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Think Before You Act: A New Approach to Preventing Youth Violence and Dropout

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Think Before You Act: A New Approach to Preventing Youth Violence and Dropout

Improving the long-term life outcomes of disadvantaged youths has long been a policy priority in the United States. Economically disadvantaged youths are more likely to drop out of high school, become teen parents, and engage in criminal behavior than are their higher-income peers. This has implications for their future economic well-being and for the perpetuation of economic disadvantage across generations. To promote a brighter future for disadvantaged youths, and in turn a more-prosperous national economy, new approaches that will reduce rates of violence and criminal behavior as well as improve the educational attainment of low-income adolescents are needed.

Compelling recent evidence suggests that insights from psychology and behavioral economics can be used to help reduce youth violence and dropout. Researchers in these fields have demonstrated that many decisions people make are intuitive and automatic, made with little deliberate thought. Although automatic responses are often helpful to guide daily behavior, they can also be misguided and can have particularly troubling consequences for young people growing up in distressed areas. For example, youths growing up in disadvantaged, dangerous neighborhoods may develop an automatic response to fight when challenged, which in certain situations could quickly lead to a host of negative consequences. With this observation, the policy challenge becomes finding ways to make young people aware of when and how their automatic responses might get them into trouble so that they will slow down and think more deliberately in high-risk situations.

In a new Hamilton Project discussion paper, Jens Ludwig and Anuj Shah, both of the University of Chicago, suggest that behaviorally informed interventions to help kids think about their thinking can help youths "rewire" their automatic responses when these responses are likely to be maladaptive. The promising results from four separate randomized control trials in Chicago-including the Becoming a Man program-suggest that expanding this type of intervention nationwide could yield favorable outcomes. The authors therefore propose a five-year demonstration project, coordinated by the federal government, to gather further evidence on this model and to learn effective strategies for adapting the intervention to local conditions. The ultimate goal of the proposal is to provide all disadvantaged youths in America with this program in order to help them recognize difficult situations in which their automatic responses may be wrong. This effort, if successful, would reduce crime, raise graduation rates, and thereby improve the long-term well-being of our nation's most disadvantaged young people.

The Challenge

The clustering of risky behavior by young people in disadvantaged areas often leads to the conclusion that these behaviors are the result of conscious, deliberate decisions by youths about what sorts of lives they wish to lead. But a closer look suggests otherwise; most young people—in fact, most people—rely heavily in their daily lives on automatic or intuitive behavior that involves little contemplation.

Intuitive or automatic decision-making can spur violence. Popular media often portray violence as premeditated, when in reality violence—even serious violence—is often not deliberate. For example, nearly 70 percent of homicides in Chicago stem from an altercation, whereas only 10 percent involve drug-related gang conflicts where deliberate premeditation might be more likely.

Ludwig and Shah suggest that automatic behaviors drive other consequential outcomes for disadvantaged youths as well. They reject the view that many students miss school and eventually drop out because they sat down, did the calculations, and decided that the labor market rewards for a high school diploma are inadequate. Instead, a large number of students drop out of school each year for a number of short-term, but very salient, reasons. For example, students pin their decision to drop out on their dislike for school or on social anxiety stemming from peer interactions. Understanding youths' decision to drop out—and ways to prevent that decision—is imperative. Among major urban school districts in the United States, the average four-year graduation rate is barely more than half (53 percent) of each class. In the United States as a whole, the high school graduation rate has hardly changed in forty years despite the dramatic increase during that period in the earnings premium associated with a high school diploma or college degree.

Indeed, the observation that automaticity largely drives human behavior provides a candidate explanation for why standard approaches—which rely on traditional classroom settings and the incentive effects of our criminal justice system—are not more effective at changing youths' behaviors. The authors contend that decisions are often driven by fast, intuitive, and automatic thoughts that stem from what is called "system 1" processing (see table 1). This automaticity is not unique to at-risk youths: it is a universal feature of how we address problems and make decisions. But the consequences of this automatic behavior may be particularly severe for young people growing up in disadvantaged urban areas where gangs, drugs, and guns are prevalent.

