



The effects of solitary confinement: Commentary on *One Year Longitudinal Study of the Psychological Effects of Administrative Segregation*

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Abstract

Solitary confinement is a common practice in many prisons, but it has sparked debates and research on its effects on prisoners. This article examines a recent study on administrative segregation in Colorado in the context of relevant European research on the effects of solitary confinement

Key words: administrative segregation, solitary confinement

The use of large scale solitary confinement became common with the rise of the modern penitentiary during the first half of the 19th century and has remained a feature of Western prison systems. A debate about the effects of solitary confinement was largely settled early in the 20th century, when both experts and practitioners tended to agree that solitary confinement was harmful. Discussions on the effects of solitary confinement resurfaced in the 1950s and the following two decades when sensory deprivation studies were carried out in reaction to, among other things, stories of the brainwashing of U.S. prisoners of war during the Korean War. During the 1980s, solitary confinement regained topicality in the wake of the creation of supermax prisons in the United States. But solitary confinement has also been used, debated, and researched extensively elsewhere. As one example, solitary confinement has been an integral part of Scandinavian pre-trial prison practice for many years (Smith 2006). In 2010, the Colorado Department of Corrections and the Department of Psychology at the University of Colorado issued a new study on solitary confinement. In this article, I will discuss research on the effects of solitary confinement and make some comments on the Colorado study. (*Editor's note: All references to, or quotes from, the Colorado study are from O'Keefe et al., 2010.*)

Colorado Study

The Colorado study is longitudinal and mainly based on self-reported data. The battery of tests used in this study looks impressive and covers the various symptoms and health issues described in the earlier solitary confinement literature, such as anxiety, depression, and suicidal thinking. However, it is clearly important that all these tests were used without in-depth interviews being conducted, and that the self-reported data was not collected by a psychiatrist, a psychologist, or an experienced prison researcher. The main conclusion in the Colorado study was that the results “were largely inconsistent with (...) the bulk of literature that indicates AS is extremely detrimental to inmates.” and that “there was initial improvement in psychological well-being across all study groups, with the bulk of the improvements occurring between the first and second testing periods.” However “all of the study groups, with the exception of the GP NMI (general population, non-mentally ill) group, showed symptoms that were associated with the SHU (special housing unit) syndrome” (i.e. high degrees of psychological disturbance). In this article, I will discuss a number of issues that will help explain the apparent discrepancy between the Colorado study conclusions and the results gathered in other available research.

Why not use the available research?

The Colorado report begins with the claims that the debate on the use of long-term administrative segregation “has suffered from a lack of empirical research” and that “the scant empirical research conducted to date suffers from research bias and serious methodological flaws.” This is a seriously misleading statement. The problem is not that relevant and rigorous empirical research does not exist, but that the authors of the Colorado report haven’t used it. Much of this research is European, but it has been presented and reviewed in international journals, including U.S.-based journals (Smith, 2006 and Haney, 2009).

European studies on the effects of solitary confinement

A growing body of American research is clearly relevant to a discussion of solitary confinement and segregation regimes (see, for example, Lovell, 2008; Cloyes, Lovell, Allen, and Rhodes, 2006; Rhodes, 2004; and Haney, 2008). In the following, I will briefly review some of the European research, which seems to be less known to American readers. This research has not been carried out in supermax prisons in the U.S. (for European supermax research, see King, 2005 and Shalev, 2009) but it is, in fact, research on how prisoners react to being subjected to 22-23 hours of solitary confinement in their cell each day, so it is most certainly relevant. According to the Colorado study, the “defining feature” of administrative segregation in Colorado is single-cell confinement for 23 hours per day.

