



Juvenile Crime and the Heat of the Moment:

A proposal to pilot cognitive behavioral therapy interventions to reduce youth crime and recidivism in Baltimore City

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Executive Summary

For youth from distressed communities, the gateway into the juvenile justice system can be the beginning of a treacherous road to adulthood. Recent studies have causally linked juvenile incarceration with higher high school dropout and adult incarceration rates, which have subsequently reduced labor market and social engagement outcomes for a population that is overwhelmingly represented by minorities. Despite extensive investment and planning by public and private stakeholders in Baltimore City, the battle to curb youth crime and recidivism has been an uphill one; even with boosts from aggressive city- and statewide initiatives, juvenile crime and recidivism rates have remained relatively steadfast over the past five years. Clearly, a fresh approach is needed to tackle the unique complexities of youth crime and incarceration in Baltimore.

In this paper, we propose introducing CBT-based interventions in select Baltimore City Public Schools and the Baltimore City Juvenile Justice Center (BCJJC). The CBT-based interventions would mimic the two Chicago interventions in content and implementation, subject to several key adjustments that we have identified through conversations with various local stakeholders. In addition, we propose a “demonstration and evaluation” of CBT in Baltimore City, enabling us to focus resources on the highest areas of need. Our proposal has two primary goals:

- 1. Use CBT to channel youth out of the school-to-prison pipeline:** To reduce the likelihood of youth recidivating back into the juvenile or adult criminal justice systems, we propose implementing elements of the JTDC intervention in the Baltimore City Juvenile Justice Center. These elements can largely be incorporated leveraging existing infrastructure and staff.
- 2. Emphasize local high-risk schools as key partners in delivering CBT-based violence prevention methods:** In-school CBT interventions have been shown to substantially reduce arrests for violent crimes while simultaneously reducing dropout rates. In this paper, we propose a framework for developing and delivering a pilot in-school CBT intervention in Baltimore City that emphasizes feasibility and local impact.

Introduction

There are few life events that can shape the trajectory of a child’s future as much as an early incarceration. One recent study establishes a causal link between juvenile incarceration and increased high school dropout and adult incarceration rates, with estimated increases of approximately 13 percent and 22 percent, respectively.¹ Youth of color are disproportionately exposed to this phenomenon: In 2013, black youth were 4.6 times more likely than white youth to be incarcerated,² and certain estimates suggest that as many as one in three black men will be imprisoned at some point in their lifetime.³

Once incarcerated, nearly half of federal and state prisoners return to prison within five years,⁴ creating a cycle of incarceration and rehabilitation that has quickly become an enormous economic burden to society. Annually, more than \$265 billion is spent on the U.S. criminal justice system, with over \$60 billion spent on judicial and legal proceedings alone.⁵

Unfortunately, we have little evidence on what works for reducing youth crime and recidivism. Despite the best intentions of policymakers and administrators, most interventions have either been ineffective (no statistically significant improvements), inefficient (high per capita expenditures), or unreliable (serious methodological issues in measuring student outcomes). For example, of the more than 1,400 programs reviewed by Blueprints for Violence,⁶ less than 10 were identified as “model programs,” based on program evaluation quality, intervention impact and specificity, and dissemination readiness.

The lack of scalable, evidence-based interventions has been a stumbling block for Baltimore City, which has been fighting an uphill battle against youth violence for many years. In the section entitled, “Crime and Juvenile Detention in Baltimore City,” we show that Baltimore possesses one of the highest per capita rates of violent crime among comparably sized cities, along with a disproportionate number of murders per violent crime. Moreover, Baltimore is also one of the nation’s most racially segregated cities,⁷ with stark residential and racial divides in poverty and crime rates.⁸ The recent local backlash following the death of Freddie Gray in 2015 has only served to heighten tensions between local communities and institutions, further complicating efforts to invest in youth who live in distressed neighborhoods.

This has not been for lack of emphasis on juvenile delinquency. In 2016, \$22.4 million was spent on the operation of the Baltimore City Juvenile Justice Center, with approximately \$400,000 spent on

education services and \$2 million on mental health services, resulting in a comprehensive per diem cost of \$640.⁹ By comparison, the Justice Policy Institute reports that nationally, “the average costs of the most expensive confinement option for a young person [were] \$407.58 per day.”¹⁰ In 2014, \$3 million was allocated by the Office of the Mayor specifically for youth violence prevention programs.¹¹ Clearly, financial resources alone have not been enough to stem this problem.

