed in administrative segregation than those with no involvement. Violent, Hispanic, single, and OMI inmates have significantly greater odds of such a placement than inmates without those traits.

Interestingly, Hispanic ethnicity remained a significant predictor even when accounting for both ethnicity and STG involvement. It appears that Hispanic gang members are segregated at a greater rate than gang members of other cultures. This finding is consistent with the earlier finding of increased placements for predominantly Hispanic gangs (Surenos-13, Gallant Knights) and fewer placements of African American

(Bloods, Crips) and Caucasian (White Supremacists) gangs. This may reflect greater violence among Hispanic gangs, more visible activities, or a greater perceived threat.

Table 11. Logistic Regression Results

Variable	B	*p*	Odds Ratio
STG involvement	1.51	<.001	4.50
Violent offender	.88	<.001	2.43
Hispanic	.65	<.001	1.91
OMI	.42	<.05	1.53
Single	.38	<.01	1.47
# punitive segregations	.18	<.001	1.19
LSI-R	.04	<.001	1.04
Schizotypal	-.01	<.05	.99

STUDY 2. LONGITUDINAL ANALYSIS

Method

Participants. Participants included 3,003 inmates who were placed in administrative segregation between January 1995 and December 2003. Offenders classified as administrative segregation but never moved to such a facility (e.g., discharged sentence before transfer) were not included. Also excluded from the study were inmates already in administrative segregation as of January 1995, unless they released and later returned to segregation in which case only latter episodes were examined.

Death row inmates were excluded from this study.

Participants were mostly male (95%) and were on average 29 years old upon their initial placement. Caucasian and Hispanic ethnic backgrounds were equally distributed at 37% each, with African Americans composing 23% of the sample and other ethnic representation totaling 3%.

Procedure. All data were downloaded from the CDOC administrative database. Dates of administrative segregation, both placements and releases, were based on classifications rather than time served in an administrative segregation facility. Moves to and from administrative segregation facilities are made according to available bed space at the proper custody facility; all inmates are held in a punitive segregation environment prior to transfer into administrative segregation. Their release upon reclassification is also made by bed availability.

Other data obtained from the database download included segregation facility, release types, COPD infractions, mental health needs levels, STG involvement, and recidivism dates.

Results and Conclusions

Eighteen percent of participants had more than one administrative segregation episode. Except where noted otherwise, only the first episode was analyzed to meet the assumption of independent observations.

Length of stay. Time in administrative segregation was examined by episode (see Table 12), including cases still active as of December 2003. It should be noted that true durations are actually longer than those represented here. Inmates placed in segregation prior to 1995 (excluded from this study) would tend to increase the lengths of stay slightly. Because these numbers are small, however, they would have only a small impact on median months, which is perhaps the most reliable measure of duration. Mean central tendencies are unduly influenced by a small number of inmates who have quite long lengths of stay.

Length of stay was analyzed by the facility where administrative segregation was served (see Table 13). Oftentimes, inmates are in multiple facilities as their needs, or the needs of CDOC, change. When a sufficient sample size was present, data were examined by specific placement patterns (e.g., CSP then SCCF). Inmates who serve their placement in CSP, whether in that facility alone or in conjunction with another one, have the longest durations. The longer stays at CSP may be attributable to pro-unit participation. Inmates at the pro-unit are not confined to the degree of administrative segregation, but re-classification does not occur until their fifth month in the pro-unit.

Table 12. Length of Stay for 1995 – 2003 Admission Cohort

		Months in Administrative Segregation		
Episode	*N*	Median	Mean	Maximum
1	3,003	16.53	21.17	107
2	552	12.45	15.77	73
3	65	9.17	11.85	41
4	8	8.49	8.62	17
5	2	3.79	3.79	5
Total	3,003	18.83	24.35	107

Table 13. Length of Stay by Segregation Facility

		Months in Administrative Segregation		
Facility	*N*	Median	Mean	Maximum
CSP	1,994	20.16	24.05	107
SCF	479	11.63	10.86	40
SCCF	64	11.25	14.22	79
Females	160	8.87	9.58	37
CSP → SCCF	90	24.95	33.42	102
SCF → CSP	133	20.07	21.53	49
Other	83	17.91	25.36	87

Months in administrative segregation, accumulated across episodes, was examined by mental health status and STG involvement. OMIs had shorter durations (*Median* = 16.03, *SD* = 16.22) than inmates with no diagnosis (*Median* = 19.86, *SD* = 19.86), but longer stays than inmates coded as other diagnosis (*Median* = 14.00, *SD* = 13.95), $F(2, 2982) = 24.22$, $p < .001$. STG members had the longest duration (*Median* = 21.88, SD = 19.58), while associates/suspects (*Median* = 16.76, *SD* = 19.22) had the same length of stay as those with no affiliation (*Median* = 17.41, *SD* = 18.68), $F(2, 3002) = 15.47$, $p < .001$.

Release from administrative segregation was categorized into four types: (1) return to general population (GP) or release for (2) sentence discharge, (3) mandatory parole, or (4) discretionary parole. An additional 5 inmates died in administrative segregation from 1995 to 2003, of which four were from natural causes and one was a suicide. Release types are presented in Table 14. Inmates predominantly return to GP, but a substantial percentage (41%) released directly to the community. Inmates granted discretionary parole may reflect the Parole Board's desire to have those offenders under community supervision prior to them discharging their sentence. Table 15 provides release type by administrative segregation facility.

Table 14. Release Type for Administrative Segregation Release Cohort

Episode	GP	Sentence Discharge	Mandatory Parole	Discretionary Parole	Totals
1	1,455	235	411	173	2,274
2	25	93	74	37	229
3	3	10	10	4	27
4	2	1	1	0	4
Totals	1,485	339	496	214	2,534
Percent	59%	13%	20%	8%	100%

Table 15. Release Type by Segregation Facility

Facility	GP	Sentence Discharge	Mandatory Parole	Discretionary Parole
CSP	64%	10%	17%	9%
SCF	60%	13%	23%	4%
SCCF	65%	12%	20%	3%
Females	71%	12%	13%	4%
CSP/SCCF	78%	6%	10%	6%
SCF/CSP	65%	7%	28%	0%
Other	39%	17%	39%	5%

Length of stay was found to vary by release type, $F(3, 2273) = 57.33$, $p < .001$. The median length of stay was 20.50 months for release to GP, 17.19 months for mandatory parole, 16.73 months for discretionary parole, and 13.06 months for sentence discharge. Posthoc analyses indicated that time in segregation was similar for discretionary and mandatory parole releases, but sentence discharges were correlated with significantly shorter terms and release to general population meant significantly longer segregation episodes.

Release type varied by mental health status and STG involvement, which in part accounts for different lengths of stay by group. For mentally ill offenders, those categorized as having 'other' diagnoses were more likely to discharge their sentences than release back to population, which corresponds to this group's shorter stays, χ^2 (6, 2258) = 17.26, $p < .01$. Associates/suspects were more likely to discharge their sentences than they were to return to GP, χ^2 (6, 2274) = 26.58, $p < .001$. While this explains why associates/suspects have shorter segregation stays than members, release type does not account for the different durations between members and those with no involvement.

Return to Administrative Segregation. In the present study, 18% of offenders released from administrative segregation returned at some point during the study period. Standardized return rates by release year are presented in Table 16. Two-year return rates appear more stable over time than one-year rates. However, across both measures, the lowest rates occurred for inmates released from segregation in 1999.

Figure 4 presents the return rates by release type. The lowest return rates were for inmates who discharged their sentences without community supervision and subsequently returned to prison for committing a new crime. Inmates who release direct from segregation to the community are closely scrutinized for administrative segregation placement in the event they fail in the community.