Research in behavioral science suggests that more-deliberate "system 2" processing can help correct thinking errors in system 1 processing. Because system 2 processing requires effort, however,

TABLE 1.
Two Cognitive Systems

System 1 (Intuitive)	System 2 (Reflective)
Process Characteristics	
Automatic	Controlled
Effortless	Effortful
Associative	Deductive
Rapid, parallel	Slow, serial
Process opaque	Self-aware
Skilled action	Rule application
Content on Which Processes Act	
Affective	Neutral
Causal propensities	Statistics
Concrete, specific	Abstract
Prototypes	Sets

Source: Kahneman and Frederick 2002.

a tired or distracted youth will allow automatic behavior errors to go unchecked.

The challenge for antiviolence programs is to help youths understand how to be more reflective in everyday situations. A natural first step is to make young people aware of their automatic tendencies so that they can pay attention to situations where they need to slow down and think more deliberately. Interventions will gain traction if they focus on helping kids think about their thinking.

A New Approach

Ludwig and Shah present evidence suggesting that disadvantaged youths can learn to recognize situations in which responding too quickly and automatically can lead to trouble. The authors' research team has carried out four separate randomized control trials in Chicago using interventions that rely on the core principles from what psychologists call cognitive behavioral therapy (CBT)—all with promising results.

The central premise of CBT closely follows the argument about system 1 (intuitive) processing and system 2 (reflective) processing. By attempting to make people more aware of their own thoughts and how their thoughts drive their behavior, CBT naturally disrupts automaticity and creates a more-reflective way of responding to situations. This pause in action allows youths to step back and reconsider whether they have accurately perceived the circumstances or jumped too quickly to a negative interpretation.

Federal agencies, including the National Institutes of Health, have funded research that shows that CBT can address problems like anxiety, depression, and aggression. But, more generally, CBT teaches people that many of their thoughts, feelings, and behaviors are generated automatically and that, with greater reflection, better solutions may present themselves.

Cognitive Behavioral Therapy Interventions

Three out of the four interventions in Chicago examine a version of CBT called Becoming a Man (BAM). Through behavioral exercises, the program teaches youths to test their biased beliefs and to recognize indicators that some maladaptive automatic thought or biased belief is being triggered. The program places special emphasis on common processing errors of social information and problems around perspective-taking, such as focusing on overly narrow, short-term goals.

Given the common risks for this population, a key focus is on anger as a cue, which is best illustrated through the fist exercise. In this exercise, program staff divide students into pairs. One student is told he has thirty seconds to get his partner to open his fist, then the exercise is reversed. As the group leader points out afterward, almost no one simply asks his partner to open his fist. When asked why not, youths frequently say, "He wouldn't have done it" or "He would have thought I was a punk." Through follow-up discussion, the exercise teaches students about hostile attribution bias, or the instinctive assumption that the other person has negative intent.

The first intervention, carried out in Chicago's distressed south-side and west-side neighborhoods during the 2009–10 academic year, randomly assigned male youths in public schools to program or control conditions. Youths assigned to the program were offered inschool and after-school programming. In-school treatment included weekly group sessions that used stories, movies, and metaphors to illustrate unhelpful automatic behaviors and biased beliefs at work in the youths' lives and in the lives of others. Participants in the after-school portion of the program were offered opportunities to participate in nontraditional sports (such as boxing, weightlifting, and handball) that require a high degree of self-control and focus, and an appropriate channeling of aggression; these sports offer youths another chance to reflect on their automatic behavior.

Researchers found that program participation reduced violent-crime arrests by 44 percent that year, with declines of 38 percent in other crimes. Although there were no statistically significant differences in arrests between the program and control groups a year after participation in the program ended, violence is so costly to society that even one year of substantially reduced violence is enough to generate promising benefit—cost ratios. Moreover, the intervention did find sustained gains in schooling outcomes that persisted after the program year. Although the youths in the study sample are still too young to have completed high school, their forecasted expected graduation rates are projected to be 7 to 22 percent higher than those of youths who did not receive programming.

In the summer of 2012, a second experiment was conducted in which randomly selected youths from Chicago high schools received summer jobs, summer jobs plus a version of CBT, or no special program (the control condition). Youths were offered five hours of work and/or services five days a week; jobs-only youths worked five hours a day, while youths assigned to jobs and CBT worked three hours and participated in two hours of CBT programming each day. Follow-up analysis showed few effects on schooling outcomes, but showed that violent-crime arrests for youths who participated in any sort of programming were about half that of the control group.

During the 2012–13 academic year, a third experiment randomly selected ninth- and tenth-grade males at a Chicago public school to receive BAM, BAM plus high-dosage academic remediation, or no special program. The study's results showed that the program had significant effects on the schooling outcomes of youths who received BAM or BAM plus academic remediation, reducing course failures by about two thirds and school absences by about one quarter.