Recently, two Chicago-based interventions have laid the groundwork for replicable, cost-effective, and impactful youth crime/violence prevention programs,¹² thanks to the pioneering research of Heller, Shah, Guryan, Ludwig, Mullainathan, and Pollack (hereinafter referred to as Heller et al.),¹³ and the visionary programming implemented by Youth Guidance (YG) and the Cook County Juvenile Detention Center (JTDC). The novel aspect of these interventions is the integration of “cognitive behavioral therapy” (CBT), a technique that has been utilized for decades in the medical field to treat mental health disorders. In the context of youth violence, many adolescents have been conditioned over time to instinctively resort to aggressive behaviors when confronted with high-risk situations. Although these behaviors may be appropriate in certain situations (e.g., protecting oneself “on the streets”), they are maladaptive in others (e.g., being reprimanded by a teacher). CBT ultimately conditions and empowers adolescents to identify and reduce the “automaticity” of such behaviors via simulation, reflection, and reinforcement of techniques and exercises adapted from the use of CBT in psychiatry. In the following section, we review the theory and current application of CBT with respect to youth violence.

Heller et al. partnered with YG and JTDC to commission two large-scale randomized control trials that measured the impact of CBT interventions when applied to in-school and juvenile detention center settings. The first of

Given the complexity of the issue at hand, the key to our approach is a focus on feasibility and prioritization of communities with high concentrations of youth living in crime-dense environments.

these programs, “Becoming a Man” (BAM), was a series of weekly in-school coaching sessions designed to engage youth through immersive group activities and reflection. Among the program’s successes were a decrease in total arrests by 28 percent to 35 percent, a decrease in violent crime arrests by 45 percent to 50 percent, and an increase in graduation rates by 12 percent to 19 percent over the course of the first program year (September 2009 to August 2010).

Furthermore, these outcomes were sustained throughout the following academic year with estimated benefit-to-cost ratios ranging between 5-to-1 and 30-to-1.¹⁴ The second of these programs was a CBT-based intervention administered at the Cook County Juvenile Temporary Detention Center (JTDC). In contrast to BAM, the JTDC intervention focused on training detainees’ abilities to discuss and identify their automatic behavior out loud. This program was offered to male youth residents at the JTDC over a period of 17 months from November 2009 through March 2011, at an estimated cost of \$60 per detention stay per youth. The researchers found that the intervention led to a reduction in recidivism rates by 21 percent at 18 months following a male youth’s exit from the JTDC.

This paper provides the groundwork for deploying similar interventions in Baltimore City. Given the complexity of the issue at hand, the key to our approach is a focus on feasibility and prioritization of communities with high

concentrations of youth living in crime-dense environments. Our intervention specifically focuses on the Baltimore City Juvenile Justice Center (operated by the Maryland Department of Juvenile Services), as well as select low-performing Baltimore City Public Schools in proximity to distressed communities with high concurrent concentrations of youth and crime.

It should be noted that we are not proposing a “silver bullet” to end juvenile crime in Baltimore. As we will discuss in our closing section, implementation of such programming requires substantial coordination and a firm commitment to longitudinal, systemic change.

The rest of this paper proceeds as follows: First, we introduce the concept of CBT and provide a detailed literature review on its use in high-risk adolescents. This is followed by a description of the current condition of Baltimore crime and juvenile delinquency compared to the state of Maryland via an expository empirical analysis over the past four years. Next, we detail our policy recommendations for the proposed CBT pilot. We conclude with a discussion of limitations, barriers to entry, and mitigating factors.

Theory and Application of CBT

We begin with a primer on cognitive behavioral therapy by exploring its underlying theory as well as its current use in Baltimore City and elsewhere in the United States. We also review the seminal work conducted by Heller et al.,

whose findings provide the most convincing evidence to date of the efficacy of CBT within the context of stemming youth violence.