Figure 5 examines return rates for the various administrative segregation facilities. As a cautionary statement, comparisons should not be made across facilities because many factors, including release type, were not taken into account. Return rates are presented for descriptive purposes; if the intent was to make inferences regarding the effectiveness of one facility over another, offender characteristics and release types would need to be controlled for across groups.

Table 16. 1 and 2 Year Returns to Administrative Segregation

		Return to Ad Seg	
Release Cohort	*N*	1 Year	2 Year
1996	156	18%	22%
1997	222	12%	20%
1998	207	11%	18%
1999	267	8%	18%
2000	250	10%	18%
2001	345	13%	21%
2002	400	13%	--

Figure 4. Return to Administrative Segregation by Release Type

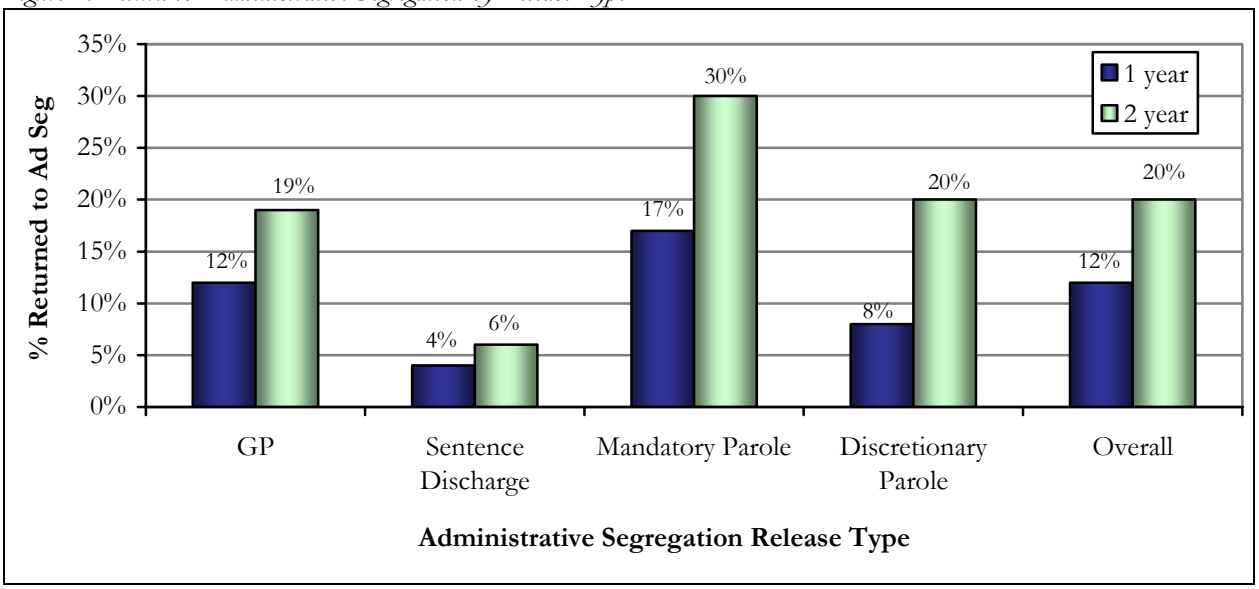
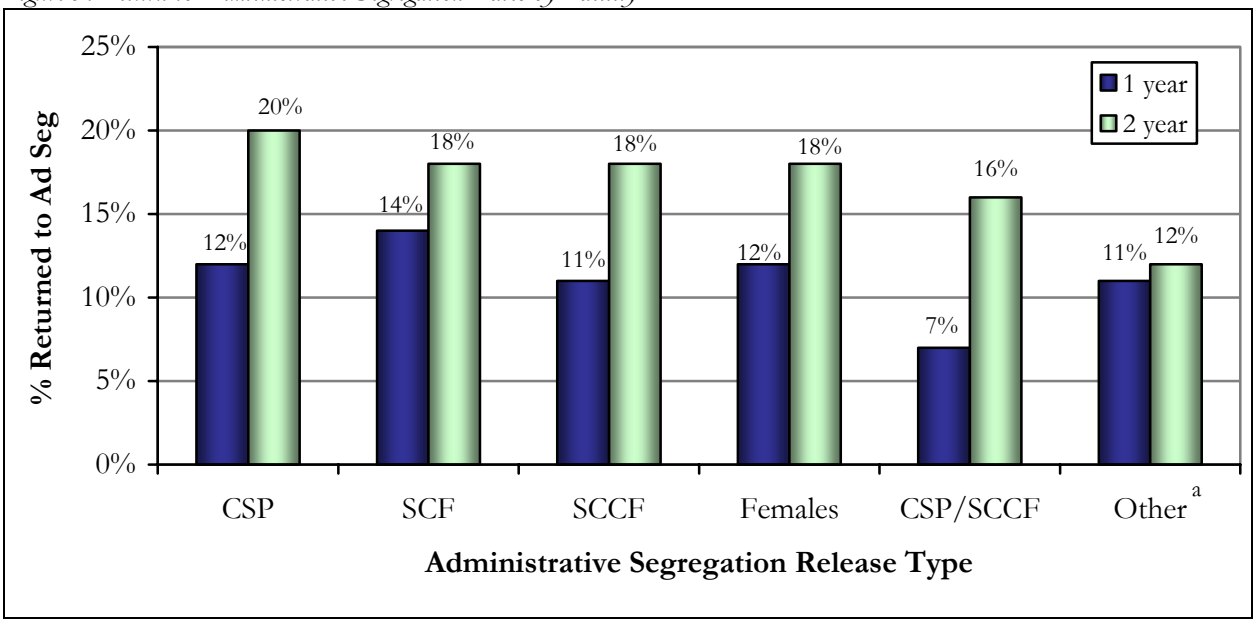


Figure 5. Return to Administrative Segregation Rates by Facility



[a] *Includes placement in multiple administrative segregation facilities.*

Return to segregation was analyzed according to mental health status and STG involvement. There was no difference across mental health groups for 1- and 2- year return to prison rates. Similarly, there was no difference between STG groups at 1 year. However, STG members were significantly more likely to return to segregation within 2 years (26%) than associates (21%). Members were twice as likely to return than individuals with no STG affiliation (13%), $F(2, 1487) = 16.64$, $p < .001$.

Recidivism. Recidivism rates were examined for up to three years following release from prison, for those who released (see Table 17). A distinction is made for whether they released directly to the community or first to GP. There appears to be a slight trend towards lower recidivism rates if inmates transitioned through GP prior to release, however, the difference is not statistically significant (see Appendix A). It is possible that this trend is attributable to improved recidivism rates for those who completed CSP's pro-unit, which should be investigated through further research.

The recidivism rates of administrative segregation inmates are considerably higher than CDOC's overall recidivism rates. CDOC's 3-year recidivism rates are as follows: 27% for sentence discharge, 64% for mandatory parole, 54% for discretionary parole, and 50% overall (Rosten, 2004). It is not at all inconceivable that the highest custody inmates have exceedingly poor recidivism rates.