For various reasons, the use of pre-trial solitary confinement has historically been extensive in Sweden, Norway, and Denmark and has sparked intense debates and also research on the effects of solitary confinement, especially in Denmark and Norway (Smith 2006). In Norway, a 1993 longitudinal study of 63 isolated remand prisoners found widespread health problems after four weeks of solitary confinement, including depression, anxiety, stomach and muscle pains, and an inability to concentrate. The study excluded inmates with obvious withdrawal symptoms and those deemed at risk of suffering from a psychosis (Gamman 2001). A longitudinal follow-up in 1995 with a sample of 54 remand prisoners

included a control group and reported significantly more physical and psychological suffering, including sleeplessness, concentration problems, anxiety, and depression, among the prisoners in solitary confinement, who were also given much more medication than the control group (Gamman, 1995, 2001). The author of this study found that several of the isolated prisoners developed symptoms of a hallucinatory nature, that there were “important differences” between the health of those isolated and those not, and concluded that “the isolated had more symptoms of both psychological and somatic nature” (Gamman, 1995, p. 2245).

In terms of the prevalence of symptoms, 94 percent of those in pre-trial solitary confinement suffered from adverse symptoms after four weeks. More than half suffered from serious symptoms like depression and anxiety, and 13 percent had mutilated themselves (Gamman, 2001). In a third Norwegian study on disciplinary segregation, more than 43 percent of the isolated prisoners suffered adverse symptoms after only an average of 39.7 hours in solitary confinement (Stang et al., 2003).

In Denmark during the 1980's and 90's, extensive research on the effects of solitary confinement was carried out in the form of a number of interview-based studies as well as a so-called “isolation-study,” which was a large-scale longitudinal study consisting of a comprehensive psychiatric and psychological study (1994) and a follow-up study (1997), both with control groups. The Colorado report authors are not aware of some of the most important articles and results from these studies (Sestoft et al., 1998; Andersen, 2004; see also Smith, 2006), and furthermore do not fully incorporate the findings of the two related studies they actually list in their references. The Danish 1994 study involved 367 remand prisoners and reported a significantly higher rate of psychiatric problems among prisoners in isolation. A higher incidence of psychiatric morbidity – mainly adjustment disorders - was found among those in solitary confinement (28 percent) compared to those not in isolation (15 percent). The rate of psychiatric morbidity was highest (43 percent) among a third group of remand prisoners who had been in solitary confinement for more than two months (Andersen et al., 1994). A number of standardized instruments were used to measure health quantitatively. The scores for those in solitary (as a group) were unchanged throughout the isolation period, while those not in isolation “had a gradual improvement on most quantitative mental health scores during this early phase of imprisonment (Andersen, 2004, p. 39)” Those in solitary confinement experienced an improvement in health scores when the solitary confinement conditions were relieved (Andersen 2004). The researchers concluded that the differences between the isolated remand prisoners and the control group were caused “mainly by different conditions of SC and non-SC” (Andersen 2004, p. 39), and that pre-trial detention in isolation compared with pre-trial detention without isolation involved strain and risk of damaging the mental health of the imprisoned individuals (Andersen et al. 1994, 2000).

The 1994 study was longitudinal, incorporated both quantitative and qualitative elements, used standardized instruments to measure health, incorporated in-depth interviews, used highly-skilled researchers, included control groups and a very large number of prisoners in solitary confinement, produced statistically significant results, and verified their results through other objective data regarding the hospitalization of remand prisoners.

Still, the thoroughness of the study caused the research itself to constitute a significant intrusion into the lives of the study's participants (Andersen, 2004). During the first three weeks of imprisonment those in solitary confinement were typically subjected to four or five days of intense interviews and testing (2–4

hours each day, not counting filling out questionnaires, having blood samples taken etc.). These remand prisoners were, in other words, effectively *not* in solitary confinement during those four or five days. This constituted around 20 to 25 percent of the period between the first test and the end of the second test round after approximately three weeks. This must have downgraded the measured differences between the isolated prisoners and the control group significantly, especially since the interviews constituted meaningful social contact in which the well-being and innermost thoughts of the imprisoned individual was in focus (Smith, 2006).

