

PRACTICING CHOICES, PREVENTING CRIME

Cognitive behavioral therapy helped young men in cities in Liberia and the United States become more focused on the future, reducing criminal and violent behavior and increasing graduation rates when delivered in school.



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KEY RESULTS:

Cognitive Behavioral Therapy (CBT) reduced criminal and violent behavior among young men in cities. In Chicago Public Schools in the United States, arrests per student decreased by 12 percent by the end of the program, with a 20 percent reduction in violent crime arrests. In Monrovia, Liberia, CBT deterred an average of 24 crimes per participant in the year following the program.

When delivered in schools, CBT also increased graduation rates. In the United States, students who received in-school CBT were 9 percent more likely to graduate high school on time, even though the reduction in crime among this group did not persist beyond the yearlong program.

CBT may have been effective because it changed participants' decision-making processes. In the United States, students learned to slow down their decision-making. In Liberia, participants exhibited increased patience and attention to their future.

In Liberia, receiving cash in addition to CBT increased and extended these effects. By relieving the immediate financial need to return to crime, the grant may have provided men more time to independently practice and reinforce their changed behaviors.

Across developed and developing countries, violence and crime concentrate disproportionately among young men in low-income settings, with detrimental effects on these men and their victims. In addition to these direct social costs, the uncertainty and risks of crime and violence can discourage economic growth. Various systemic factors contribute to these challenges, affecting not only the choices young men make, but how they think about making those choices. While young adults in many contexts struggle to develop a positive identity or skills such as self-control, those who grow up in low-income or violent settings, and who are often targets for mobilization into violence, may have more at stake and receive less support.

Cognitive behavioral therapy (CBT) is a comprehensive intervention to reduce self-destructive behaviors by teaching individuals to evaluate and modify the way they think and the decisions they make. Rather than simply teaching good behaviors or nudging participants towards certain choices, CBT teaches concrete methods of better relating to one's environment and practicing strategies to regulate harmful, automatic behavior. Since the 1980s, CBT has been used to address mental health disorders such as depression, and policymakers globally are increasingly interested in using similar interventions to deter criminal and violent behavior. In contrast to policing approaches such as increased enforcement or broad social initiatives such as employment programs, CBT is targeted and short-term, making it a relatively inexpensive policy option.

Previous research suggests that CBT can help reduce crime and violence,¹ but existing rigorous evaluations primarily focus on model programs with relatively few participants, rather than programs at scale in real-world settings. In addition, there are few rigorous studies on CBT's effects among older youth or in non-US contexts. To address these evidence gaps, researchers conducted randomized evaluations of three scalable CBT programs in Liberia and the United States targeted towards young men with a history of criminal behavior.

¹ Abt, Thomas, and Christopher Winship. 2016. "What Works in Reducing Community Violence: A Meta-Review and Field Study for the Northern Triangle." Bethesda, MD: Democracy International.

Hill, Patrick L., Brent W. Roberts, Jeffrey T. Grogger, Jonathan Guryan, and Karen Sixkiller. "Decreasing Delinquency, Criminal Behavior, and Recidivism by Intervening on Psychological Factors Other than Cognitive Ability: A Review of the Intervention Literature." NBER Working Paper #16698, January 2011.

Lipsey, Mark, Nana A. Landenberger, and Sandra J. Wilson. 2007. "Effects of Cognitive-Behavioral Programs for Criminal Offenders: A Systematic Review." *Campbell Systematic Reviews* 3 (6).



EVALUATIONS

CONTEXT AND INTERVENTIONS

This bulletin features randomized evaluations of three CBT programs that took place between 2009 and 2015: the Sustainable Transformation of Youth in Liberia program (STYL) in Monrovia, the Becoming a Man program (BAM) in Chicago Public Schools, and the CBT program at the Cook County Juvenile Temporary Detention Center (JTDC) in Chicago. Table 1 provides details of each intervention.