Table 17. Recidivism Rates by Release Type

Release Type	1 Year	2 Year	3 Year
Released from Ad Seg via:	(*n* = 698)	(*n* = 549)	(*n* = 418)
Sentence Discharge	10%	27%	38%
Mandatory Parole	56%	78%	84%
Discretionary Parole	48%	65%	69%
Total	41%	60%	66%
Released to GP prior to:	(*n* = 396)	(*n* = 296)	(*n* = 221)
Sentence Discharge	11%	21%	27%
Mandatory Parole	53%	70%	74%
Discretionary Parole	47%	60%	70%
Total	42%	55%	60%

Recidivism rates were examined by facility (see Table 18). Because the earlier analyses demonstrated that transition to GP did not significantly impact recidivism rates, the categories were collapsed. Each successive year is cumulative, meaning that inmates who recidivated in their first year of release would be included in the return rates for second and third years. However, the overall numbers decline with each successive year because fewer inmates had 2- or 3-year at-risk periods. Again, given that each facility houses inmates with different risk factors and release types, inferences can not be made regarding one facility's effectiveness over another.

Table 18. Recidivism Rates by Administrative Segregation Facility

	1 Year at Risk (1995–2000) [a]			**2 Years at Risk (1995–2001)** [a]			**3 Year at Risk (1995–2002)** [a]		
Facility	*# returns*	*% returns*	*Total*	*# returns*	*% returns*	*Total*	*# returns*	*% returns*	*Total*
CSP	310	40%	785	373	57%	655	320	63%	510
SCF	52	42%	125	32	63%	51	---	--	---
SCCF	22	60%	37	24	75%	32	23	77%	30
Females	34	44%	78	39	57%	69	38	67%	57
Other [b]	34	49%	69	23	61%	38	18	62%	29
Total	452	41%	1,094	491	58%	845	399	64%	626

[a] *Years in parentheses define release years.* [b] *Includes placements in multiple administrative segregation facilities.*

Table 19 examines recidivism rates by mental health status and STG involvement. Additional analyses, not reported here, were conducted to determine if holding release type constant across groups impacted the results. The pattern of results was similar and did not change interpretation of findings. Actual recidivism rates are reported below because they are easier to interpret than adjusted rates.

The results indicated that recidivism rates did not differ by severity of mental health diagnosis. On the other hand, STG involvement was related to recidivism. STG members have the highest recidivism rates followed by associates/suspects. Those with no STG involvement have the lowest rates.

Table 19. Comparison of Recidivism Rates Across Mentally Ill and STG Involvement Groups

	Qualifying Mental Illness Diagnosis									
	OMI			Other			None			
	# return	*% return*	*Total*	*# return*	*% return*	*Total*	*# return*	*% return*	*Total*	*p*
1 Year Recidivism	61	47%	129	15	42%	36	375	41%	924	n.s.
2 Year Recidivism	60	61%	98	14	64%	22	414	57%	722	n.s.
3 Year Recidivism	50	65%	77	7	58%	12	350	64%	548	n.s.

	STG Involvement									
	Member			Associate/Suspect			None			
	# return	*% return*	*Total*	*# return*	*% return*	*Total*	*# return*	*% return*	*Total*	*p*
1 Year Recidivism	186	48%	385	119	40%	295	147	36%	414	<.01
2 Year Recidivism	205	72%	283	127	55%	233	159	48%	329	<.001
3 Year Recidivism	158	77%	205	109	61%	179	142	56%	255	<.001

Institutional Behavior. A repeated measures design with one within-subjects factor (time) and one between-subjects factor (OMI) was proposed to analyze the rate of COPDs over time, using 6 month intervals beginning at 6 months pre-segregation and ending with 6 months post-segregation. However, because participants may have short durations before or after segregation, as well as varying segregation stays, the longitudinal sample was partitioned into 13 groups. Doing so enabled maximum flexibility to examine different paths that offenders might experience.

Inmates with less than 3 months prior to segregation (n = 254) or with less than 6 months in segregation (n = 276) were excluded. Additionally, inmates still in segregation (n = 599) at the end of the study (December 2003) were excluded, unless their episode was longer than 3 years. Some offenders may

have been excluded for more than one of these reasons. Hypothetically, the 599 still in segregation would naturally fall into one of the 13 groups given enough time. However, these findings can not be applied to inmates who are quickly placed in segregation (e.g., high-profile criminals, parole returns) or to those who serve a brief time in segregation.

Table 20 describes how the 13 groups were categorized. The first six groups included inmates who returned to GP for a minimum of 6 months while the second six groups included inmates who released either directly to the community or within 6 months of return to GP. For those with fewer than 6 months in prison prior to segregation, a 6-month rate of COPDs was computed. Similarly, a 6-month rate of COPDs was calculated for participants in groups 6, 12, and 13 who were housed in excess of 36 months in segregation (all COPDs from 36 months to release were factored in). Where there was an insufficient number of OMIs, a within-subjects only design was conducted.

Mean plots for every group are available in Appendix B.

There was a significant time main effect for all groups. In all cases except group 13, the rate of COPDs dropped substantially upon entry into administrative segregation. Upon the last measurement period prior to release, the rate approached zero. For those who returned to GP for at least 6 months, COPDs increased following release but not to pre-segregation levels. This pattern suggests that placement in administrative segregation reduces the rate of COPDs, although they may not be the best measure of compliant behavior as the setting precludes certain violations (i.e., assault, fighting, bartering). Even so, COPDs is not a wholly inadequate measure as evidenced by group 13 which had longer than average segregation stays presumably related to elevated rates of disciplinary infractions.

Groups 1 through 6 are particularly interesting when considering whether behavior dictates release. At first glance, it appears as though it does. However, groups 3 through 5 demonstrate very low levels of violations commencing around 6 or 12 months, but they are maintained in administrative segregation for longer periods. Considering that the average number of COPDs was less than .5 for these periods, most inmates would be accumulating no disciplinary violations for months or years without release. It should be noted that COPDs is not the only measure of behavior, albeit it an important one. This is another area for further research to understand why there is a need to segregate these inmates for such long durations.

There were significant OMI main effects for 7 of the 8 comparisons, indicating that OMIs have more disciplinary violations than non-OMIs. This finding suggests that mentally ill inmates were more disruptive, perhaps because adapting to the prison environment poses a greater challenge to them. Nonetheless, they represent a population that is more difficult to manage.

Three interaction effects were significant. For groups 1, 2, and 8, it can be interpreted that the rate of change in COPDs over time was different for OMIs than non-OMIs. This appears primarily due to pre-segregation levels of COPDs. Over time, COPDs for OMIs drop to levels found with non-OMIs, but they have a greater distance to travel.

Group 13 was different from the other groups. This was a disruptive group of individuals who continued to have write-ups and violations while in segregation, particularly the OMIs, and consequently were retained within segregation. This population may be of particular interest for further study because they clearly are unmanageable even in segregation. It may be that segregation is particularly incompatible for these individuals and that another approach is needed. Or it may indicate that these individuals are so unruly and combative that the safety of the prison environment depends on their extreme confinement.

