REFLECTIONS ON COLORADO'S ADMINISTRATIVE SEGREGATION STUDY

BY **MAUREEN O'KEEFE**

One researcher who specializes in corrections discusses the study's strengths and limitations, the impassioned response to its findings, and areas for further research.

The practice of incarcerating inmates in long-term segregation is an emotionally charged topic. Human rights advocates oppose it, particularly for inmates with mental illness, while corrections personnel deem it necessary for the safe operation of their facilities. The practice has been criticized as being psychologically damaging, excessively harsh and inhumane (i.e., lack of programs and services, minimal control over environment, limited access to the outdoors), prone to abuses by staff, and lacking in adequate step-down programs for those releasing to the streets. Media coverage and litigation have fueled the debate, while advocates and researchers have called attention to the lack of quality research, including the lack of evidence supporting its effectiveness in reducing prison violence.

A research team in Colorado sought to fill a gap in the research and advance the empirical dialogue around segregation. With support from NIJ, researchers (including the author), academics, prison officials, and human rights advocates conducted a longitudinal study of the psychological effects of solitary confinement, particularly for inmates diagnosed with a mental illness. We had hoped that empirical evidence would help develop some common ground — but instead our findings seemed to divide the sides even further.

The Colorado Study

The conditions of long-term segregated confinement are as varied as the names by which it is called — supermax, solitary confinement, security housing unit, and restrictive housing.

At the time of the study (2007-2010), long-term segregation in Colorado was known as administrative segregation (AS). Colorado inmates were placed in AS for one serious violation or a series of lesser violations and were confined to single cells approximately 23 hours a day for an indeterminate period of time (two years on average). Inmates participated in cognitive behavioral programs and a quality-of-life level system that rewarded positive behavior with increased privileges, such as in-cell televisions and more family visits.

At the start of the study, 5 percent of Colorado's 21,807 prison inmates were in AS. The prevalence of mental illness among these AS inmates was high, as it was across the nation.

Our research team approached 302 male AS inmates in the Colorado state correctional system to participate in the study; 270 consented.[1] We divided the AS inmates into two groups: those with mental illness and those with no mental illness. For comparison, we included two groups of inmates in general population prisons: those with mental illness and those with no mental illness. The general population inmates were all at risk of being put in AS, but they were either placed in a diversion program or returned to a higher-security general population prison after an AS classification hearing.[2] Our research team added a third comparison group to further explore inmates with mental illness. The final group consisted of inmates housed in a special needs prison because their mental illness and corresponding behavioral problems exceeded the management capacity of general population prisons.[3]

A research assistant administered a battery of paper-and-pencil tests to the inmates at approximately three-month intervals over the course of a year.[4] The tests measured depression and hopelessness, anxiety, psychosis, withdrawal and alienation, hostility and anger control, somatization, hypersensitivity, and cognitive impairment. Clinicians and correctional officers also completed rating forms on psychological functioning and behavior, and we examined mental health crisis reports and prison logs of behavioral data and out-of-cell activities. However, we found it challenging to interpret the collateral data for a number of reasons, including missing data, so in the end we relied primarily on the inmates' self-reported data.

The Results…

We had hypothesized that inmates in segregation would experience greater psychological deterioration over time than comparison inmates in general population prisons. Our study found that the AS inmates had elevated psychological and cognitive symptoms when compared to normative adult samples. However, there were elevations among the comparison groups, too, suggesting that high degrees of psychological disturbances are not unique to the AS environment. The group of inmates without a serious mental illness in general population prisons was mostly similar to the normative group.

In examining change over time, we found initial improvement in psychological well-being across all groups, with rapid improvement at the start and smaller changes over the remainder of the study. Contrary to another of our hypotheses, we found that inmates in AS with mental illness did not deteriorate more rapidly and extremely than those without mental illness.

Finally, although AS inmates in the study had traits believed to be associated with long-term segregation, we could not attribute these features to AS confinement, because they were present at the time of placement and also occurred in the comparison groups.

…and the Unanticipated Controversy

We were surprised by the results, but we were even more stunned by the response from the field.