Cognitive Behavioral Therapy and the Psychology of Juvenile Crime

Underlying the motivation behind cognitive behavioral therapy is the observation that humans develop automatic, adaptive responses as defensive mechanisms in stressful situations that they commonly face. This can cause problems when the same automatic response is generalized to other environments, sometimes leading to serious, unintended consequences.¹⁵ For example, consider an adolescent who grows up in an environment where developing a reputation as someone who does not fight back leads to repeated victimization.¹⁶ As a means of self-preservation, such an individual could develop an automatic, but adaptive, response to fight back when provoked by someone who attempts to victimize him. However, that same automatic response could be triggered in the classroom, when a student is singled out by a teacher attempting to restore order, or in school hallways, when a student retaliates against a classmate because of a comment made on social media. These are typical cases of an individual misconstruing a situation and deploying the incorrect automatic response.^{17,18}

In a relatively extreme example, one high school teacher who we interviewed at Frederick Douglass High School reported that she had observed a student devolve into a state of semi-conscious rage, only to “wake up” minutes later without an understanding of the extent of his violent behavior. The purpose of CBT is to counterbalance such automatic behaviors with the aid of mindfulness techniques to help individuals “identify, monitor, challenge, and change their thoughts and behavior.”¹⁹ Through CBT, youth can internalize effective patterns of thinking and situational awareness while gaining strategies for recognizing and

regulating behaviors that they learn to identify as automatic or impulsive.²⁰ In contrast to traditional counseling and behavioral coaching:²¹

1. CBT gives individuals a sense of agency over their actions by eliminating automatic behavior, as opposed to teaching a set of rigid guidelines for desired behavior via persuasion or lecturing.
2. CBT — in the context of aggressive behavior — focuses on identifying and limiting “automatic” behavior, as opposed to normatively labeling behaviors as “wrong” or “inappropriate.” The goal of CBT is not to limit aggressive behavior, but rather to help students understand the consequences of their actions and develop situational awareness of nuanced circumstances.
3. CBT emphasizes simulation and reflection over traditional coaching methods such as repetition. To truly internalize the process of overcoming automaticity, it is imperative that students experience what it is like to do so in a controlled environment. Whether or not an automatic behavior is suppressed in this artificial setting, directed reflection allows a secondary channel for internalization of the sensation, experience, and concept.

To summarize, the goal of CBT as applied to this environment is to enable individuals to distinguish between safe and dangerous environments in order to modulate their responses and to dissociate automatic reactions from feelings and emotions. As one psychologist summarizes, “By altering routine misinterpretations of life events, offenders can modify antisocial aspects of their personality and consequent behaviors.”²² It is worth noting, however, that although existing evidence supports the efficacy of CBT in ultimately

reducing propensity to commit violent crime, it is much less clear whether there is any meaningful impact on property and drug-related crimes.

Youth Violence and CBT-Based Interventions in Baltimore City

Youth Violence Initiatives in Baltimore City.

Currently, there exist numerous programs and nonprofit organizations dedicated to reducing juvenile violence and arrest rates in Baltimore City. A list of some of these programs is provided in Appendix B. These programs take a wide variety of approaches toward youth violence, ranging from emergency room counseling services to state-run case management services. In September 2015, the City of Baltimore also launched the “B’More for Youth!” initiative to coordinate many of these services and programs in an effort to achieve better outcomes for youth in Baltimore.²³

CBT in Baltimore City. The use of CBT within the Baltimore City public school system has mainly targeted childhood anxiety and depression.²⁴ In Appendix B, we provide an overview of active youth violence prevention programs in Baltimore City. Among these programs, only the in-school PATHS (Promoting Alternative Thinking Strategies) program explicitly qualifies as a CBT-based program.²⁵ The key differences between PATHS and the in-school BAM intervention are:

- *Audience:* The PATHS intervention is a longitudinal curriculum designed for young elementary-aged students, and the current offering of the program extends only to grade six. By comparison, the BAM and JTDC interventions are very clearly targeted toward high-risk adolescents and juvenile offenders. Although lessons learned early on in childhood may be effective in preventing risky behaviors later in adolescence, it is unclear if these benefits

persist through the most high-risk years of adolescence. Indeed, the clinical results that are advertised on the PATHS website are only germane to one- and two-year follow-ups.