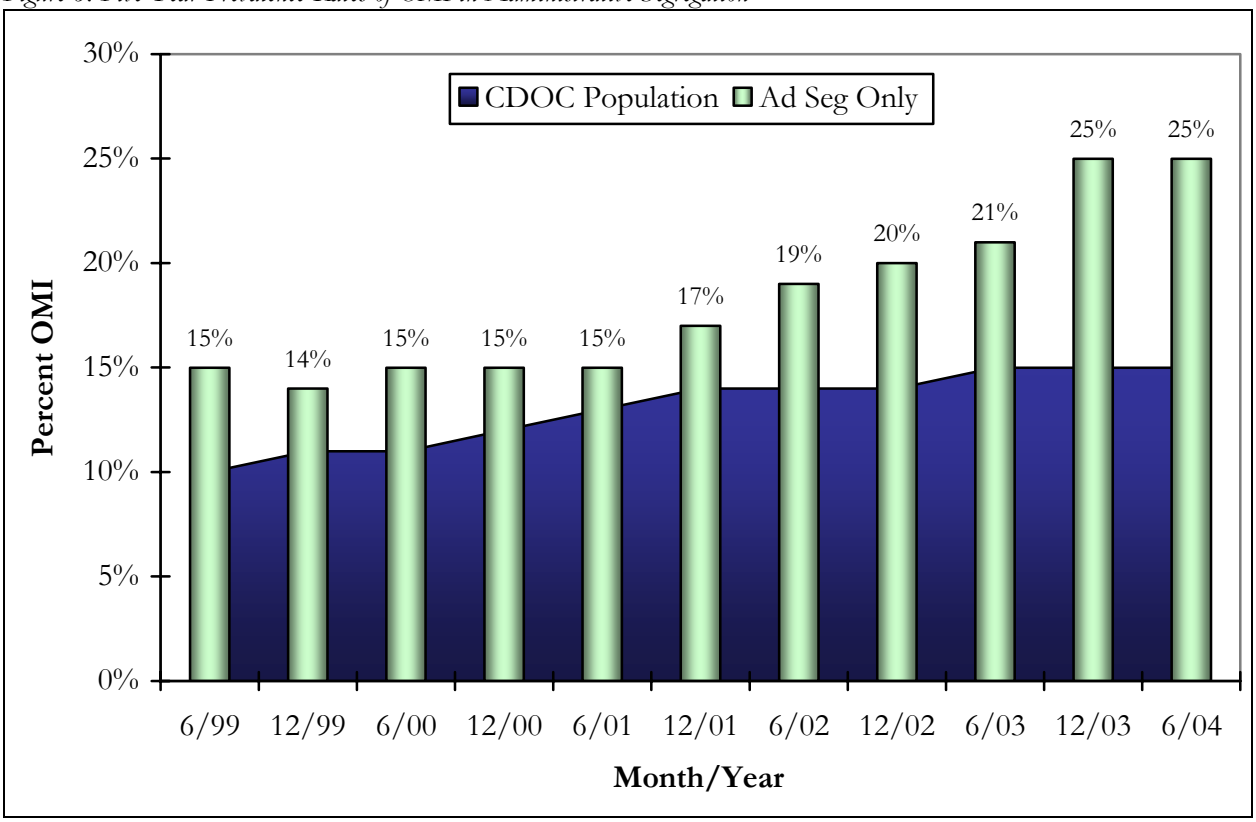
Table 20. Factorial Repeated Measures ANOVA

Group	Months in Ad Seg	Sample Size Total	Sample Size OMI	Repeated Measures ANOVA Results OMI	Time	Time x OMI	Within-Ss MSE
Released to GP with at least 6 months incarcerated following release:							
1	6-12	124	20	$F(1, 122)= 6.77^{*}, \eta^2=.05$	$F(2, 257)= 78.44^{**}, \eta^2=.39$	$F(2, 257) = 5.08^{*}, \eta^2=.04$	2.75
2	13-18	281	35	$F(1, 279)= 12.70^{**}, \eta^2=.04$	$F(2, 600) = 160.70^{**}, \eta^2=.37$	$F(2, 600) = 5.73^{*}, \eta^2=.02$	3.07
3	19-24	235	31	$F(1, 233)= 8.37^{*}, \eta^2=.04$	$F(3, 716) = 77.23^{**}, \eta^2=.25$	$F(3, 716) = 2.70, \eta^2=.01$	2.54
4	25-30	143	9	--	$F(2, 248) = 87.75^{**}, \eta^2=.38$	--	8.08
5	31-36	90	8	--	$F(3, 283) = 48.85^{**}, \eta^2=.35$	--	3.51
6	>36	217	18	$F(1, 215)= 0.14, \eta^2=.00$	$F(5, 1050) = 21.39^{**}, \eta^2=.09$	$F(5, 1050) = 0.44, \eta^2 = .00$	4.85
Released to community or < 6 months incarcerated following release:							
7	6-12	257	36	$F(1, 255)= 13.26^{**}, \eta^2=.05$	$F(1, 362) = 146.95^{**}, \eta^2=.37$	$F(1, 362) = 5.03, \eta^2 = .02$	8.27
8	13-18	207	28	$F(1, 205)= 10.78^{*}, \eta^2=.05$	$F(2, 353) = 82.45^{**}, \eta^2=.29$	$F(2, 353) = 6.11^{*}, \eta^2 = .03$	13.63
9	19-24	128	23	$F(1, 126)= 7.59^{*}, \eta^2=.06$	$F(3, 374) = 57.53^{**}, \eta^2=.31$	$F(3, 374) = 1.98, \eta^2 = .02$	7.69
10	25-30	74	6	--	$F(2, 171) = 48.50^{**}, \eta^2=.40$	--	15.96
11	31-36	59	3	--	$F(3, 194) = 12.16^{**}, \eta^2=.17$	--	11.56
12	>36	59	8	--	$F(5, 273) = 15.11^{**}, \eta^2=.21$	--	8.90
Still in administrative segregation after more than 36 months:							
13	>36	112	21	$F(1, 110)= 20.85^{**}, \eta^2=.16$	$F(4, 468) = 14.06^{**}, \eta^2 = .11$	$F(4, 468) = 2.18, \eta^2 = .02$	12.36

** $p < .001$, * $p < .01$.

Trend of Segregating Mentally Ill Offenders. Five year prison and administrative segregation populations were examined in 6-month increments. Figure 6 displays the rate of OMIs in the population and segregation. Historically, OMIs have been over-represented in administrative segregation. However, the rate increased substantially, particularly in the last year. This increase coincides with a dramatic decline in mental health professionals and rehabilitation programs that were a casualty of budget cuts.

Figure 6. Five-Year Prevalence Rates of OMI in Administrative Segregation



STUDY 3: ADMINISTRATIVE SEGREGATION HEARINGS

Method

Participants. Data from 842 hearings from August 2003 to July 2004 was used for this study. Participants included 820 inmates who had administrative segregation hearings, with 22 of these offenders having two hearings during this timeframe. Inmates were 95% male (n = 779) ranging in age from 18 to 62 (M = 29.8, SD = 7.8). The ethnic composition of inmates was as follows: 41% Hispanic, 37% Caucasian, 19% African American, 2% Native American, and 1% Asian.

Procedure. Inmates who were determined to be a threat to the facility were removed from population and placed in a segregation cell. They attended an administrative segregation hearing where it was determined whether such a placement was warranted. The case was next reviewed by the warden who had the opportunity to affirm, reverse or modify the decision. Lastly, each case was reviewed by CDOC's Offender Services staff prior to reclassification and transfer. This division, in conjunction with the Director of Prisons, also had the authority to affirm, reverse or modify the decision.

The Offender Services personnel who reviewed administrative segregation hearings maintained a database designed for research purposes. The database application was put into use in mid-July 2003 and variables included hearing dates, decisions, reasons for placement decision, and a narrative of the facts surrounding the case.

Results and Conclusions

Of the 842 hearings, 90% resulted in an initial decision to place the inmate in administrative segregation (n = 759). Nine of those decisions were reversed and one was modified. Ultimately, 762 of the 842 hearings resulted in an administrative segregation placement.

The number of hearings conducted by month is shown in Figure 7 and the number of hearings by facility is presented in Figure 8. Facilities not shown in Figure 8 had no hearings during the year. Hearings were on the decline for the first few months and peaked in March. During the spring, there were major facility disturbances at LCF, FCF, AVCF, and CCF that accounted for a large number of hearings.