The misrepresentation of factual information about the study was particularly worrisome. For instance, some critics argued that we did not share how many inmates were excluded because of language barriers or reading level;[5] however, we present those figures (only 2 percent of the population) and discuss them as a study limitation in the final report. Other critics claimed that an overrepresentation of study participants with a high school diploma or equivalent occurred because of this exclusion;[6] however, our statistical analyses in the report show that participants' education levels were representative of inmates who had had an AS hearing. Several also disagreed about how long inmates were in segregation before their initial testing session, even though figures in the report show an average of 30 days.[7]

Two critics claimed that we were purposely deceptive about the validity of the assessments, citing as "irrefutable evidence" an example of a deceased inmate who did not endorse any suicidal intent items on his most recent test.[8] However, the inmate in question did not commit suicide, so failing to endorse suicide items should not be perceived as a conflict with his cause of death.

One critic conceived the "Alysha effect" to describe a supposed phenomenon in which inmates would favorably distort their responses because they were gathered by the research assistant, who "is apparently an attractive young woman, talking with inmates who had virtually no contact with any such young attractive women."[9] The base premise is untrue: Inmates endorsed negative symptoms, and there are often women, including young and attractive ones, working in prisons as correctional officers, mental health clinicians, teachers, and administrators. Another critic asserted that the research assistant's undergraduate degree rendered the test results unreliable,[10] but there is no reason to believe the assistant was incapable of developing rapport, handing out self-report tests, and scanning tests for random responding patterns.

Some critics take issue with the study's use of self-report paper-and-pencil tests, claiming that these measures are satisfactory for university students and outpatient clients but not for inmates.[11] Some also argue that inmates, fearing reprisal, would not reveal psychological dysfunction on these types of tests. However, our study participants revealed significantly *greater* psychological discomfort than did normative community samples. Furthermore, reliability and validity measurements for our participants were strong, indicating consistent responses within and between tests. The notion that clinical interviews are more valid is faulty. Interviews rely on self-reporting, as does any study of an individual's internal experiences, and are more prone to experimenter bias.

Several have argued that research on the 19th century penal system, the experiences of prisoners of war, KGB interrogation practices, polar exploration, and sensory deprivation contribute more to our understanding of the harmful effects of segregation than empirical research on actual inmates.[12] However, those studies address conditions that bear little resemblance to modern-day segregation. For instance, prisoners of war or those interrogated by the KGB experienced torture, had no contact with the outside world, were denied basic food and medical care, and feared imminent death — all tremendous stresses not shared by today's inmates in segregation. These critics appear to not recognize that inmates involved in litigation are not a representative sample and that their interviews may provide a distorted picture, especially when not accompanied by careful review of their mental health history before segregation. Two researchers further criticized the exclusion of inmates who refused to participate, but that limit applies to all human subjects research bound by today's ethical standards.[13]

If we as scientists choose which studies to believe and which to ignore on the basis of personal preconceptions rather than scientific merit, how much easier will it be for practitioners to do the same, leading them to reject future scientific advances in psychology and criminal justice?

So why do people react to this study in such extreme ways? Our hypotheses had face validity,[14] which can explain why the results surprised many people — including our research team. Researchers and critics have expressed a fear that "the Colorado study will be used to justify the warehousing of large numbers of mentally ill prisoners in solitary confinement."[15] Those who devote their professional lives to the belief that solitary confinement harms mental health may consider the study a personal affront. One researcher noted that "people feel very strongly about this issue. It appears as though some researchers are so entrenched in their beliefs that when presented with evidence that counters their point of view, they resort to making every attempt at belittling its worth."[16]

Regardless of the reason, if we as scientists choose which studies to believe and which to ignore on the basis of personal preconceptions rather than scientific merit, how much easier will it be for practitioners to do the same, leading them to reject future scientific advances in psychology and criminal justice?

The Benefit of Hindsight

This commentary is not meant to suggest that the Colorado study was perfect or that it was the only research needed to answer the questions about psychological harm resulting from AS. Nor does this article mean to suggest that our research team rejects all criticisms and alternative explanations. The critiques addressed thus far are the least compelling; there are others that can help shape our understanding of reasonable and important limitations, provide alternative explanations for the outcomes, and explain why the Colorado results might not generalize to other corrections agencies. It is interesting to consider some of these additional critiques and what we might do differently — or the same — if we conducted such a study today.

For example, having three external experts who served alongside prison management on the advisory board was extremely helpful: The experts shared a national perspective and were actively engaged with the study design, project implementation, troubleshooting, analyses, and interpretation of the results. There were mixed biases within the research team and advisory board; however, this created a lively but respectful atmosphere, one in which team members had a heightened sensitivity to opposing viewpoints that helped ensure the study's robustness.