- *Licensing:* PATHS is delivered in a series of classroom modules that are under proprietary ownership of the Channing-Bete Company. As of now, the proprietor of BAM (Youth Guidance) remains a nonprofit organization and does not appear to retain licensing rights over its curriculum. As such, Youth Guidance may be more likely to share training and program materials should interest in CBT materialize in Baltimore.

Part of the ambiguity in identifying CBT programs in Baltimore City can be attributed to the broad nature of what a CBT intervention is. Even for programs that are not explicitly labeled as CBT programs, as noted by Heller et al., key parts of such programs “may be lumped together under the broad heading of what psychologists call cognitive behavioral therapy.” The researchers also caveat that “CBT programs vary in their focus, including the degree to which they try to reduce automaticity, and not all interventions to reduce automaticity will necessarily be called CBT.” The remaining programs in Appendix B could also plausibly include CBT components, but likely would not consider those specific activities to be core offerings of their services. Furthermore, as confirmed by the Community Services Coordinator at the BCJJC, there is no explicit CBT programming that currently exists in the BCJJC. It appears that outside of PATHS, there are likely no other comparable CBT programs in Baltimore City that are explicitly aimed at violence prevention. Other CBT services, such as those commonly used to treat psychiatric disorders, do exist in Baltimore City but were categorically excluded from our comparison.

All sessions follow a common structure and begin with "check-in," in which the counselor shares how things in his life are going in various domains. The youth are given time to do the same. This is an example of a "retrospective/introspective" activity, in which youth are encouraged to talk about aspects of life they are doing well in and other areas they still need to improve.

CBT Nationwide. Appendix C provides a nonexhaustive list of 11 CBT interventions that have been implemented and evaluated in various parts of the nation. Each program was evaluated by the National Institute of Justice (via CrimeSolutions.gov) based on a scale of "No Effects" (negative or non-significant effects), "Promising" (positive and moderate, significant effects), and "Effective" (positive and large, significant effects). We note that there is possibly a degree of survivorship bias at play in the list of programs that we have identified in Appendix C; it is indeed plausible that successful programs are more likely to show up in the criminology literature.

Becoming a Man (BAM) and Cook County Juvenile Temporary Detention Center: Results from the Heller et al. study

Originally developed by the Chicago nonprofit organization Youth Guidance (YG), the Becoming a Man (BAM) program began as an intervention at a single high school and a few elementary schools with the goal of helping "young men navigate difficult circumstances that threaten their future." In a phone interview with an Operations Associate from YG, we learned that as of four to five years ago, the BAM staff numbered approximately 15 and operated at only a limited number of schools. After applying for a grant to conduct a randomized control trial through the UChicago

Crime Lab, YG gained academic sponsorship and eventually became the recipient of a \$1.25 million MacArthur grant, which fueled its subsequent rapid expansion. As of 2016, the BAM program has expanded to more than 60 public schools, reaching over 4,000 male youth. The program intends to expand to 6,000 youth over the next two years.

The BAM curriculum consists of 27 one-hour, once-per-week group sessions held in place of class during the school day and is designed to be completed over one academic year. In order to cover more advanced material on self-reflection and delve deeper into each topic, the length of the curriculum can be modified to extend over a period of two academic years. To promote relationship building, small groups are composed of no more than 15 students, and are led by male, college-educated counselors. Because the BAM curriculum is made accessible by an easy-to-follow manual, counselors are not required to have additional training in psychology or social work. Youth Guidance makes an effort to hire people from neighborhoods similar to those that they will be working in. With the onset of demand for rapid expansion, the program has struggled to find counselors who have mastery of all desired core competencies,²⁶ but is able to compensate with a rigorous, robust training regimen for all new counselors.

All sessions follow a common structure and begin with a “check-in,” in which the counselor shares how things in his life are going in various domains. The youth are then given time to do the same. This is an example of what Heller et al. call a “retrospective/introspective” activity, in which youth are encouraged to talk about aspects of life they are doing well in and other areas they still need to improve, while also participating in the experience of listening to others. Heller et al. define four other activity categories that can be used to summarize key aspects of the BAM curriculum: immersive/experiential, role-playing, skill-building, and stories and discussion. Examples of each of these activity categories are listed and described in Appendix D.