Reasons for administrative segregation placements are shown in Figure 9. Typically, offenders were placed in administrative segregation for multiple reasons, averaging 4.02 reasons (SD = 1.56). The most common of which was serious management problem, indicative of offenders who pose a threat by remaining within the general population. Only one inmate had this listed as the sole placement reason. Other common reasons included multiple disciplinary violations, advocating facility disruption, STG activity, and assaults, many of which were STG-related. The most frequent 'other' reasons included failure in the CSP's pro-unit program, parole failure following release from administrative segregation, and dealing drugs.

Figure 7. Administrative Hearings by Month

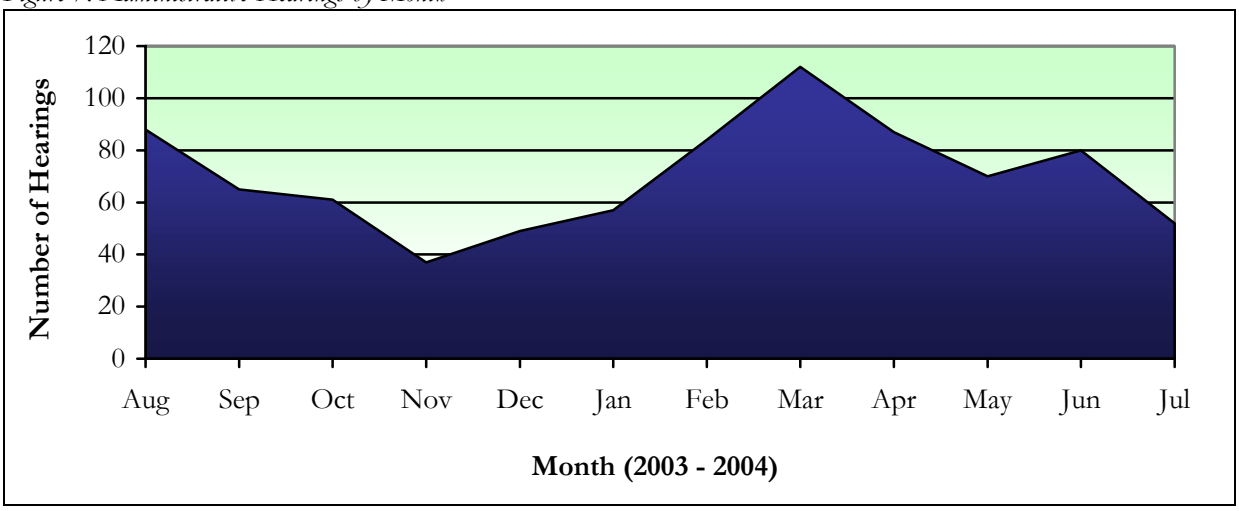


Figure 8. Hearings by Facility

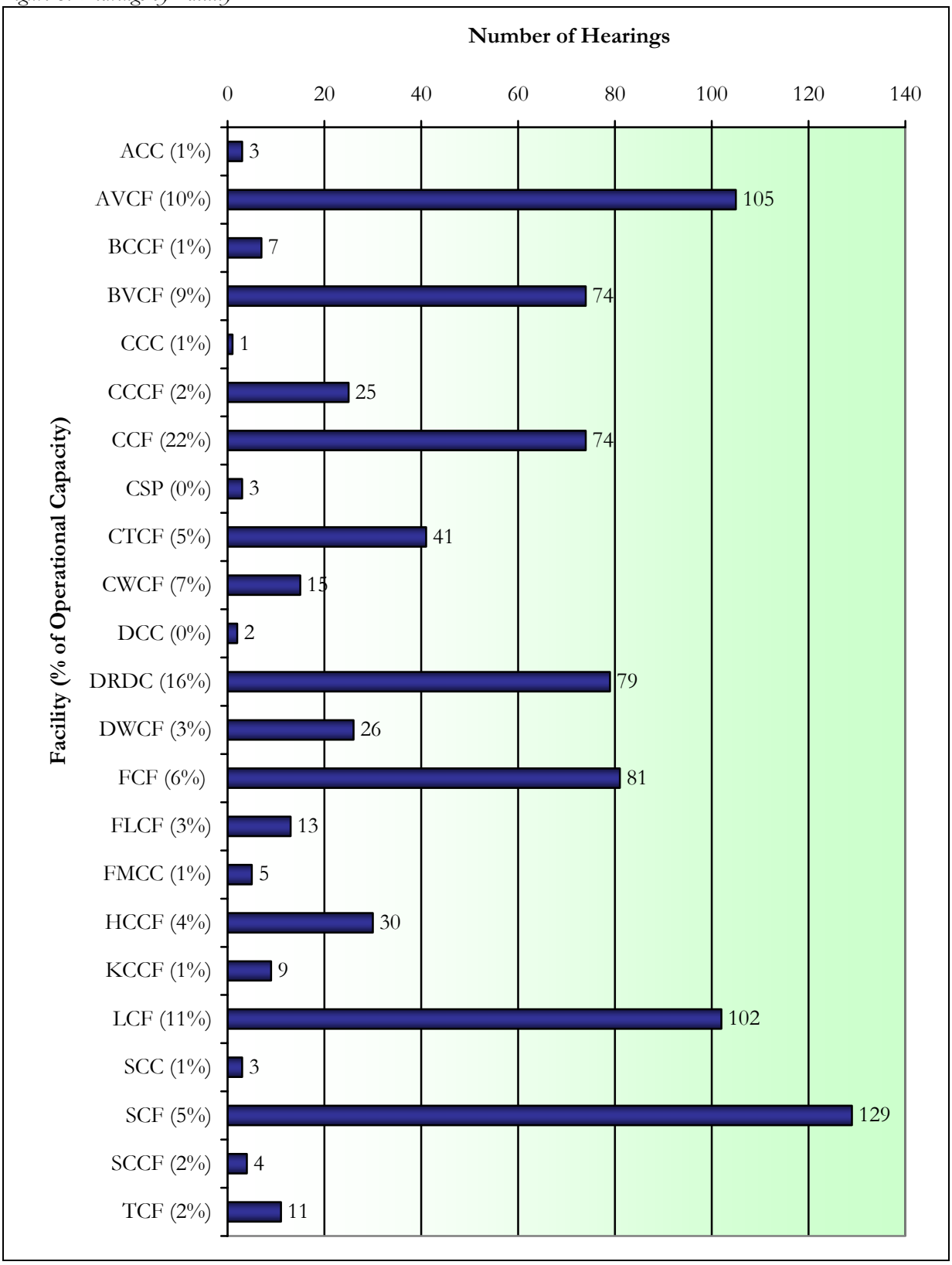
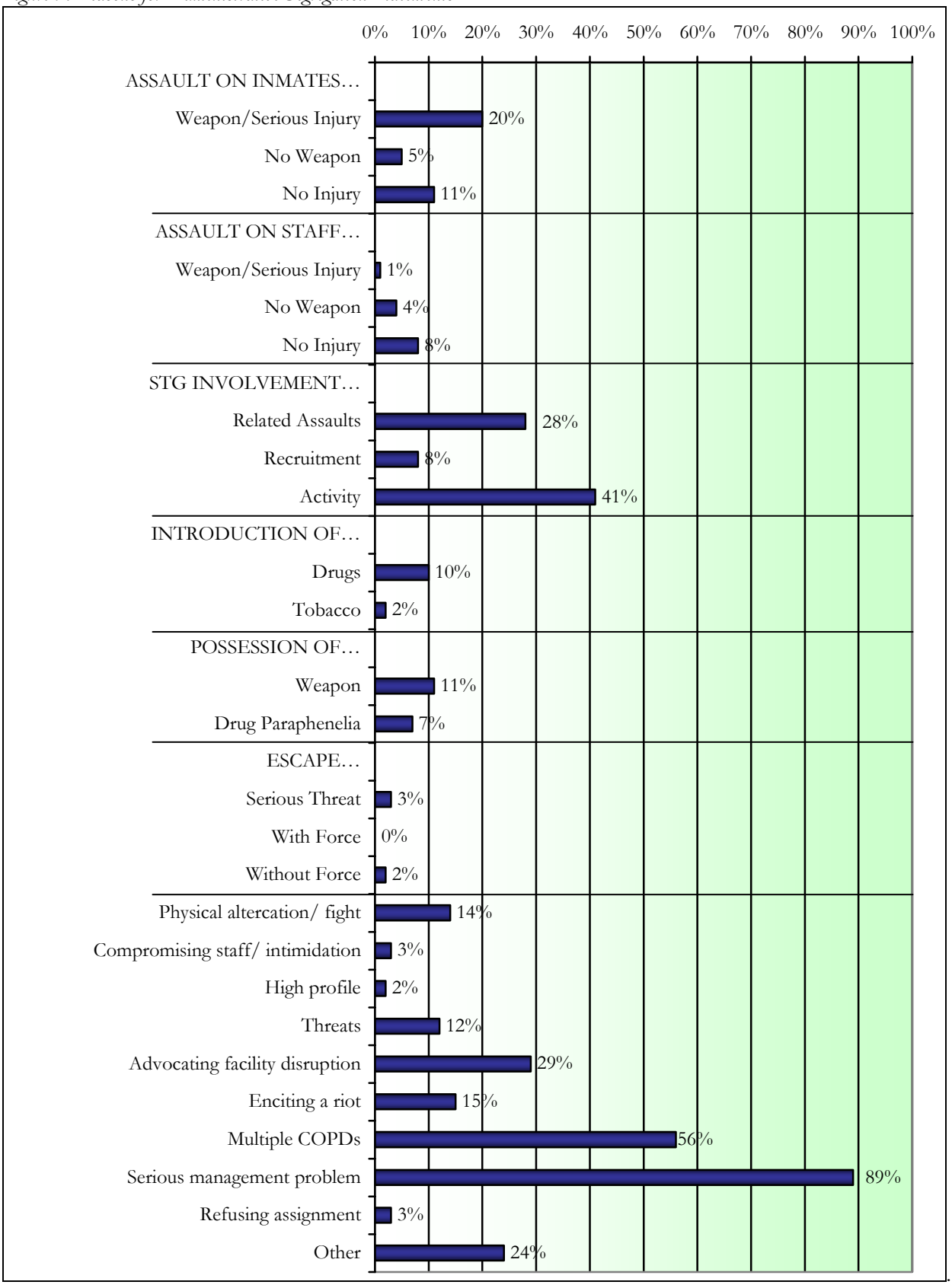


