

Mindfulness training and therapy can reverse jail time's negative psychological effects

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Cell block in Baghdad Central Prison (Abu Ghraib, Iraq)

Just four months in prison can negatively affect a person's cognitive abilities and impulse control, according to findings published in *Criminal Justice and Behavior* from University of Pennsylvania criminologists Adrian Raine and Rebecca Umbach. The good news is, some combination of cognitive behavioral therapy (CBT) and mindfulness

training can reverse the damage.

"We have known for decades that poor cognitive functioning is a risk factor for crime and delinquency," says Raine, the Richard Perry University Professor of Criminology, Psychiatry, and Psychology. "The big thing for society here is that imprisonment is making worse a risk factor that sends people to [prison](#) to begin with."

The study, led by Umbach, a fourth-year criminology graduate student, analyzed data collected by New York University researcher Noelle R. Leonard. Incarcerated 16- to 18-year-old males at Rikers Island Prison were randomly assigned to three months of either a control group that attended weekly sessions focused on substance use, violence, and sexual health risk-reduction or an experimental group that participated in CBT and mindfulness exercises.

"This was a specific kind of mindfulness," Umbach says. "Participants learned breathing exercises and went through varying degrees of CBT. The idea was that the CBT would make you more willing to open up to the positive effects of mindfulness. They were also encouraged to meditate and do [breathing exercises](#) on their own."

Everyone in the study completed what's called the "Emotional Go/No Go" test at intake, then again after four months. Inmates viewed faces on a computer screen expressing one of four emotions—fear, happiness, sadness, or anger—or a neutral face. For each of eight rounds, one of these or a neutral face became the focus. For the fear-focused round, for example, participants were to press the button when a fearful face appeared and avoid pressing it for a neutral one.

The Penn team confirmed what's been hypothesized, that spending time in prison has negative psychological consequences for cognitive control, emotion regulation, and emotion recognition. They also found that while

performance of both groups decreased significantly over time, the CBT/mindfulness appeared to mitigate the decline for impulse control and [emotion regulation](#).

"Perhaps we should be paying a little more attention to cognitive behavior therapy and mindfulness when we have young offenders. These kids are 16 to 18, they're teenagers," Raine says. "Maybe we should be doing a little more to help them with their [impulse control](#)."

Though this work doesn't prove that such an intervention can work for older offenders who have been in prison longer, Raine says it's proof of concept for a methodology that could apply to future research.

In that vein, Umbach says she hopes to replicate the results, and has plans to assess other tasks in the dataset Leonard originally collected. She feels strongly about the implications of these and future findings on those who end up in prison.

"Most people who are incarcerated go back out into the world," she says. "Are there efforts we can make to keep them at a level of cognitive functioning that's as close to normal as possible?"

More information: Rebecca Umbach et al, Cognitive Decline as a Result of Incarceration and the Effects of a CBT/MT Intervention: A Cluster-Randomized Controlled Trial, *Criminal Justice and Behavior* (2017). [DOI: 10.1177/0093854817736345](https://doi.org/10.1177/0093854817736345)

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