The Cook County Juvenile Temporary Detention Center (JTDC) is where juvenile arrestees from the Chicago area are taken for detention prior to their scheduled trials. In May 2007, JTDC implemented numerous reforms to its facilities and services, most notably converting several of its units into “CBT centers.” These detention centers provide twice-a-day group CBT sessions to youth, and the intervention is delivered by trained JTDC staff. Appendix D summarizes a few key types of activities with examples of specific exercises included in the curriculum. Compared to the BAM program utilized at public schools, this intervention focuses less on activity/immersion-based instruction, and opts instead to focus on skill-building and reinforcement of positive behaviors through the detention center’s internal token/reward system.

The results from these two interventions were ultimately published in the paper, “Thinking Fast and Slow: Some Field Experiments to Reduce Crime and Dropout in Chicago” (Heller et al.) — the title an homage to Daniel Kahneman’s famous book that explored many of the psychological mechanisms underlying

the theory of CBT. Randomized controlled trials (RCTs) are the gold standard of evidence for treatment effects in the program evaluation literature, and through a collaborative effort with YG and JTDC, Heller et al. conducted the largest-known RCT of CBT-based interventions to date.

Heller et al. conducted two studies on BAM: one during the 2009-2010 school year and another during the 2013-2014 school year. We focus on the results of the second BAM study for two reasons: First, it represents a more up-to-date assessment of the program’s current practices. Second, the treatment in the first study included an after-school sports component, and the researchers note it was unclear whether — or to what extent — the results should be attributed to the in-school versus after-school treatments. The second study relied on standard randomization methods, with some small technical caveats: First, the researchers limited the population of interest to seventh- through 10th-grade male students at the highest risk of failure.²⁷ The researchers also excluded students who rarely attended school²⁸ or had serious disabilities.

The study by Heller et al. of the JTDC intervention was conducted between November 2009 and March 2011. JTDC randomly assigned incoming male youth into one of four CBT units, or one of four “status quo” units. As the names of these units suggest, youth in the CBT units received all of the CBT interventions developed by the facility, whereas youth in the status quo units received standard treatment. As usual, there were occasional restrictions on randomization: First, if the youth was deemed to be “physically, emotionally, or mentally immature,” he would need to be housed separately. Second, if the assigned center type was full, the youth would be housed in a center with openings. Third, if the youth had been in a JTDC CBT unit previously, he would continue to receive CBT treatment. Fourth, if there was a safety

For students enrolled in the latter BAM study, total arrests decreased by 28 percent to 35 percent, violent crime arrests decreased by 45 percent to 50 percent, and "other arrests" decreased by 35 percent to 40 percent over the academic year. Additionally, graduation rates increased by 12 percent to 19 percent for the 2013-2014 year compared to the prior year.

concern due to gang affiliation or history of conflict, he would be placed in a unit deemed safe by the staff. Finally, very short-term admissions stayed in the facility's "Alpha" center.

Key tables outlining complete results from this paper are provided in Appendix E. For students enrolled in the latter BAM study, total arrests decreased by 28 percent to 35 percent, violent crime arrests decreased by 45 percent to 50 percent, and "other arrests" (e.g., weapon violations, trespassing, vandalism) decreased by 35 percent to 40 percent over the academic year. Additionally, graduation rates increased by 12 percent to 19 percent for the 2013-2014 year compared to the prior year.²⁹ The JTDC intervention reduced youth re-admission rates to the detention facility by 21 percent for youth who had been released for 18 months. Importantly, both interventions produced statistically significant positive results with cost-efficiency, and were deemed a success for youth crime prevention and recidivism reduction efforts in Chicago. Notably, Heller et al. found no significant changes with respect to property and drug-related crimes.

As with other social experiments, there were minor issues with treatment compliance, attrition, and suspected record-keeping issues. However, the researchers demonstrate that their results are robust to the standard array of tests used to account for possible biases that could arise from these complications. A technical discussion of these points can be found in Appendix F.