Figure 9. Reasons for Administrative Segregation Placements



DISCUSSION

This study revealed an administrative segregation profile that was very discernable from that of the general population. As a whole, the administrative segregation population has a worse criminal history and more disruptive institutional behavior than the general prison population, which would confirm that Colorado's administrative segregation is used for the worst of the worst. Further support was provided in study 3 where the bulk of placement reasons occurred for serious offenses such as violent assaults on other inmates, STG involvement, multiple disciplinary violations, and facility disruptions.

While the administrative segregation population clearly delineates itself from the general population as a more disruptive, difficult to manage group of offenders, the question of whether Colorado sets its bar too low remains. In the absence of a national standard or guideline, it is unclear how disruptive is enough to warrant segregation. In study 1, 17% of administrative segregation cases had never been convicted of a class I disciplinary violation, a significant indicator of a seriously disruptive inmate. A file review of these cases indicated that many offenders established disruptive, violent patterns through their crime, prior Colorado incarcerations, or their incarcerations in other jails or prisons. The remainder had less overt behavior patterns, having committed some class II violations or demonstrating gang involvement.

Research is subject to its own limitations. It is important to remember that statistics examine groups, averages, and sample distributions. A court of law, on the other hand, looks at individual cases. For this reason, it is not enough to say that, on average, administrative segregation placements are justified. Even one inappropriate placement is too many.

Administrative segregation durations are of equal interest to placements. In Colorado, these stays average one and a half to two years. In the absence of more statistics, it is unknown how long this is in comparison to national averages. However, it is important to note that OMIs had shorter durations than their mentally healthy counterparts. As much as possible, OMI placements are made in the "kinder, gentler settings" provided at DWCF and SCCF where there is a greater emphasis on intensive mental health services and quick transitions back to population. Unfortunately slots are limited by number, and staff are forced to make difficult decisions of which inmates deserve prioritization for these beds.

Disciplinary violations not only decreased as a result of administrative segregation, they were also related to offenders' release. Clearly, COPDs did not represent the only factor dictating release decisions; the other factors remain yet unmeasured. Given that 41% of inmates release directly to the community, coupled with a correspondingly high recidivism rate, the need exists to transition offenders to lower custody prisons as early as possible.

Perhaps the most informative findings from this study described the types of inmates in segregation. Two unique profiles emerged with very little overlap between the two: mentally ill and STG-involved inmates. Interestingly, there still remained an undefined administrative segregation group that fit into neither group. Segregating STG-involved inmates represents a departmental management decision to reduce the negative impact of gang related activities in the general population. The same is not true of the OMI group, although high segregation rates appear to be an unintended effect, likely attributable to recent budget deficits.

This study was specifically concerned about OMIs in administrative segregation. Not only was a disproportionately high prevalence of Axis I and II disorders discovered, but administrative segregation inmates exhibited more severe psychiatric symptoms. These represent serious implications for operating such a facility. It is the responsibility of staff to monitor OMIs and ensure that they do not decompensate, particularly in regards to suicidal behavior. Solely by definition, this population requires more rigorous programming and treatment services than most. In addition to their mental health needs, this group presents with greater academic, vocational and medical needs which can not be neglected on the basis of their administrative segregation placement.

This trend of incarcerating more and more OMIs in solitary confinement has even greater implications for non-administrative segregation facilities. With the decline of mental health resources, rates of administrative segregation placements for Colorado OMIs have dramatically increased. Whether the prevailing perspective that prison mental health services are ancillary changes to one where they are accepted as integral or mental health training is brought to the front lines (i.e., security staff), prisons need to learn how to better manage their mentally ill inmates and protect them. Optimally both scenarios would be in effect,

where mental health clinicians work closely with line staff to employ the best management strategies. A system which condones "check-ins" (inmates who, fearing for their safety, engage in the minimal behaviors necessary to land them in solitary confinement), by merely allowing them to happen would benefit from procedural review. Colorado should take heed from Judge Justice's ruling in *Ruiz v. Johnson* (1999): "Despite its institutional awareness of these conditions, [Texas Department of Correctional Justice] has failed to take reasonable measures to protect vulnerable inmates from other, predatory prisoners and overzealous, physically aggressive state employees."

Future Research

First and foremost, the need persists for researchers to tackle the empirical question of whether administrative segregation inflicts psychological harm on inmates, both for mentally ill and mentally healthy subgroups. A well-designed study would include a control group and a repeated measures design. The repeated measures design can ascertain whether offenders decompensate over long periods of solitary confinement while the use of a control group can discern whether any significant psychological changes are attributable to the administrative segregation environment specifically or are simply associated with the overall prison environment. In keeping with the broad range of criticisms aimed at solitary confinement, measures across a variety of psychological dimensions (e.g., suicide ideation, hopelessness, psychosis) should be included. Assessments gained through multiple sources (e.g., inmate self-report, mental health clinician, researcher) enable a researcher to analyze convergence of measures, thereby strengthening the study findings. Furthermore, research should try to understand if some types of individuals, such as those with Cluster A personality disorders, do better in a segregation environment than others.