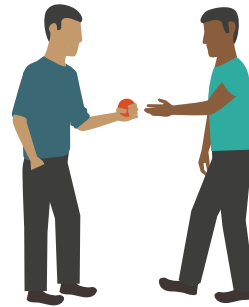
While the three programs took place in diverse contexts, they targeted similar populations: high-risk, young men in cities with a history of criminal behavior. BAM enrolled poorly performing male secondary school students; they missed an average of 6–8 weeks of the school year and around one-third had been arrested before. In the JTDC program, the average detainee had been arrested eight times in the past. Participants in STYL were recruited from neighborhoods known for crime and worked mainly low-skilled or illicit jobs; 41 percent were former members of an armed group.

These programs featured similar CBT components that included self-reflection, experiential exercises, role-playing, and skill-building exercises. These activities could have affected participants through several channels, such as increasing self-control and planning skills, developing social skills like teamwork, and shifting away from a criminal self-image. CBT may also have reduced automatic behaviors by helping participants slow down their decision-making processes to better assess situations and choose appropriate responses. Figure 1 provides examples of program activities and how they might correspond to one or more of these mechanisms.

The three programs were designed as easy-to-deliver, low-cost interventions with a simple, standardized curriculum. BAM and STYL were taught by facilitators with no formal training in social work or psychology, but with similar backgrounds as the participants and, in some cases, practical experience working with comparable groups. BAM was delivered by young, college-educated men, often from similar neighborhoods as the students, and STYL facilitators were often street youth or ex-combatants formerly involved in crime who themselves were graduates of a STYL-like program. Qualitative interviews suggested that STYL facilitators were particularly influential among participants as mentors and role models. Program costs per participant ranged from US\$60 at JTDC, where the program was integrated into the center's existing infrastructure, to US\$530 for STYL and about US\$1,475 per year for BAM.

FIGURE 1. EXAMPLES OF PROGRAM ACTIVITIES AND MECHANISMS

BAM, CHICAGO



THE FIST

Students are told to retrieve an object from a partner. Many try to use force. The counselor asks questions to highlight how their partners might have been willing to give them the object if they had simply asked for it.

- ✓ Automatic behaviors
- ✓ Social skills

JTDC PROGRAM, CHICAGO



GOAL SETTING

Students state something they want to do better or differently to the group.

- ✓ Automatic behaviors
- ✓ Self-Control/Grit²

STYL, LIBERIA



EXPOSURE TO "MAINSTREAM" BEHAVIORS

Men practice shopping for goods in a supermarket, using a bank, attending a phone company sales training, and other activities, and process successes and failures as a group.

- ✓ Social Skills
- ✓ Social Values/Identity

STYL, LIBERIA



PHYSICAL SELF-IMAGE

Physical uncleanliness is defined and highlighted as a problem through group discussion. Facilitators bring in a haircutter, shaver, and nail clippers for participants to clean up if they like. Homework assignments include cleaning up one's place of living.

- ✓ Social Skills
- ✓ Social Values/Identity

² Grit is a term used in psychology and behavioral economics and is defined as the tendency to sustain interest in and effort toward long-term goals.

For more information, please see: Duckworth, Angela L., Christopher Peterson, Michael D. Matthews, and Dennis R. Kelly. 2007. "Grit: Perseverance and Passion for Long-Term Goals." *Journal of Personality and Social Psychology* 92(6): 1087.

