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How nature imagery affects inmates in the “Blue Room”

By Dr. Naille M. Nadkarni, Lance Schmaeker, Patricia Hasbach, Tierney Thys and Emily Gaínes Croteau

Wallace, an inmate at the Snake River Correctional Institution (SRCI) in Oregon, was shackled at the wrists and held by two officers in the Intensive Management Unit (IMU) as he prepared for his hour of exercise. Thinking back to that morning, when he received an upsetting message from his father, he began feeling agitated and angry.

“I want to see the wilderness video, number 28,” he said to the officer in the control room, as the blank white cinderblock walls of the cellblock surrounded him. He then proceeded to what is referred to as the “Blue Room,” the unit’s exercise room, which had a projector mounted on its north wall. By the time the officers removed his cuffs, the video he had requested was playing, projected across the south wall — painted a light blue — which served as a giant screen. Wallace, in the solitude of the environment of stall and officers in solitary restrictive housing cellblocks. The Room, that emotion remained inside of him, long after he returned to his small cell. To camp and hunt in the mountains of Utah.

yelling across the hall. For that short time, the presence of nature scenes brought him calm, the kind blank white cinderblock walls of the cellblock surrounded him. He then proceeded to what is referred to as the “Blue Room,” the unit’s exercise room, which had a projector mounted on its north wall. By the time the officers removed his cuffs, the video he had requested was playing, projected across the south wall — painted a light blue — which served as a giant screen. Wallace, in the solitude of the environment of stall and officers in solitary restrictive housing cellblocks. The Room, that emotion remained inside of him, long after he returned to his small cell.

Wallace’s experience — watching nature videos in the exercise room of the restrictive housing cellblocks — was part of a study done to explore how the sights and sounds of nature might reduce stress, anxiety and violence that characterize the living environment of inmates and the working environment of staff and officers in solitary restrictive housing cellblocks. The SRCI study had resulted in multiple correctional centers adopting this unique visual initiative.

Placing inmates in restrictive housing or IMUs, isolated from human contact, is mainly used either as a punishment measure or as a means of isolation. Yet it has been recognized by the American Correctional Association (ACA) that the practice causes or worsens an array of mental disorders, including anxiety, anger, self-harm, obsessive thoughts and psychooses.

Restrictive housing cellblocks are considered more dangerous and stressful to staff than general prison conditions. These cellblocks are known to have higher rates of violence and inmate injuries.

Most studies on the negative aspects of restrictive housing have focused on the effects of social isolation — that is, the reduction or severing of contact with other humans. But another attribute of restrictive housing is the near total absence of inmate access to nature. Living things and the natural environment, including plants, animals, wind, rain and full sunlight. Though the denial of nature to inmates potentially serves as a deterrent to violent inmate fights, it can result in negative behavioral effects that could be avoided by providing access to nature or nature imagery.

This idea comes from another venue in which nature is almost totally absent: the sterile rooms of hospitals. There, patients may spend days or weeks in recovery, and due to fears of infection and cross-contamination, they even ban potted plants.

However, in 1984, psychologist Roger Ulrich compared the health and emotional outcomes of surgery patients between two groups: one with a view of trees outside their windows and the other with just a concrete wall. Those with the nature view reported lower stress and anxiety and needed significantly fewer days of hospital recovery than those with the wall view. That study led to a body of research showing that access to nature imagery can profoundly reduce stress, irritability, anxiety and aggression. This effect is especially strong in venues where little ambient nature exists, such as nursing homes, offices with windowless cubicles and military barracks. Although direct contact with nature is most effective, indirect nature exposure (e.g., a window, book, sound recording or photograph) can provide temporary relief from psychological stress in daily life, producing a micro-restorative experience.

In 2013, a research team, consisting of a scientist, a science educator, a psychologist, a science media expert and a correctional statistician, initiated the Nature Imagery in Prisons Project (NIPP) to investigate whether exposure of inmates to nature imagery might create a safer working environment for officers and staff, and whether that would help regulate and improve mood and behavior of inmates in restrictive housing cellblocks. The team, based at the University of Utah, collaborated with officers, behavioral health staff and administrators at SRCI to compare the mood and violent infractions of inmates who viewed nature films with those who did not, as well as officer and staff responses to this practice.

The study

SRCI houses more than 500 male inmates in restrictive housing (IMU) in its multi-security-level cellblocks in Ontario, Oregon. The intervention was tested in one cellblock (IMU-E), which houses 48 inmates. This cellblock is split into two sides, E-A and E-B, with identical layout on each, as well as similar age ranges and security risk of inmates, IMU stay duration (over 60 percent are held there for seven months to three years), exercise equipment, duration of exercise periods (45 minutes, four times/week), officer and staff members, and security procedures.

SRCI began providing nature videos to inmates only in the E-B indoor exercise room in April 2013; however, inmates on side E-A did not view films. The cost of the video projector, installation (not including staff time) was about $1,500.