Process evaluations that take into account actual prison operations in Colorado's administrative segregation facilities should be undertaken. As demonstrated in *Ruiz v. Johnson* (1999), clearly written policies and procedures are not nearly enough; a court of law will examine actual practices. In fact, even ACA accreditation did little to assist the corrections officials' position in the Texas lawsuit because a paper review was deemed an inadequate substitute for a thorough on-site evaluation. Process evaluations conducted by an agency or unit external to the prison program, where there are not repercussions for either the prison or the researchers, is essential to obtain an unbiased perspective that might reveal program features not obvious to those working there everyday and promote positive change.

Finally, it is recommended that an outcome study of CSP's Pro-Unit be conducted. There is some evidence to suggest that inmates who complete this transitional program from administrative segregation have better outcomes than those who release directly to the community. If this is a transitional model that provides successful reintegration back into the general prison population and/or society at large, then it should be endorsed as an ideal model within Colorado and nationally.

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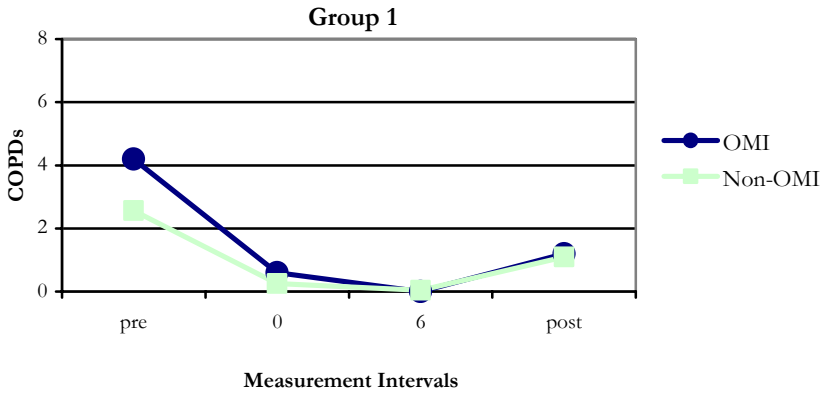
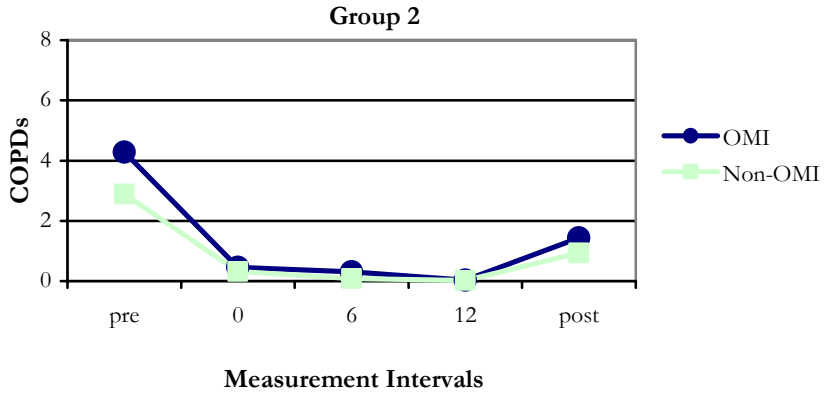
APPENDIX A

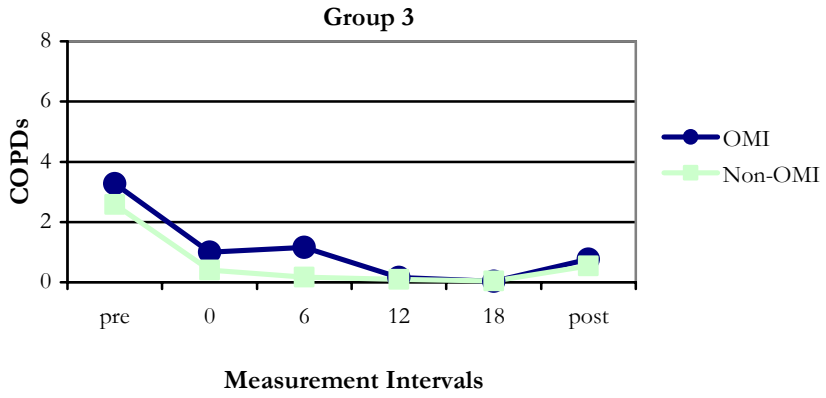
Comparison of Recidivism Rates via Release to GP

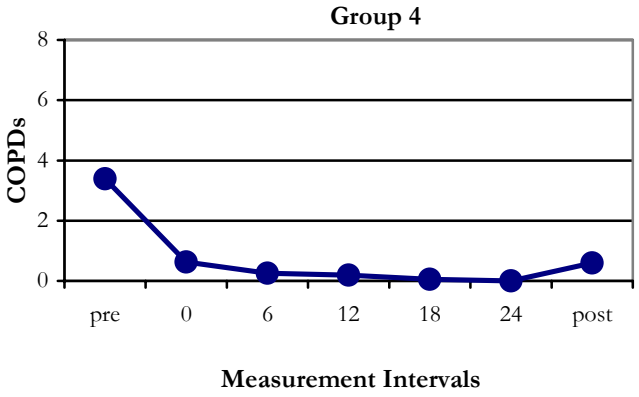
	Recidivism Rates		
	1-Year	2-Year	3-Year
Sentence Discharge	$t(270) = -0.25, p = .80$	$t(221) = 0.87, p = .39$	$t(174) = 1.40, p = .16$
Mandatory Parole	$t(484) = 0.56, p = .57$	$t(332) = 1.57, p = .12$	$t(233) = 1.81, p = .07$
Discretionary Parole	$t(334) = 0.19, p = .85$	$t(286) = 0.85, p = .40$	$t(226) = -0.20, p = .84$