EVALUATIONS

TABLE 1. CONTEXT AND DETAILS OF THE INTERVENTIONS

	BECOMING A MAN (BAM)	CBT IN THE JUVENILE TEMPORARY DETENTION CENTER (JTDC)	SUSTAINABLE TRANSFORMATION OF YOUTH IN LIBERIA (STYL)
LOCATION	<p>Low-income public schools in Chicago, US</p> <p>18 schools in Evaluation 1 9 schools in Evaluation 2</p>	10 juvenile detention center residential units in Chicago, US	5 high-crime neighborhoods in Monrovia, Liberia
IMPLEMENTING ORGANIZATION	Youth Guidance; Chicago Public Schools	Cook County Juvenile Temporary Detention Center	Network for Empowerment and Progressive Initiatives; Global Communities
SAMPLE	<p>2,740 male 7th–10th graders, aged 16 years on average</p> <p>2,064 male 9th and 10th graders, aged 15 years on average</p>	2,693 male juvenile detainees, aged 16 years on average	999 male youths, aged 25 years on average
INTERVENTION YEARS	2009–2010; 2013–2015	2009–2011	2009–2012
INTERVENTION FREQUENCY	Weekly one-hour group sessions	Twice daily group sessions	Four-hour group sessions, three times a week, as well as weekly one-on-one counseling sessions
INTERVENTION DURATION	1–2 school years	3–4 weeks (the average length of a participant’s detention)	8 weeks
FACILITATORS	College-educated, young men, often from similar neighborhoods as the students	Detention center staff	Men who were themselves graduates of a similar program
OTHER PROGRAM COMPONENTS	Some students were enrolled in an after-school sports program, but participation was low	CBT was part of a package of reforms in the center that included creating a token economy to promote good behavior and increasing educational requirements of staff	Half of the men in both the treatment and comparison groups were randomly chosen to receive a US\$200 unconditional cash grant (equivalent to around three months’ worth of wages)
ESTIMATED PROGRAM COST PER PARTICIPANT	US\$1,100–US\$1,850 per year	US\$60	US\$530, including the cash grant

RESULTS

CBT reduced criminal behavior. Across all BAM recipients, arrests per student decreased by 12 percent by the end of the program, relative to the comparison group, though these effects disappeared one year later among participants of the first evaluation (for whom longer-term data is available). JTDC detainees who received CBT were 39 percent less likely to be readmitted within two months of release, a reduction that persisted eighteen months later. STYL participants in Liberia who received CBT or cash alone also reported committing one-third fewer thefts in the weeks following the program. The largest and most persistent declines occurred among men who received both; a year after STYL, these participants reported a 40 percent decline in the number of thefts committed in the past two weeks relative to the comparison group.

Recipients also reduced violent and anti-social behavior.

By the end of the program, BAM decreased the number of violent crime arrests among participants by 20 percent, relative to the comparison group, though these effects disappeared after one year among participants of the first evaluation. In Liberia, aggressive and hostile behaviors declined among STYL participants who received CBT, and these effects were most sustained among men who received both cash and CBT; one year after STYL, participants who received both reported a 0.34 standard deviation decline on an index measuring behaviors such as yelling, cheating, and bullying. Receiving cash alone had no effect.

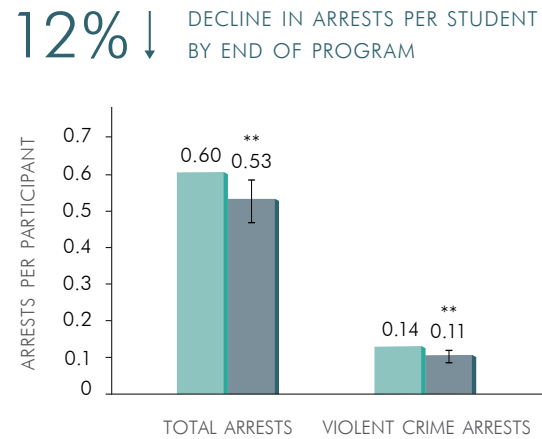
When delivered in schools, CBT increased graduation rates.

BAM improved schooling outcomes among participants by 0.10–0.19 standard deviations on a school engagement index of enrollment, attendance, and GPA. BAM participants from the first evaluation were 9 percent more likely to graduate high school on time relative to the comparison group. These effects could be particularly important in the long term, as increased school achievement can lead to improvements in lifetime earnings and health. STYL, delivered to men already out of school, had only a temporary impact on their economic activities in the weeks following the program.