We used a repeated-measures design to examine whether and how inmates' psychological symptoms changed over time. Including comparison groups allowed us to explore whether these changes differed by mental status (mental illness vs. no mental illness) or conditions of confinement (AS vs. general population and AS vs. special needs prison). The more the comparison inmates resembled the AS inmates, the better our understanding of how inmates respond to different environments. Some have criticized our team for conducting baseline psychological assessments after inmates had been placed in AS; others have noted that the groups did not remain pure (that is, AS inmates might have been released from segregation, and general population inmates might later have been placed in short- or long-term segregation). However, no better group selection was feasible without the benefit of random assignment.

We selected objective assessments to help reduce experimenter bias. We sought assessments that measured the psychological symptoms reported among segregated inmates in prior research; were reliable and valid, but not lengthy or difficult to read; and had minimal interaction requirements, so they could be administered in noncontact settings. As discussed earlier, clinical interviews do not circumvent the self-report issue, and they present the potential for experimenter bias, but they could also add depth and context to the data. Future research may benefit from interviewing inmates at the beginning and end of the study to learn more about their mental health history and treatment needs, probe their perceptions about confinement conditions, and compare their verbal responses to their written ones. However, to mitigate concerns about the interviewer influencing responses, such research would need to use highly structured and recorded interviews and stringent coding criteria.

Our collateral data sources have also been criticized, with some noting that correctional officers and clinicians put minimal effort into completing their rating forms.[17] In the end, we found that their data contributed little to the study. A better approach would have been either to make a stronger effort to obtain these data or to use our resources to collect other valuable data; for example, we could have reviewed inmates' mental health records more thoroughly. Such a review might have yielded a better understanding of inmates' prior treatment history, including crisis events; the recommended level of mental health care; diagnostic history; and any difficulties related to adjustment to prison. An in-depth review of mental health records also might have provided better insight into the differences between AS inmates with mental illness and inmates with mental illness in a special needs prison, although it is not certain that the records would be detailed enough for such a determination.

We also collected mental health crisis data. Clinicians routinely record any unscheduled appointment requiring immediate intervention as a "crisis" contact. The study's criteria for counting crises related to self-harm and psychotic symptoms were overly inclusive. For instance, if the clinician referenced past hallucinations or delusions, we coded the event as a psychotic symptom even if the inmate denied it and the clinician

did not observe it during the current event. Our team has been criticized for not interpreting these data as evidence of psychological harm. About twice as many inmates with mental illness in a special needs prison had crisis events compared with AS inmates with mental illness, even though the two groups were roughly the same size. If we had interpreted the data by the number of crises or the number of inmates experiencing a crisis, we might have concluded that a special needs prison setting is psychologically harmful to inmates — potentially twice as harmful as AS, which may be an unfair conclusion.

There were concerns about pre-study incident rates after discovering that one inmate with numerous crises had a long history of self-harming behavior and psychiatric care before the study began. Because of these data limitations, we feel that the study would have been strengthened if we had adopted more stringent criteria for including crisis events, conducted a mental health record review to examine crisis and treatment history, and compared crisis events against self-reported data.

Advancing the Science

The Colorado study was neither the perfect study nor the only study of the psychologically damaging effects of segregation. But it was carefully designed and scientifically rigorous — and it has stimulated a renewed interest in research, which is starkly needed.

In a meta-analytic review, researchers rejected an astounding 91 percent of studies on segregation for not meeting the threshold of inclusion: direct studies of inmates confined in AS that use comparison groups, an outcome measure written in English, and enough data to calculate an effect size.[18] The criticism that the Colorado study did not look at inmate experiences throughout and beyond incarceration, including the social context of segregation units, should be taken as a call for further research.[19] One study cannot resolve all of the questions or even definitively answer a single question on its own; we need to broaden the scope of research and expand the jurisdictions in which it is conducted.

Our research team and advisory board do not agree that our findings are contrary to previous research. A large body of prior research involved case studies, demonstration projects, and cross-sectional studies, all of which use designs that preclude conclusions about causality — that is, whether segregation causes psychological harm. When we apply an alternative conclusion to these studies — that segregation is disproportionately used with inmates with mental illness — our findings are no longer at odds. Furthermore, a recent meta-analysis found small to moderate adverse psychological effects resulting from AS that were no greater in magnitude than the overall effects of incarceration.[20] These findings are consistent with our Colorado results.

