

# Cognitive Behavioral Therapy as a Cost-Effective Tool for Sustained Violence Reduction

*10-Year Follow-Up Evaluation of the Sustainable Transformation of Youth program in Liberia*



**U**rban crime and violence are among the most costly and divisive issues facing cities around the world. Policymakers and donors seek effective ways to reduce crime and violence, particularly among young men at high risk of becoming involved in violence. Cognitive behavioral therapy (CBT) is a method for mitigating self-destructive beliefs and behaviors, and promoting positive ones by helping people become aware of harmful thoughts and patterns, and guiding them to think and react differently. A growing body of evidence suggests that CBT is an effective crime and violence reduction strategy.

In Liberia, an 8-week CBT program paired with cash transfers, called the **Sustainable Transformation for Youth in Liberia (STYL) program, successfully reduced criminal, violent, and other antisocial behaviors over a ten-year period.** The STYL program, developed by the local community organization Network for Empowerment & Progressive Initiative (NEPI), involved therapy led by reformed street youth and ex-combatants. The program was low-cost, with a budget of \$530 US per participant for CBT, cash, and administration.



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## Results after ten years

*The 10-year follow-up evaluation—the first long-run randomized study of a CBT-informed program—found that the large short-term reductions in crime and violence persisted nearly ten years after the program concluded.*

- » **Men offered both CBT and economic assistance reported large and sustained falls in criminal, violent, and other antisocial behavior immediately after and 10 years after** participating in the program. The positive effects were slightly smaller and less precise when therapy was delivered alone, without cash.
- » **Men offered CBT and cash were much less likely to commit thefts and robberies.** In the long run, those in the therapy-only group reported 61 percent fewer crimes compared to men in the comparison group, while those who participated in STYL reported a 57 percent decrease in crimes committed. Interpolating, this **translates to roughly 338 fewer crimes per subject over 10 years—\$1.50 per crime avoided**, given the low program cost.
- » **Men offered CBT and cash reported being less likely to sell drugs.** Though members of the group that did not participate in the program also reported lower rates of drug selling, those that participated in STYL were 45 percent less likely to sell drugs after nearly ten years relative to the comparison group.
- » **The highest-risk men seem to be driving the sustained declines in antisocial behavior.** Even though the program targeted high-risk young men, those who reported the largest declines in thefts, robberies, drug selling, and other antisocial behavior were those who reported the highest initial levels of crime and violence—implying higher-than-anticipated returns to targeting the most criminal and violent young men.
- » **Cash itself did not lead to sustained changes in economic performance.** While recipients invested in small businesses, most of those had failed one year after the grants, and there were no signs of improved economic performance after one or ten years—whether or not they received CBT. To the extent cash coupled with therapy improved antisocial behaviors, it is probably because it led to more sustained practice and behavior change.

### RESEARCHERS

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### PARTNERS

Network for Empowerment and Progressive Initiative (NEPI)

### COUNTRY

Liberia

### TIMELINE

2009-2021

### SAMPLE

999 “at-risk” young men

### TOPICS

Crime, Violence, Peace and Recovery, Psychology, Cognitive Behavioral Therapy, Cash Transfers

## The Evaluation

In 2020-2021, researchers from the University of Chicago, IPA, the University of Exeter, and the University of North Carolina worked with Innovations for Poverty Action's Liberia office to evaluate the long-term effects of the STYL program, nearly ten years after the program concluded.

The study targeted “hard-core street youth”—men ages 18 to 35 who were commonly homeless, had been involved in drugs and crime, lived in extreme poverty, or were engaged in violence and other risky activities. The study ultimately recruited 999 young men to participate. Two in five had been members of armed groups during Liberia's civil wars.

Participants were randomly assigned to receive one of the following: the STYL program which consisted of an 8-week CBT-informed group therapy program followed by a US \$200 cash transfer, the group therapy program without the cash transfer, the cash transfer without the therapy, or neither the therapy nor the cash. The men participated in two public lotteries for each element of the program. The cash transfer was both a tool to see the effects of the therapy on economic decisions, and also an intervention in itself, helping men improve their lifestyle, save, or start a small enterprise. Participants could spend the money however they wanted. Global Communities<sup>1</sup>, an international non-profit organization, implemented the cash lottery and distribution.

**Figure 1.** STYL program group distributions

<b>Therapy only</b> 28 percent of participants	<b>Therapy plus cash</b> 28 percent of participants
<b>Cash only</b> 25 percent of participants	<b>Comparison</b> 22 percent of participants