The success of BAM was ultimately used as a motivating factor for former President

Obama's "My Brother's Keeper" initiative,³⁰ a "coordinated federal effort to address persistent opportunity gaps faced by boys and young men of color and ensure that all young people can reach their full potential."³¹ The program also received praise from the former president, who visited and interacted with students from BAM on multiple occasions.^{32,33} Although the Department of Justice (DOJ) has not directly commented on the approach used in the JTDC intervention, it has formally endorsed CBT as an effective approach to youth rehabilitation. In a publication highlighting CBT methods for corrections professionals, the DOJ states: "Several studies have indicated that the most effective interventions [for recidivism] are those that use cognitive behavioral techniques to improve mental functioning. Cognitive-behavioral treatments have become a dominant therapy in clinical psychology, and analyses of cognitive-behavioral programs for offenders have come to positive conclusions."³⁴ In the past year, the National Institute of Justice has also released a report surveying the efficacy of CBT in criminal justice, coming to the following conclusion:

*"CBT appears to be more effective with juveniles. This is consistent with the conceptual basis of CBT: Adults may have developed more deeply rooted maladaptive cognitive processes that may be more difficult to change. CBT also appears to be consistently effective in helping crime victims deal with trauma. And there is good evidence that CBT, in the controlled setting of a prison therapeutic community, can reduce the risk of reoffending."*³⁵

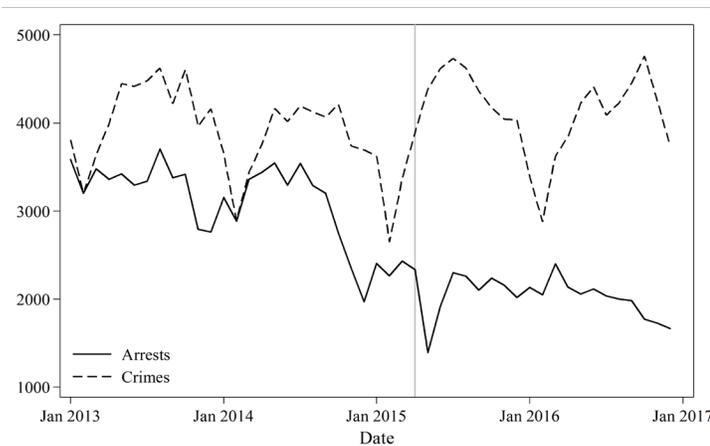
Table 1: Violent Crime Statistics for Police Departments Covering Populations Between 500,000 and 1,000,000, 2014

Police Department	Covered Population	Violent Crimes/100,000	Murders/100,000*	% Murders/Violent Crime
Detroit Police Dept.	684,694	1,990	44	2.19%
Memphis Police Dept.	654,922	1,744	21	1.22%
Milwaukee Police Dept.	600,374	1,485	14	0.96%
Baltimore City Police Dept.	623,513	1,339	34	2.53%
Indianapolis Police Dept.	858,238	1,255	16	1.26%
Washington Metropolitan Police Dept.	658,893	1,185	16	1.34%
Nashville-Davidson Metro Police Dept.	647,689	1,125	7	0.58%
Albuquerque Police Dept.	558,874	883	5	0.61%
San Francisco Police Dept.	850,294	795	5	0.67%
Oklahoma City Police Dept.	617,975	774	7	0.94%

*Includes non-negligent manslaughter

Source: Federal Bureau of Investigation Uniform Crime Reporting

Figure 1: Crimes versus Arrests, 2013-2016



Source: BPD Arrest and Part I Crime Data; Calculations by authors.

One particular quote from a juvenile detention staffer in the Heller et al. paper sheds light on the type of situation faced by youth in juvenile detention centers: “Twenty percent of our residents are criminals; they will harm other people if they are not locked up. But the other 80 percent, I always tell them — if I could give you back just 10 minutes of your lives, you wouldn’t be here.” Youth in detention centers already have one foot in the proverbial door of the school-to-prison pipeline. Even with schooling services available at the detention centers, incarceration may force students who are already behind in school to spend less time with their usual instruction.³⁶

As expressed by the JTDC staffer, CBT may be a way for youth in detention centers to reflect on those “10 minutes” that they could have back, while effectively coaching them to recognize such high-stakes situations and react in a more intentional, less automatic fashion.