Finding elevated psychological symptoms among AS inmates — both those with diagnosed mental illness and those without — was as disturbing as detrimental effects would have been. Regardless of whether those symptoms existed prior to incarceration, resulted from incarceration, or were caused by segregation, isolation is not an effective treatment approach. Inmates in psychological distress are better served in a therapeutic environment where they can receive proper care and treatment. A significant but overlooked finding in the Colorado study was that inmates with mental illness who received treatment in a special needs facility fared no better than those held in segregation. In fact, they disclosed the highest rates of mental disturbances at the outset of the study and showed no better improvement than their counterparts in segregation or the general population. The field needs to move beyond studies that measure the degree of harm inflicted to studies that improve our understanding of safe and effective psychiatric treatment and humane conditions of confinement for difficult-to-manage inmates with mental illness.

Critics worried, justifiably, that corrections agencies would use the Colorado study to rationalize and possibly expand the use of segregation. We did not intend to address whether segregation is an appropriate confinement option, particularly for people with serious and persistent mental illness, nor should our study be seen as an endorsement of prolonged indefinite segregation. No corrections system has successfully used the study to promote segregation. In fact, since we completed the study, the American Psychiatric Association and the National Commission on Correctional Health Care have released position statements advocating restricted use

of prolonged segregation with certain inmates,[21] and the Association of State Correctional Administrators established guiding principles for correctional systems on the operation of restrictive housing.[22] The U.S. Department of Justice also published recommendations on the use of restrictive housing.[23]

Researchers have offered explanations for why we did not find systematic psychological deterioration among inmates confined to AS. Some speculate that certain inmates do better in segregation, such as those seeking decreased social stimulation or those engaged in a self-imposed protective custody.[24] Others contend that "when negative effects occur in AS, it is primarily due to how inmates are treated by correctional staff and managed in general by prison administrators."[25] And still others say that several mediating factors might affect prisoners' segregation experiences, including the physical conditions of confinement, level and form of contact with the outside world, in-cell provisions, access to programs and activities, medical and mental health treatment, staff-inmate relationships, and the ethos and atmosphere in the prison.[26]

If it is true that segregation conditions are typically harsher than Colorado's, we advise against generalizing our findings to other systems. It may be that prison in general is psychologically harmful. We desperately need more research to understand whether, under what conditions, and for whom long-term segregation causes psychological harm and — equally important — how to better manage those few inmates who pose a serious risk of harm to staff and other inmates.

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For More Information

Read the full report from the Colorado study at NIJ.gov, keyword: 232973.

Learn more about NIJ's research on restrictive housing at NIJ.gov, keywords: restrictive housing.

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Notes

1. Subjects included men only due to low numbers of women in AS. Researchers excluded inmates from the study if they had too little time remaining on their sentence (26 percent) and for illiteracy or language barriers (2 percent). Twenty-three subjects later withdrew their consent, but we used data collected to that point. Inmates were compensated $10 per test session, subject to $3-$8 restitution fines and debt collection by the corrections agency.
2. All classifications regarding inmates' mental status and housing assignments were the result of routine prison operations; our research team grouped subjects according to the agency's procedures.
3. We did a series of comparisons to determine whether AS subjects represented the eligible pool on demographic, criminal history, institutional behavior, and risk/needs variables. Results indicated that AS participants were similar to the eligible pool on nearly all comparisons.

4. Of the 270 subjects who consented and completed the initial battery, 258 completed the second test session, 251 completed the third, 243 completed the fourth, and 236 completed the fifth. Some inmates who missed a test session may not have missed subsequent sessions.

5. Stuart Grassian and Terry Kupers, "The Colorado Study vs. the Reality of Supermax Confinement," *Correctional Mental Health Report* 13 no. 1 (2011): 1-16.

6. Sharon Shalev and Monica Lloyd, "Though this be Method, yet there is Madness in't: Commentary on One Year Longitudinal Study of the Psychological Effects of Administrative Segregation," *Corrections & Mental Health: An Update of the National Institute of Corrections,* posted June 21, 2011, http://community.nicic.gov/blogs/mentalhealth/archive/2011/06/21/though-this-be-method-yet-there-is-madness-in-t-commentary-on-one-year-longitudinal-study-of-the-psychological-effects-of-administrative-segregation.aspx.