Given this issue, it is not surprising that the second part of the 1994 study - a survey of hospitalization among remand prisoners – gave even more clear-cut results. A sample of 124 remand prisoners who had been transferred to prison hospital revealed that, if “a person remained in SC [solitary confinement] for four weeks the likelihood of being admitted to the prison hospital for a psychiatric reason was about twenty times as high as for a person remanded in NSC [non-solitary confinement] for the same period of time” (Sestoft et al., 1998, p. 103).

A 1997 follow-up study was based on reports (questionnaires) from former participants in the original study, and illustrated how former remand prisoners in solitary confinement found their incarceration significantly more straining than did remand prisoners not in isolation. Thirty-eight percent of those in solitary confinement and 36 percent of those in long-term solitary found their remand imprisonment extraordinarily straining, as opposed to 12 percent of those not in solitary (Andersen et al., 1997). Furthermore, 23 percent of those in solitary confinement and 27 percent of those in long-term solitary reported that they experienced severe psychological reactions after their remand imprisonment, as opposed to nine percent of those not in solitary (Andersen et al., 1997). The authors concluded that from a medical and psychological perspective the practice of pre-trial solitary confinement should be abandoned (Andersen et al., 1997).

A Swiss study on the effects of solitary confinement documented a similar problem surrounding hospitalization of inmates in solitary confinement. The study sample consisted of 203 male patients in a psychiatric clinic in Zurich, of whom 102 were committed from a prison (76 percent of these came directly from solitary confinement). The study concluded that remand prisoners in solitary confinement were much more often hospitalized for psychiatric reasons than were prisoners who came from communal prison conditions (Volkart, Rothenfluth, et al., 1983).

Volkart and colleagues also compared 30 prisoners in solitary confinement with a control group of 28 prisoners in communal imprisonment. The study was cross-sectional and incorporated no longitudinal data. Isolated inmates had spent an average of ninety-one days in solitary confinement while the control group had spent on average 326 days imprisoned. All participants had normal intelligence and their health and personalities were assessed through psychiatric questionnaires. The group of isolated inmates “showed considerably more psychopathological symptoms than the control group [and these] effects were mainly caused by solitary confinement; age, schooling, duration of detention and personality turned out to be of subordinate importance.” (Volkart, Dittrich, et al. 1983, p. 44)

Social contact and contamination across groups

The available research, including the above-mentioned studies, demonstrates that solitary confinement “causes serious health problems for a significant number of inmates. The central harmful feature is that it reduces meaningful social contact to an absolute minimum: a level of social and psychological stimulus that many individuals will experience as insufficient to remain reasonably healthy and relatively well-functioning.” (Smith, 2006, p.503)

This should be a starting point for further research on solitary confinement. Previous research does not show, for example, that the availability of television, radio, or newspapers, or even good material conditions of confinement, will offset the negative impact of solitary confinement on many prisoners, although access to such items and conditions can ameliorate any prison experience to a certain extent. But as the Colorado report concludes, the availability of modern technology, such as videoconferencing, is not always positive for the prisoners since “it also increases the degree of isolation experienced by inmates.”

Therefore, it is unfortunate that the Colorado study does not explore this issue convincingly, i.e., measuring the relative level of psychologically meaningful social contact in administrative segregation (AS), punitive segregation, and general population (GP). If we look closer at the Colorado study it describes basic AS conditions as single-cell confinement for around 23 hours per day. In AS, prisoners are given five 1-hour recreation spells each week, as well as three 15-minute showers (although apparently inmates use less time for showers). Prisoners are escorted to recreation in “full-restraints.” Depending on custody level, inmates are allowed either two 2-hour noncontact visits per month (Level 2) or four 3-hour visits per month (Level 3). Phone calls for those in the Colorado State Penitentiary apparently amounted to only a few minutes daily. If we look at both recreation, visits, and showers, an inmate on level 2 will apparently (assuming he receives visitors) stay at least around 23 hours in his cell on a daily basis, while those on level 3 get two more hours out of their cell on a weekly basis (once again assuming that they receive visits) – i.e. less than 20 minutes less cell time on a daily basis.