Each of these experiments tests the effects of a combination of BAM and some other type of programming. However, given how few past interventions aimed at helping disadvantaged youths seem to work, the fact that all three of these experiments yielded encouraging findings—and that all contained BAM as a component—suggests to Ludwig and Shah that BAM may be an important ingredient for successful interventions.

The fourth intervention was carried out in collaboration with the Illinois Juvenile Temporary Detention Center (JTDC) in Cook County, which houses the highest-risk youth arrestees in the Chicago area. Between November 2009 and March 2011, youths entering the facility were randomly assigned either to new centers that were implementing CBT and a token economy system, or to status quo centers within the facility. Measuring outcomes eighteen months after release, researchers found that youths who received treatment were 20 to 24 percent less likely to return to the facility than were youths in the control group. The study's results also found that CBT programming led to a 10 percent reduction in severe disciplinary infractions committed by youths while inside the JTDC during the study period.

The Way Forward

The success of these programs in Chicago suggests that there is potentially great value in using the CBT approach to help disadvantaged youths across the country. The challenge to scaling up this program nationwide will be in adapting the model to local conditions since the key situations and automatic responses that are adversely affecting disadvantaged youths may vary across localities. The scaling-up process would provide an important opportunity to address these key issues.

Ludwig and Shah propose that the federal government designate the executive branch's Coordinating Council on Juvenile Justice and Delinquency Prevention to lead a multiagency effort in testing and taking this proposal to scale. The Council would draft a five-year strategy, including specific responsibilities and related budget requests for the relevant agencies. The authors believe that this initiative should be supported by the federal government—rather than by city or state governments, which cannot run budget deficits—because rates per capita of many types of crime tend to go up as economic conditions turn down; a nationwide CBT demonstration that relied on state and local funding would be vulnerable to cutbacks during precisely those times when they might be most needed.

During the first two years, the Office of Juvenile Justice and Delinquency Prevention (OJJDP) within the U.S. Department of Justice would issue requests for proposals from nonprofits from across the country to provide 500 youths, ideally in a school setting, with a CBT-type program based on the BAM curriculum. Priority

Roadmap

- The federal government will coordinate an effort to provide youths from across the country with cognitive behavioral therapy (CBT) programming. It will designate the executive branch's Coordinating Council on Juvenile Justice and Delinquency Prevention (CCJJDP) to lead a multiagency effort in testing and taking this proposal to scale.
- The Administrator of the Council will draft a five-year strategy, including specific responsibilities and related budget requests for the relevant agencies. Working through the budgeting process for the Departments of Justice, Health and Human Services, and Education, the Administrator of the Council will propose an annual funding level of \$50 million in the first and second years for the implementation of these behaviorally informed interventions, and an annual funding level of \$100 million in the third through fifth years.
- During the first two years, the U.S. Department of Justice's
 Office of Juvenile Justice and Delinquency Prevention
 (OJJDP) will issue a request for proposals from nonprofits
 from across the country to provide youths with a CBTtype program based on the Becoming a Man (BAM)
 curriculum. In collaboration with the National Institute
 of Child Health and Human Development (NICHD),
 OJJDP will select forty nonprofit organizations from forty
 different cities to receive grants to provide services to
 500 youths in school settings, with a focus on diversity
 and with priority given to cities that have a good data
 infrastructure to facilitate low-cost impact evaluation.
 - Deviations from the BAM curriculum will be permitted to allow for adaption to local contexts and to reflect lessons learned from local program innovations.
 - NICHD will set aside \$2 million per year for evaluation and hold a peer-reviewed competition to select the evaluator.
- In years three through five, the demonstration-andevaluation process will be continued in the original forty cities, but will also be expanded to another forty sites to provide services to youths outside school settings, such as in local community centers or in juvenile detention. NICHD will continue to have a competitively selected evaluator carry out the most rigorous possible randomized experimental evaluation.
- After the fifth year, and after the evaluations yield details
 on best practices and answer questions about how to
 achieve the most beneficial outcome in a variety of
 contexts, the demonstration will be scaled up nationally
 to provide one year of program services to each youth
 living in poverty in the United States.