<sup>1</sup> Formerly CHF International

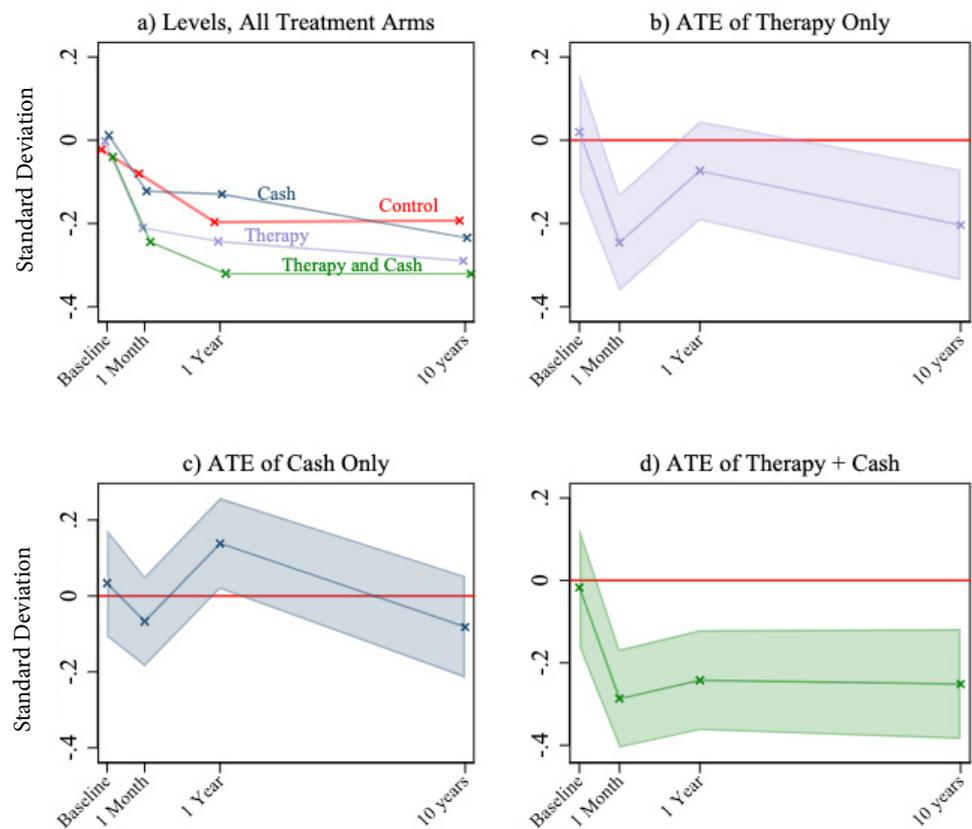


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The therapy sessions employed a mix of lectures, group discussions, and practice, including: role playing in class, homework that requires practicing tasks, exposure to real situations, and in-class processing of experiences of executing these tasks. Like many CBT-informed programs, these tasks began simply and got more difficult over time. There were no formally-trained psychologists or counselors in Liberia, and so all sessions were led by facilitators trained by NEPI. These facilitators had typically been involved in armed groups or crime earlier in their lives, and most were past graduates of a past NEPI rehabilitation program. Men receiving therapy met in groups of about 20 people three times a week for 3-4 hours a day. On days when the group did not meet, facilitators sometimes visited the men in their homes or workplaces to provide one-on-one advising and encouragement.

Members of the research team surveyed participants at the time of recruitment, before they were randomly assigned to cash or therapy, and then two weeks, five weeks, 12 months, 13 months, and 9.5 years after the cash transfer disbursement.

**Figure 2.** This figure illustrates program impacts using a standardized index of all antisocial behavior measures, first illustrating how levels of these behaviors change in each program group over time (figure a) and then the average treatment effects for each program group, with 95% confidence intervals (figures b-d)



## Cost Effectiveness Analysis

The STYL program was designed with the potential for replication and scaling in mind, and, as such, interventions were short, simple, and inexpensive. The full cost of delivering therapy and the cash transfer was US\$530 per person, inclusive of all implementation costs for delivering the 8-week CBT and the cash transfer and associated distribution costs, and for program registration and other administration costs.

The study results suggest that the intervention led to a reduction in a wide range of antisocial behaviors, including a reduction of 34 crimes per participant per year at both the 1- and 10-year surveys. Interpolating, this implies 338 fewer thefts and robberies per program participant since the STYL program. **Based on the above cost, the STYL program reduced theft and robbery at a cost of as little as US \$1.50 per crime avoided. Since STYL also led to reduced drug selling and other violence, this cost per crime is a minimum indicator of cost-effectiveness.**

## Conclusions and Policy Recommendations

**W**hether it is in criminal justice or post-conflict peacebuilding, policymakers seek alternatives to sanctions, punishment, and imprisonment. This is especially true in poor and fragile states, which do not have the resources to imprison offenders, and where violence and imprisonment of large portions of the population could be politically destabilizing. In response, by empowering young men with the resources and tools to analyze and change their intentions, behaviors, and identity, cognitive behavioral therapy has emerged as a potential alternative strategy for mitigating crime and violence.

This study specifically shows that **low-cost group behavioral therapy programs have the potential to reduce crime and antisocial behavior over an extended period of time.**

In addition, **therapy appears to be especially impactful in combination with economic assistance, including but not limited to cash transfers.** Since the cash transfers did not result in sustained economic impacts, more comprehensive economic assistance could potentially produce even larger effects on behavior change. Cash seems to have augmented therapy because it allowed a few months of sustained practice after the STYL program ended. Any program that increased business success in a more sustained way would likely further reduce

violence and other antisocial behaviors. This is a crucial area for experimentation. Furthermore, based on the evidence from other CBT interventions, other promising program components include “booster sessions” that reconvene participants to refresh their skills some time after the initial course of therapy.

Moreover, **the 10-year results from Liberia suggest that there are high returns to targeting the most violent and antisocial young men.** Policymakers focused on violence reduction strategies should find ways to better identify and engage these youth, such as investing in and exploring varied strategies with youth outreach staff, monitoring systems, and tools of risk prediction.

**This approach has promise beyond West Africa,** and cities around the world have used CBT-based programs to address crime and violence. STYL was adapted from U.S.-based CBT programs, suggesting that adaptability to other contexts is feasible. The program’s use of past graduates rather than trained clinicians to deliver CBT, combined with its low relative cost, suggest that it could be replicated in a variety of settings. More long term evidence from other programs is essential, however, to better understand what can lead CBT-induced behavior change to endure in other settings.

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<sup>2</sup> The Economist. 2019. *Applying lessons from war-torn Africa to Chicago*. [online] Available at: <<https://www.economist.com/united-states/2019/05/04/applying-lessons-from-war-torn-africa-to-chicago>>.



Support of this project is provided by the Network for Empowerment and Progressive Initiative (NEPI).

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