In addition to the above, there is some contact with mental health clinicians who do monthly rounds and occasional “mental health sessions” for one to two hours per week. Furthermore inmates in AS go through a “Quality of Life Program,” which includes cognitive classes, but as far as I can see this does not result in increased social contact since these classes, along with some recreational activities, take place over the television.

Punitive segregation, where many inmates stayed prior to AS, is single-cell confinement for 23-24 hours per day, during which inmates only come out for recreation and showers in the living unit. So most inmates stay inside the segregation unit during their entire stay and are “placed in full-restraints” if escorted out of the cell. Inmates in punitive segregation are not allowed to work or participate in any programs or education, and do not have a television.

Descriptions of these conditions indicate that the amount of psychologically meaningful social contact is extremely scarce in both AS and punitive segregation, with the latter regime apparently allowing even less out-of-cell time and social contact. There is, however, one unclear factor. According to the Colorado

report, the inmates in AS can communicate with sign language and they can also yell to each other. Exactly how much and what kind of contact this results in is not described. Furthermore, GP conditions are not described along with the amount of social contact allowed under that regime.

Basically, it is somewhat unclear in the Colorado study how much meaningful social contact inmates in AS had access to during the study. AS conditions suggest that they had very limited access to such contact, although it is not entirely clear what level of communication was allowed through yelling and sign language, where especially the former might potentially yield some level of meaningful contact. Furthermore, it is unclear how much staff contact inmates have, although it is seemingly not a lot.

To confuse matters even more, there was “contamination across groups” meaning that “all offenders in AS were not confined in segregation for their entire period of participation in the study” and inmates in GP may “at some time during their study participation [have] been placed in punitive segregation or even AS.” In fact, when looking at “pure cases” of continuous AS, there were only 26 among the mentally ill and 39 among the non mentally ill, and even more alarming, there were only 13 “pure cases” of continuous GP prison time among the mentally ill GP control group (GP-MI) and 11 “pure cases” of continuous GP prison time among the non mentally ill GP control group (GP-NMI). This means that out of the 33 GP-MI and 43 GP-NMI who participated in the study (some of which later dropped out) only 13 GP-MI and 11 GP-NMI spent their entire study time in GP conditions. So the GP control group was not really a GP control group at all since the majority of these experienced either AS or punitive segregation during their participation in the study, and in addition most – perhaps all – experienced AS immediately prior to their AS hearing, after which they went into GP.

The Colorado researchers looked at their “pure cases” and found no major differences between these and other GP inmates. Then, they disregarded the problem, although such a finding questions the validity of their self-reported data and the setup of the entire study. Under all circumstances, the Colorado study is in fact *not* a study comparing segregation/solitary confinement with non-segregation/solitary confinement, since most of the GP inmates experienced solitary confinement during the study.

Equally important are uncertainties surrounding the levels of meaningful contact the study participants had prior to the start of the study. It is unclear how many participants came from solitary confinement when they entered AS or how much time they spent under such conditions before their initial tests. If some came directly from GP conditions to AS, then it is a problem that we do not know what that means in terms of a change in the level of available, meaningful social contact. We do know that some inmates – although not how many - came directly from punitive segregation and given the way these conditions are described in the Colorado study it seems likely that these inmates experienced better conditions with more meaningful contact when they entered AS. In that case, it is hardly surprising that the study found positive developments between the first and second testing of the inmates.

Were the study participants harmed by solitary confinement prior to the study?

The mental health of the Colorado inmates when they entered AS is very important, as are the conditions they arrived from prior to the start of the study. Needless to say, it puts the Colorado study in different light if many participants were actually in segregation prior to the start of the study. Unfortunately, the Colorado study is somewhat unclear about this.