Learn More about This Proposal

This policy brief is based on The Hamilton Project discussion paper, "Think Before You Act: A New Approach to Preventing Youth Violence and Dropout," which was authored by:

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would be given to youths from families with incomes below the federal poverty threshold. Deviations from the curriculum would be permitted to allow for adaption to local contexts and to reflect lessons learned from local program innovations. This planned variation would be critical to a better understanding of how the basic program design should be modified to have maximum impact with diverse populations in different settings.

In collaboration with the National Institute of Child Health and Human Development (NICHD), the Office of Juvenile Justice and Delinquency Prevention would select forty nonprofit organizations from forty different cities to receive grants, with a focus on diversity and with priority given to cities that have good administrative data infrastructure to facilitate low-cost impact evaluations. NICHD would set aside \$2 million per year for program evaluation, and hold a peer-reviewed competition to select the evaluator.

The authors also propose granting funds to Chicago's Youth Guidance, one of the two groups that designed and first implemented BAM, to provide services to youths in ten of the selected forty cities; this would allow the designated research evaluator to compare the effects of "franchised" BAM versus "original" BAM to determine whether any program effectiveness is lost through the franchise process (and to see how the effects of original BAM compare when delivered in Chicago versus elsewhere). Recipients would be required as a condition of their grant awards to work with the evaluator to identify 1,000 youths meeting the program's eligibility criteria, of which 500 would be randomly selected for program participation.

This demonstration-and-evaluation process would be expanded in the third through fifth years. The authors recommend staying with the same forty cities and grantees, but awarding forty additional grants to provide services to youths outside school settings, such as in local community centers or juvenile prisons, among others. The goal would be to learn more about how the program works in reaching youths who no longer come to school often enough to benefit from a school-based program.

The scaling up of the demonstration project over five years is intended to help address the major scientific and policy questions at the core of any attempt to successfully scale up this type of program nationwide. By funding the first wave of organizations to provide the program in school over five years, the evaluation team could estimate the learning curve for organizations—that is, the team would estimate how much the program improves over time before it reaches maximum effectiveness. The last three years would allow evaluators to compare the social benefit for each dollar spent reaching youths inside versus outside school settings. With forty cities and many program variants in operation across cities—including some cities where the original version of BAM is also in operation—evaluators could examine variation in youths' behavior across cities and program types to try to determine the most important active ingredients in these programs for helping youths.

Costs and Benefits

The five-year demonstration project outlined by the authors would cost the federal government between \$50 million and \$100 million each year. At scale, the project would cost \$2 billion annually, enough to provide one year of program services to each youth living in poverty in the United States. Already the randomized control trials in Chicago show that this approach can significantly reduce violent-crime arrests, boost expected graduation rates, and generate benefits to society that equal roughly thirty times the program costs when accounting for the authors' preferred monetization of the costs of crime.

The authors underscore that even the most successful government programs rarely have benefit—cost ratios in the range of \$30 in benefits to society for each \$1 invested. To provide a cost comparison with other social programs, the \$2 billion spending level is about one quarter the annual federal budget for the Head Start early childhood program (\$8 billion), and is dwarfed by what the United States spends each year on the criminal justice system (\$200 billion), safety-net programs for families with children (\$220 billion), and K–12 public schools (\$590 billion).

Conclusion

Remarkably few previous interventions have improved the life outcomes of disadvantaged youths. Ludwig and Shah believe that new attempts to help disadvantaged teenagers should incorporate the notion that much of their behavior—and of everyone's behavior, for that matter—happens intuitively. For example, youths growing up in disadvantaged, dangerous neighborhoods may develop an automatic response to fight when challenged outside school, a reaction that might be adaptive for most of their daily experiences. The consequence, though, is that it is easy to see for many lowincome youths why "fight" and "don't fight" scenarios become hard to distinguish, and how getting this differentiation wrong can be disastrous when gangs and guns are prevalent. The encouraging news, according to Ludwig and Shah, is that the growing body of research in psychology and behavioral economics suggests that there may be low-cost ways of reducing the social harms from youths' bad decisions while simultaneously improving the longterm life outcomes of the disadvantaged youths themselves.

Questions and Concerns

1. Does this program really work?

Given the great difficulty policymakers have experienced in identifying interventions that can help improve the life outcomes of disadvantaged youths, the authors recognize the considerable surprise in the idea that helping youths to basically just slow down and behave less automatically in critical situations might really influence hard-to-change behaviors such as crime and dropout. But the fact that they have now carried out four separate rigorous randomized control trials in Chicago, each including CBT as at least one component of the intervention and each yielding promising results, is cause for optimism. Given how little is known about how to help disadvantaged youths, the very encouraging initial findings from these four separate randomized controlled trials, and the enormity of the underlying social problem, the authors contend that there is a strong case to be made to move ahead and try this approach. Importantly, they believe that the scale-up of the program would help address the major scientific and policy questions that are central to any attempt to take this program nationwide.