7. Peter Scharff Smith, "The Effects of Solitary Confinement: Commentary on One Year Longitudinal Study of the Psychological Effects of Administrative Segregation," *Corrections & Mental Health: An Update of the National Institute of Corrections,* posted June 21, 2011, http://community.nicic.gov/blogs/mentalhealth/archive/2011/06/21/the-effects-of-solitary-confinement-commentary-on-one-year-longitudinal-study-of-the-psychological-effects-of-administrative-segregation.aspx; Shalev and Lloyd, "Though this be Method, yet there is Madness in't."

8. Grassian and Kupers, "The Colorado Study vs. the Reality of Supermax Confinement."

9. Stuart Grassian, "'Fatal Flaws' in the Colorado Solitary Confinement Study," *Solitary Watch,* posted November 15, 2010, http://solitarywatch.com/2010/11/15/fatal-flaws-in-the-colorado-solitary-confinement-study.

10. Scharff Smith, "The Effects of Solitary Confinement: Commentary on One Year Longitudinal Study of the Psychological Effects of Administrative Segregation."

11. Grassian and Kupers, "The Colorado Study vs. the Reality of Supermax Confinement."

12. Ibid.

13. Ibid.

14. Robert H. Berger, M. Paul Chaplin, and Robert L. Trestman, "Commentary: Toward an Improved Understanding of Administrative Segregation," *Journal of the American Academy of Psychiatry and the Law* 41 no. 1 (2013): 61-64.

15. Shalev and Lloyd, "Though this be Method, yet there is Madness in't."

16. Ryan M. Labrecque, "The Effect of Solitary Confinement on Institutional Misconduct: A Longitudinal Evaluation." Final report to the National Institute of Justice, grant number 2014-IJ-CX-0003, August 2015, NCJ 249013, https://www.ncjrs.gov/pdffiles1/nij/grants/249013.pdf.

17. Grassian and Kupers, "The Colorado Study vs. the Reality of Supermax Confinement."

18. Robert D. Morgan et al., "Quantitative Syntheses of the Effects of Administrative Segregation on Inmates' Well-Being," *Psychology, Public Policy, and Law* 22 no. 4 (2016): 439-461.

19. Shalev and Lloyd, "Though this be Method, yet there is Madness in't"; Lorna A. Rhodes and David Lovell, "Is 'Adaptation' the Right Question? Addressing the Larger Context of Administrative Segregation," *Corrections & Mental Health: An Update of the National Institute of Corrections,* posted June 21, 2011, http://community.nicic.gov/blogs/mentalhealth/archive/2011/06/21/is-adaptation-the-right-question-addressing-the-larger-context-of-administrative-segregation.aspx.

20. Morgan, "Quantitative Syntheses of the Effects of Administrative Segregation on Inmates' Well-Being."

21. Board of Trustees, "Position Statement on Segregation of Prisoners with Mental Illness," *American Psychiatric Association,* posted December 2012, https://www.psychiatry.org/File%20Library/About-APA/Organization-Documents-Policies/Policies/Position-2012-Prisoners-Segregation.pdf; Board of Directors, "Solitary Confinement (Isolation)," *National Commission on Correctional Health Care,* posted April 2016, http://www.ncchc.org/solitary-confinement.

22. Administrative Segregation Sub-Committee, "Restrictive Status Housing Policy Guidelines," *Association of State Correctional Administrators,* posted August 2013, http://www.asca.net/system/assets/attachments/6145/B.%20ASCA%20Restrictive%20Status%20Housing%20Policy%20Guidelines-Final%2008092013.pdf?1375723019.

23. Guiding principles 36-40 specifically address inmates with severe mental illness. See U.S. Department of Justice, *Report and Recommendations Concerning the Use of Restrictive Housing: Guiding Principles* (Washington, D.C.: U.S. Department of Justice, January 2016) 6-8, https://www.justice.gov/dag/file/815556/download.

24. Berger, Chaplin, and Trestman, "Commentary: Toward an Improved Understanding of Administrative Segregation."

25. Paul Gendreau and Ryan M. Labrecque, "The Effects of Administrative Segregation: A Lesson in Knowledge Cumulation," in *The Oxford Handbook of Prisons and Imprisonment,* eds. John Wooldredge and Paula Smith (Oxford, U.K.: Oxford University Press, 2016).

26. Shalev and Lloyd, "Though this be Method, yet there is Madness in't."

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