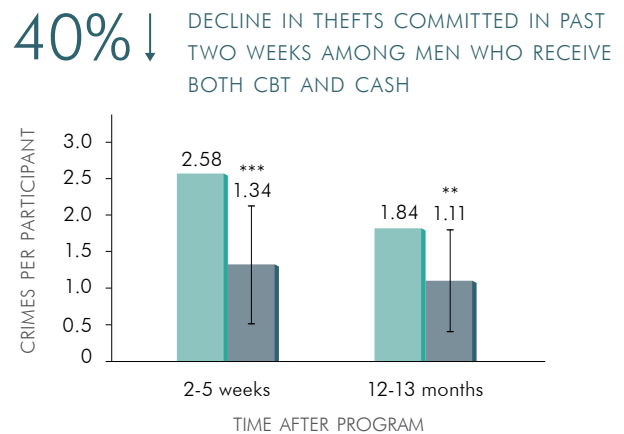
CBT may have worked because participants learned strategies to relate to their environment, slowing down their decision-making processes and planning ahead. In a game BAM researchers designed to test decision-making, BAM students took about 80 percent longer than comparison students to decide how to respond to a peer in a money transaction scenario, suggesting that BAM students had slowed down their decision-making processes. In a combination of games and questionnaire answers, STYL participants who received CBT demonstrated greater patience and forward-looking behavior, with larger, more persistent effects among men who received both STYL and cash. One year after STYL, these men reported a 0.2 standard deviation increase on an index measuring these traits. Receiving cash alone had no effects.

FIGURE 2.

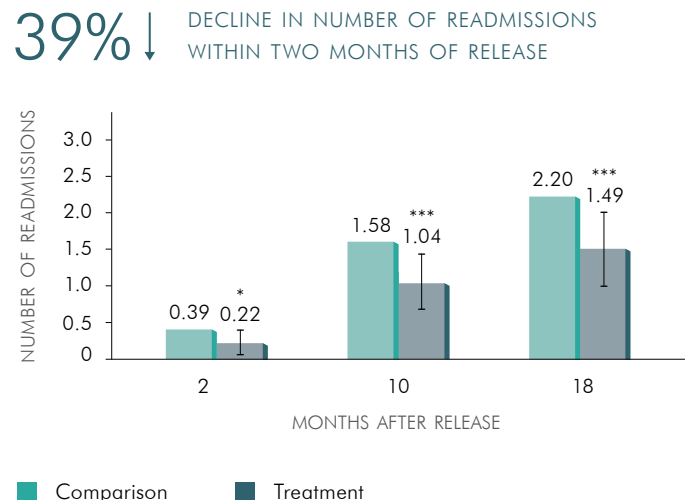
A. BAM, CHICAGO



B. STYL, LIBERIA



C. JTDC PROGRAM, CHICAGO



Note: Statistically significant difference relative to the comparison group is noted at the 1% (***), 5% (**), or 10% (*) level.



RESULTS



GLENNA GORDON

In Liberia, CBT may have been effective because participants also learned to think differently about their self-identity and change their values. Though receiving CBT or cash alone had no effect, STYL participants who received both showed a marked improvement in physical appearance, including quality of dress and cleanliness, in the weeks after the program. These effects did not persist beyond one year, but researchers did find evidence of a longer-term shift in participants' values; one year after STYL, men who received both CBT and cash scored 0.18 standard deviations lower on an index measuring self-reported criminal and violent values.

In Liberia, men who received cash grants earned and spent more in the short run, but neither the grant nor CBT affected recipients' economic well-being in the long run. Whether they received CBT or not, men who received cash grants used the money for productive reasons, spending about half on living expenses and business investments and increasing their weekly incomes by more than 20 percent in the weeks after the program. These results add to existing evidence that unconditional cash transfers are a powerful tool for raising incomes. After a year, however, these investments and income gains disappeared. Interviews revealed that about 70 percent of all men reported experiencing regular theft of their assets by the police or others in their community. More research is needed on how to sustain these economic impacts.

INTEGRATING CBT IN NEW CONTEXTS: THE STYL STORY

Existing research primarily focuses on CBT interventions implemented in pre-existing institutions, such as schools, in developed countries. Yet a community-based Liberian organization successfully incorporated CBT into its post-conflict community work by leveraging existing programs. How did they do it?