2. Do these effects persist over time beyond the program period?

The evidence from the four randomized control trials of BAM and of CBT carried out in the Cook County Juvenile Temporary Detention Center yield somewhat mixed results in terms of the degree to which program effects on criminal behavior persist after the program ends. Nonetheless, the authors believe that the social costs of violent crime are so large that even a temporary reduction in violence among high-risk youths who are at the peak age for criminal behavior can be enough for such programs to pass a benefit–cost test. Indeed, from the perspective of improving the lives of disadvantaged youths and the families trying to raise children in high-crime

areas, a better understanding of how to maintain impacts more consistently over time would be of great value.

The authors hope that the first five years of the proposed effort could be used to learn more about under what conditions the program's effects on violent crime and schooling outcomes are most likely to persist. It could be the case that during the demonstration project some of the planned variations in program design that are tested across different cities might include some refresher courses (similar to booster shots), or even provide some youths with a double or even triple dosage of the programming (such as two or three years of programming rather than just one). The rigorous evaluation that Ludwig and Shah propose that NICHD help support and carry out would determine what dosage generates the greatest social good per dollar spent.

3. Which youths should the program target?

Ludwig and Shah's initial proposal is to provide this program to all youths living under the federal poverty level. Right now many policymakers and practitioners believe that the greatest social good comes from targeting those youths at highest risk for dropout, violence, or other adverse outcomes that are of policy concern. Their intuition is that these youths will benefit the most, but, according to the authors, this need not be the case. If the goal is to generate the largest amount of social good per dollar spent, then the key question is which youths experience the largest reduction in risk in response to the intervention, and not which youths' baseline risks are the highest. Serving youths with a wide range of baseline risk levels would allow policymakers to better understand how baseline risk levels do or do not help predict benefit from participation in the program. Ludwig and Shah thus believe that this variety in program design is an important priority for the evaluation component.

Highlights

Jens Ludwig and Anuj Shah, both of the University of Chicago, propose a federal government scale-up of cognitive behavioral therapy (CBT) programming. This expansion is intended to help disadvantaged youths recognize those situations in which their automatic responses are likely to be maladaptive and could lead to trouble, and to help them slow down and act more deliberately.

The Proposal

Establish a multiagency effort to test and expand this proposal. The Administrator of the Coordinating Council on Juvenile Justice and Delinquency Prevention (CCJJDP) would draft a five-year strategy, including specific responsibilities and related budget requests for relevant government agencies.

Provide youths from across the country with a CBT-type program based on the Becoming a Man (BAM) curriculum. The Office of Juvenile Justice and Delinquency Prevention (OJJDP) within the U.S. Department of Justice would issue requests for proposals and then select nonprofit organizations from different cities to receive grants to provide services to youths in school. The focus would be on providing services to youths whose families have incomes below the federal poverty level. OJJDP would accept deviations from the BAM curriculum to account for local contexts and to reflect lessons learned from earlier program innovations.

Continue the expansion of CBT programming around the country for five years. The OJJDP would issue additional grants to provide more CBT programming to youths both in school and outside school settings (e.g., in local community centers, alternative schools or GED programs, pretrial detention, and juvenile or adult prison).

Perform rigorous evaluation to learn more about how best to implement the programs. An evaluator—competitively selected by the National Institute of Child Health and Human Development—would carry out the most rigorous possible randomized experimental evaluation to learn more about how to most effectively implement (and, if needed, modify) the program in different contexts across the country.

Benefits

The evidence from four separate randomized control trials administered in Chicago, especially the Becoming a Man (BAM) program, show that CBT can have positive impacts on the outcomes of disadvantaged youths; it can significantly reduce arrests for violent crimes and boost expected graduation rates. The evidence also suggests that this type of behavioral intervention can yield as much as \$30 in social benefits for each \$1 invested. Even the most successful government programs rarely have benefit—cost ratios in this range, particularly programs targeted toward disadvantaged youths. After scaling up the program for five years, the goal would be to provide one year of program services to each youth in this country who lives in poverty.



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