The Colorado report states that “all study participants classified to AS were waitlisted for and placed in CSP,” which as far as I understand means that they were living in AS conditions when waiting for their AS hearing. The introduction to the report says something slightly different, however, when it states that “in the time leading up to and during their AS hearing, inmates have typically been in segregation.” So some prisoners were apparently not in segregation? The Colorado authors “recognized that significant changes could occur while inmates were held in segregation at their originating facility.” Therefore, they collected a pre-baseline measure “as close to the AS hearing as possible.”

In order to use the study to discuss the effects of solitary confinement, we need to know exactly how many were in segregation prior to the study and, even more importantly, we need to know for how long those subjected to a pre-baseline measure had been in segregation before they were subjected to the pre-baseline measure. This information is crucial and seems lacking in the report. All we are told is that pre-baseline measures were collected “as close to the AS hearing as possible.” But what does this mean in practice? The question, of course, involves the extent to which participants were possibly affected by solitary confinement prior to the start of the study. This is important since we know from other research that reactions to solitary confinement vary from one individual to another, but they “often set in very quickly.” (Thelle & Traeholt, 2003, p.769)

The Colorado report concludes that “all of the study groups, with the exception of the GP-NMI group, showed symptoms that were associated with the SHU syndrome. These elevations were present from the start and were more serious for the mentally ill than non-mentally ill.” So if many study participants had been subjected to segregation prior to the study that would likely explain their symptoms. In other words, the study participants were already damaged by solitary confinement when the study began, and the Colorado study shows us that these prisoners continued to show “symptoms that were associated with the SHU syndrome” during their time in AS.

Furthermore, positive developments between the first and second test could be explained by the transfer from punitive segregation conditions to apparently better AS conditions, which include a more meaningful form of social contact (visits). Seen in this light, the results of the Colorado study are in line with previous research. The AS inmates in Colorado got slightly better when they had access to slightly more meaningful social contact, but they remained in a very bad condition, and continued to show symptoms, as they stayed in solitary confinement.

How was the self-reported data obtained?

According to the Colorado study, all the self-reported data were collected by one field researcher who was a female university employee with CDOC training and badge that allowed her unescorted access to the prison facilities. The field researcher had an undergraduate degree and is not the responsible author. This is a very big difference in contrast to Danish and Norwegian studies, where the actual researchers who designed the studies and wrote the reports were trained psychiatrists and psychologists and also operated as field researchers. They accessed the health of the study participants themselves and did the in-depth interviews. In my opinion, this is the only serious and professional way to design and conduct a study about health in prison, which includes obtaining data directly from prisoners. Sending a “researcher” who is neither a health practitioner nor a PhD-level researcher with experience doing prison research, into a prison in order to access the health of prisoners by collecting self-reported data simply means that the

data are likely to be unreliable. That the field researcher had to report to an employee of the prison system studied (the leading author of the report) is also problematic.

The Colorado report itself describes instances in which the self-reported data appeared questionable. When this occurred, the field researcher apparently asked prisoners to retake the test if they admitted to “not being truthful.” If study participants said they were being honest and the researcher still did not believe them, she “marked the test as questionable.” This validation process seems outright naive. On what grounds did the university’s inexperienced field researcher assess whether or not the prisoners were “being truthful” about their psychological problems and mental health? This obviously requires education, experience, and psychological or medical knowledge. Seen in this light, it is interesting to note that when the Colorado study authors removed persons “with questionable or inconsistent responses” it “did not change the overall effects and results” so they used all the responses in their analysis. This raises serious questions about the field researcher’s capacity to assess whether or not the prisoners were ‘truthful’ and, once again, raises questions about the reliability of all of the self-reported data.