The Network for Empowerment and Progressive Initiative (NEPI) is a Liberian NGO established in 2000 by two former combatants, Klubosumo Johnson Borh and Morlee Gugu Zawoo Sr., with the aim of helping rehabilitate and reintegrate youth who had been conscripted as combatants into the country's fourteen-year civil war. NEPI conducted a variety of engagement activities that developed organically over time, including lectures, storytelling, group sessions, and one-on-one counseling. To better inform its activities with evidence, NEPI partnered with researchers to conduct field visits and interviews with staff and youth, pilot and test group activities, and consult with an expert psychologist to incorporate best practices from CBT programs in the United States.

This formalization process resulted in a standardized eight-week program with eleven modules and activities selected for their grounding in existing evidence and potential for impact among war-affected youth in Liberia. For example, one module focuses on the health, psychological, and social benefits of maintaining body cleanliness, a challenge for men who live on the streets or in slums and who are often ostracized from mainstream communities for their physical appearance. Activities include devising and practicing strategies for garbage control at home, and providing men with a haircutter and electric shaver to clean up. These activities are very different from those of BAM or JTDC, yet they build on the same underlying CBT principles of personal reflection, practical application, and skill building.

With NEPI's extensive knowledge of local social networks and strong reputation among community leaders, the organization has been effective in identifying and drawing a disconnected and hard-to-reach population of high-risk, young men into its CBT-inspired STYL program, providing youth with tools for behavior change to successfully reintegrate into society.

POLICY LESSONS



GLENN A GORDON

CBT can be a cost-effective approach to reduce criminal behavior among high-risk young men in cities across diverse contexts. These CBT programs were short-term and relatively easy to implement, with standardized curricula delivered by minimally trained facilitators. Researchers estimate BAM's overall societal benefits were anywhere from five to thirty times greater than the program's cost, and the JTDC program reduced recidivism at a cost of US\$114 per readmission avoided per year. Similarly, STYL could deter about 26 crimes per participant per year at a cost of US\$21 per "crime not committed." STYL implementers are exploring opportunities to scale up to thousands of youth in Liberia. BAM has since been scaled up across Chicago Public Schools and is currently being expanded into Boston Public Schools.

Providing young men with opportunities to continue practicing CBT techniques could be an effective way to reinforce recipients' changed skills and behaviors. The STYL results from Liberia demonstrated that receiving

cash in addition to CBT increased and extended the effects of the therapy. In the short term, the cash helped because it temporarily stimulated self-employment and earnings, relieving the immediate financial need to return to crime. Importantly, the cash may have been effective in bringing about longer-term behavioral change because it provided men more time to independently practice and reinforce their changed behaviors. This suggests that programs that provide additional reinforcement, such as periodic "booster" therapy sessions, could be important to sustaining effects. Understanding the interaction between cash and CBT, as well as the impact and cost-effectiveness of reinforcing CBT interventions, are important areas of future research.

More research is needed to understand the channels through which CBT effects change. The evaluations of BAM and STYL found that, among various mechanisms through which the programs may have affected behavior, CBT may have been effective in part because it slowed down participants' decision-making processes, encouraged more planning, enabled more patient behavior, and/or shifted self-identity and values. Additional research to better understand the mechanisms driving CBT's effects will be important to inform future interventions.

For Further Reading: Blattman, Christopher, Julian Jamison, and Margaret Sheridan. 2017. "Reducing Crime and Violence: Experimental Evidence from Cognitive Behavioral Therapy in Liberia." *American Economic Review* 107 (4): 1165-1206.

Heller, Sara B., Anuj K. Shah, Jonathan Guryan, Jens Ludwig, Sendhil Mullainathan, Harold A. Pollack. 2017. "Thinking, Fast and Slow? Some Field Experiments to Reduce Crime and Dropout in Chicago." *Quarterly Journal of Economics* 132 (1): 1-54.

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