During this study, inmates had a choice of 38 different nature videos, with content including images of diverse habitats (e.g., oceans, forests and rivers), aquarium scenes, views of Earth from space and cloud fly-throughs. After inmates selected which video they wanted to watch, officers in the control room started and stopped the videos so they could verify it was running correctly on a separate monitor. On occasion, officers could use their judgment to place an E-B inmate they perceived as being agitated or troubled in the exercise room in front of a nature video, outside of his scheduled exercise time, using this as a calming intervention. Once the study ended, the research team reviewed the inmates’ behavior, mood and attitudes before and after 12 months of viewing videos.

To examine the behavioral effects of this content viewing, inmates’ disciplinary referrals (IFRs) for violent infractions of inmates on the cellblock...
The studies found that inmates who viewed nature videos committed fewer violent infractions than those who did not view the films.

**Outcomes and results**

**Prison inmates**

The studies found that inmates who viewed nature videos committed fewer violent infractions than those who did not view the films. Statistical analysis revealed that if both sides of the IMU were at full capacity for the periods before and during the nature video intervention, unit E-A (no videos) would have had 65 DFs prior to the intervention and 52 DFs during the activities (a decrease of about 25 percent). However, the E-B (videos available) would have had 57 DFs in the pre-period and 51 DFs in the post-period (a decrease of about 20 percent). The reduction in violent interactions between inmates, or inmates and staff members, is highly substantial impact, as DFs often result in injuries requiring hospitalization, reduced trust, and extended time in the IMU.

Surveys of the E-B unit revealed that inmates perceived the nature videos as having an overall positive effect. Most surveys reported that the inmates felt calmer and more sustained; when they did get angry, they could overcome their feelings and remain calm; and they had more positive relationships with the prison staff (see Figure 1). They also gave a high value to the intervention and its effects on themselves, other inmates and their families.

Although inmates in E-A did not view nature videos in their exercise room, most were aware of the videos, due to hearing about them from other inmates or staff members, and when asked if they would like to view the nature videos in their own exercise room, 70 percent said yes.

**Figure 1. Inmate responses to nature videos.**

On the surveys, the inmates indicated a preference for videos that featured a mix of nature places, including beaches, mountains, oceans and forests. They preferred water, rainforests, places one might go hiking, and images of healthy animals and nature "...nothing in particular other than four walls." Analysis of video selections (199 viewings over the year) showed that the most frequently viewed videos were a variety of landscapes from different countries, including waterfalls, animals, and nature "...everything else in between..." The inmates found the videos relaxing and enjoyable. The majority of individuals preferred nature sounds over music or silence.

**Prison staff**

The surveyed staff members all agreed that the inmates became calmer, with a majority stating that these effects lasted for hours after they saw the videos. Many viewed their workload as easier compared to before the intervention; nearly 70 percent agreed that the intervention affected their relationships with inmates in a positive way, and the majority described their workload as easier or the same as before the intervention and reported that it had a high-to-medium value for the officers, behavioral health staff, upper-level administration and the inmates.

In interviews with prison staff members, most mentioned that they and their peers started out skeptical about the effectiveness of nature imagery to inmates. However, after several months, they recognized it as a potentially effective tool. By watching for precursor behaviors such as pacing or rocking, staff could more easily de-escalate behavior and avoid possible disciplinary action. One staff member stated, "The response was amazing because sometimes it took 15-20 minutes in the inactive area to calm them down and get them back on task."

Staff members observed less violent behavior, lower incidents of forced extractions, fewer anger outbursts by inmates and less self-inflicted injury by inmates. Most comments from staff interviews and surveys indicated pride in taking part in something forward-thinking and potentially effective (e.g., "It makes me proud to be recognized for something positive.").

**What this means**

Finding a way to house people who have repeatedly carried out violent crimes outside and within prison requires multiple approaches and has no simple fix. The negative consequences of isolating inmates from social interactions and nature are increasingly apparent. As suggested by this study, providing short-term nature imagery exposure for violent offenders can reduce negative behavior (e.g., self-inflicted injury) for weeks, months or years without access to nature could be one practical and cost-effective method of reducing stress in that population.

However, this study is not without limitations. First, because the inmates lacked any social stimulation, the presence of outside researchers might have influenced them to provide biased information. Second, no information was researched regarding whether viewing other films (i.e., non-nature) films has similar effects. Nevertheless, many studies have shown that nature imagery is more effective at reducing stress than urban imagery, daytime television or abstract art in a variety of venues. Further research should test other types of visual imagery among prison populations as well as identify which specific elements within the preferred nature videos are most responsible for the inmates’ behavioral changes. Other studies should identify what “dosage” is best suited to prison populations, which inmates and security levels are most receptive to such intervention and, how to achieve the best measure outcomes.
Staff from state prisons in Nebraska, Washington, Wisconsin, Alaska, Oregon and Utah have instituted, or made plans to implement, this intervention in various security levels of their facilities. These findings from a prison setting, along with studies on the effects of nature on human well-being, suggest that this approach could be applied in other venues that have a deficit of nature — such as mental health facilities, assisted living centers, windowless offices and military barracks — making this intervention in one prison setting a useful tool for other prisons and institutions in society.

ENDNOTES


8 Schnacker, L. (2015). Nature imagery in prison project at the Oregon Department of Corrections. Salem, OR: Oregon Youth Authority Research and Evaluation Unit.


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