APPENDIX B





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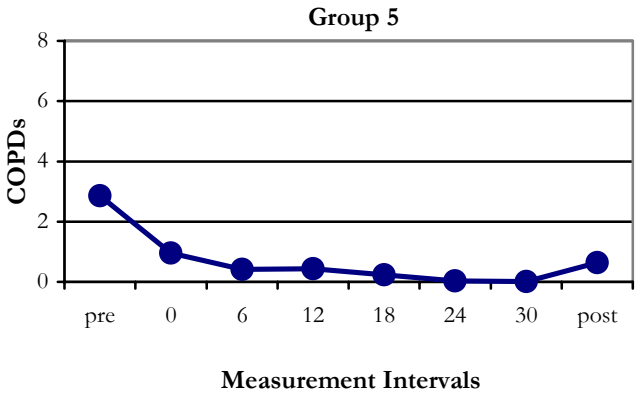
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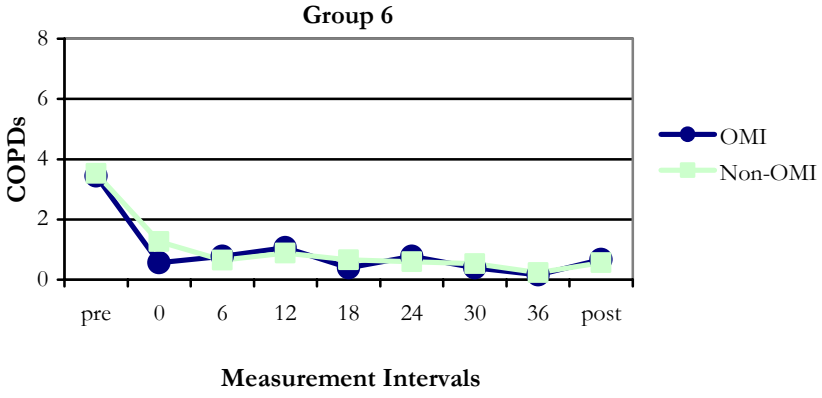
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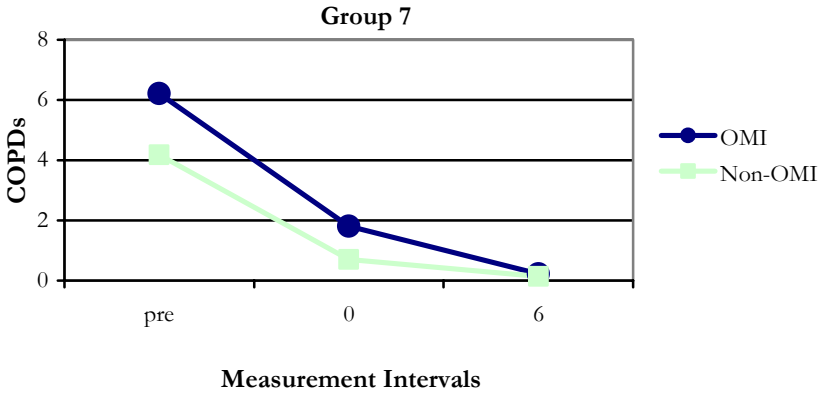
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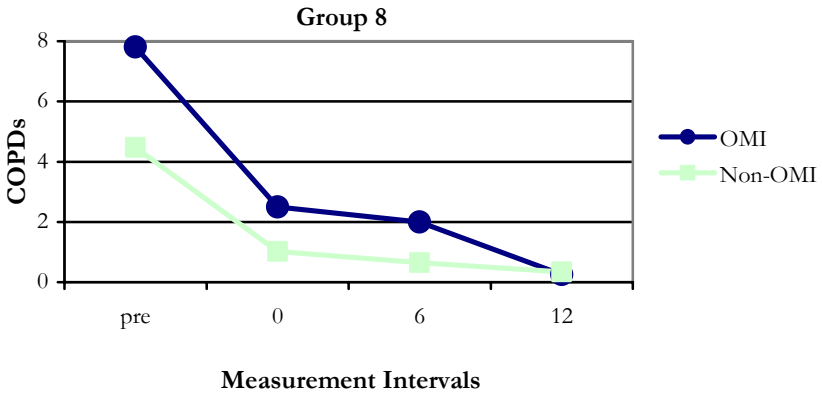
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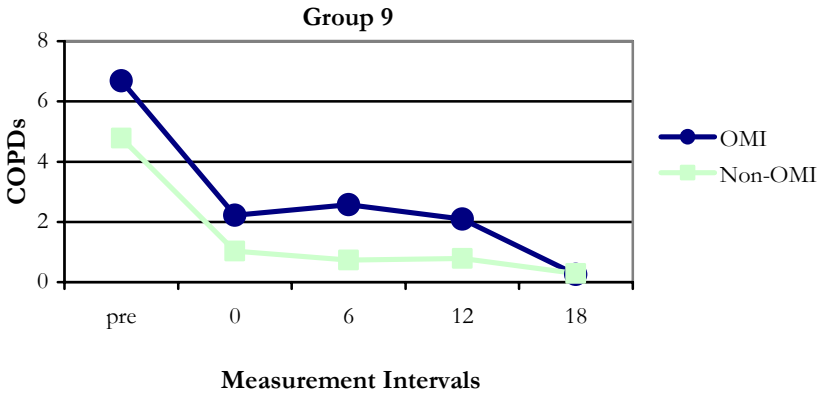
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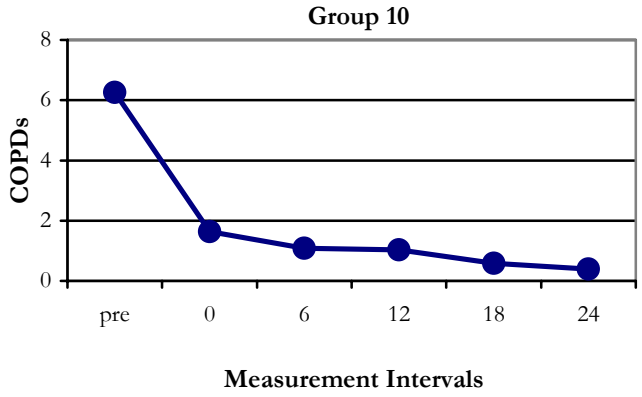
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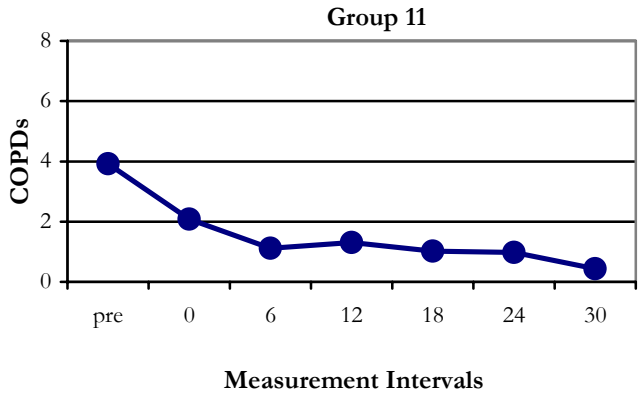
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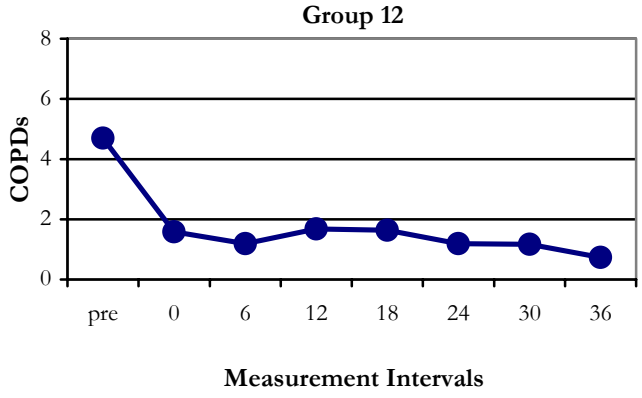
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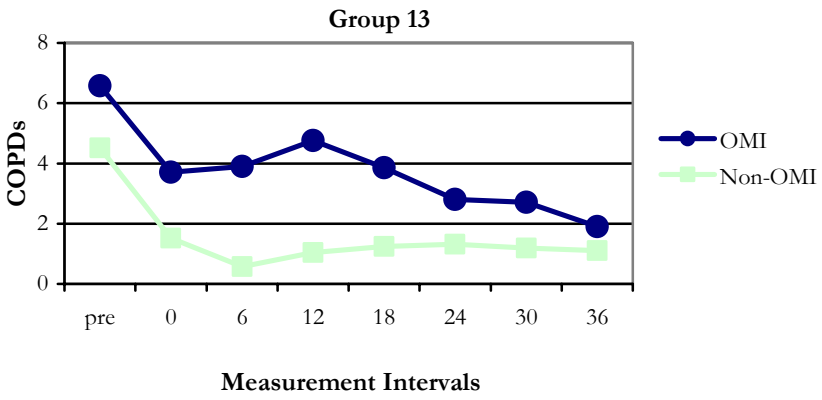
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Measurement Intervals
OMI
Non-OMI

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