Professional researchers report that it can be difficult to learn about symptoms suffered by isolated inmates since many (male prisoners in particular) try to hide their condition (Smith, 2006). Researchers also explain that it is often extremely difficult, traumatic, and painful for formerly isolated individuals to talk about their experience of solitary confinement: “A few studies seem to explain the fact that some inmates do not complain and seem to adapt more or less peacefully to solitary confinement as a sign of a healthy coping strategy, while others explain this as an unhealthy sign of social withdrawal typically accompanied by severe psychological problems. Such problems often will be discovered only by personal in-depth interviews in a positive (therapeutic) atmosphere.” (Smith, 2006, p. 474; see also Koch, 1982; Toch, 1992; Jackson, 1983)

King, who has interviewed many supermax prisoners, observes that a significant number of these prisoners “found it extremely difficult to bring themselves to talk about their experience” and only after “considerable persistence some prisoners came to regard a researcher from another culture, who treated them with respect and clearly wanted to learn, as an acceptable proxy and began to open up.” (King, 2005, p.130)

Furthermore, the study authors made a mistake by advising inmates that “the purpose of the study was to learn about their adjustment to prison.” It is well known that within a prison community it is important for prisoners to seem capable of adjusting to prison, and those who do not manage to do this are typically placed at the bottom of the prison hierarchy. Approaching study participants with an overall question regarding “their adjustment to prison” in other words makes it likely that they will try to hide possible weaknesses and try to convey the impression that they cope and adjust relatively well. In a prison context, it is not an “open” but a “leading” question.

Crisis events, hospitalization, and objective data

The Colorado researchers describe initial attempts to include “crisis events” such as self-mutilation or suicide attempts recorded by prison clinicians in their study, but they decided not to, because the number of participants who experienced these events allegedly was too small and because crisis events could occur without staff’s knowledge. The authors conclude that the available data “raise more questions than they provide answers.” If we look carefully at these data, however, they certainly raise some questions.

If we compare the number of crisis events among the mentally ill in GP and in AS, we find that throughout the study two persons had two crisis events in the former group, while 10 persons had 26 crisis events in the latter group (one suicide attempt, 14 cases of suicidal/self harm ideation, and 11 cases of self harming behavior). This seems a significant difference with respect to important behaviors that have been identified in past research as among the adverse effects of solitary confinement. The numbers are small, but, still, five times as many prisoners in the AS-MI group had crisis events compared to the GP-MI group, and 13 times as many crisis events occurred in the AS-MI group compared to the GP-MI group. Furthermore, 11 crisis events in the AS-MI group were associated with psychotic symptoms compared to one such crisis event in the GP-MI group.

These data are important in two ways. They suggest that solitary confinement had a negative impact on the health of the mentally ill, but also, even more importantly, they seriously question the reliability of the study’s self-reported data. These crisis event data raise questions about why the difference among the AS-MI and GP-MI groups was not found through the self-reported data. After all, a significant number of participants in the AS-MI group had crisis events and the prevalence of these events were much higher than in the GP-MI group. Furthermore, such crisis events would normally be considered “the tip of the iceberg.” A likely hypothesis would be that a prison environment producing significantly more self-harm and suicidal thoughts than other prison regimes would also reveal many more “lesser” psychological problems. One cannot help asking how and why the Colorado researchers chose to ignore this data, which in fact questions the entire setup of their study?

Conclusion

The Colorado study suffers from several major problems. First, some of the most relevant research available was not used and it was wrongfully claimed that previous research was biased and flawed. Secondly, the way the self-reported data was collected very likely made these data unreliable. Thirdly, the study authors ignored that their crisis data seriously questioned the validity of their self-reported data and in fact suggested that AS might have serious ill effects. Fourth, the majority of the study participants apparently came directly from segregation, and were thus likely to be harmed from solitary confinement before the study started. Finally, the Colorado study in fact did not compare segregation/solitary confinement with non-segregation/solitary confinement since most of the GP participants also went into solitary confinement during the study. Imagine a similar situation with, for example, medical research on the effects of a new type of medicine where it turns out that most of the control group participants also received the new medicine being tested both during the study and prior to study start. It does not make sense. It is therefore extremely difficult to gain any valuable information about the effects of AS and solitary confinement from the Colorado Study.

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