Crime and Juvenile Detention in Baltimore City

We begin by contextualizing the need for CBT-based interventions in Baltimore City through an expository empirical analysis of crime, arrests, and detention. To do so, we rely on a variety of publicly available data sources including:

- 2013-2016 Baltimore Police Department Arrest and Part I Crime Microdata (“BPD Data”);
- 2014 FBI National Arrest and Crime Data (“UCR Data”);
- 2015 Census Demographic Data (“Census Data”); and
- 2016 Maryland DJS Juvenile Detention Data (“DJS DRG Data”).

Descriptions of the contents of each data source can be found in Appendix G. The extent of required data cleaning and manipulation are described in the Appendix as well.

Observations of Overall Crime in Baltimore City

To begin, we ask: How does crime in Baltimore City compare to crime in similar cities? With the use of agency-level UCR data on reported crimes, we can compare the rate of violent crime in Baltimore City to that of similarly sized cities nationwide.

Table 1 (page 9) lists violent crime statistics at the police department level; our sample is restricted to departments covering populations ranging from 500,000 to 1,000,000 during 2014. The numbers place Baltimore among the nation’s most severe hubs of violent crime among similarly sized cities.³⁷ What immediately stands out about Baltimore City is a murder rate that is disproportionate to its overall rate of violent crime. In particular, murders comprise roughly 2.5 percent of all violent crime, a rate exceeding those of all other cities in Table 1.

We next consider how crime has changed over time in Baltimore City. The BPD microdata, which is current as of December 2016, allows us to observe trends in reported crimes and registered arrests over the past four years. Figure 1 (page 9) shows monthly and yearly crime and arrest frequencies from 2013 through 2016.

Three observations are immediately apparent:

1. The incidence of reported crime has remained roughly the same since 2013, subject to seasonal fluctuations.³⁸
2. By contrast, arrests have been decreasing since 2013; since then, monthly arrests have fallen by nearly 50 percent.
3. The vertical reference line marks the month preceding Freddie Gray’s death in April 2015, after which the number of arrests dropped substantially for one month.

Table 2: DJS Complaints and Admissions, 2009-2016

FY	Baltimore City			Maryland (Total)		
	Complaints	Admissions	Admissions %	Complaints	Admissions	Admission %
2009	7,867	2,526	32%	48,443	7,494	115%
2010	6,585	2,191	33%	40,697	7,390	18%
2011	4,881	2,208	45%	35,871	6,892	19%
2012	4,420	2,279	52%	33,006	6,767	21%
2013	3,996	2,075	52%	27,550	6,135	22%
2014	4,016	1,540	38%	25,135	4,781	19%
2015	3,408	1,284	38%	23,473	4,054	17%
2016	2,490	1,092	44%	22,429	3,615	16%
Change	-68%	-57%	+37.5%	-54%	-52%	+6.7%

Source: Department of Juvenile Services, Data Resources Guides 2011-2016.

In short, it appears that there has been a gradual decrease in arrest rates over the past several years. Although one might be quick to point to the decrease in arrests as a sign of progress and improvement, we must be careful not to conflate decreases in arrests with decreases in crime. As the data suggest, crime has largely been unaffected despite the apparent decrease in arrests—an observation that may point to a shift in policing trends in response to recent high-profile cases of police brutality and the Baltimore City riots of 2015.

Youth Crime and Detention

Although youth can be processed by BPD and do occasionally show up in the arrest data, most youth are referred to the criminal justice

system through other channels, including schools, citizens, and parents. The Maryland Department of Juvenile Services (DJS) acts as the institutional oversight for all such youth. DJS also carefully collects, documents, and analyzes data from all youth who pass through the Maryland juvenile justice system. The detention center that is allocated to Baltimore City is the Baltimore City Juvenile Justice Center (BCJJC).

Through a wide variety of initiatives and services, DJS has been aggressively campaigning to decrease juvenile occupancy and re-admission rates across its seven detention centers statewide. In an annual communication from DJS in 2016, Maryland Governor Larry Hogan stated:

Table 3: Intake Complaint Decision Demographics, DJS FY 2014-2016

Demographics	FY 2014	FY 2015	FY 2016	FY 2014	FY 2015	FY 2016
Race/Ethnicity	Baltimore City			Maryland (Total)		
Black	95.3%	94.0%	94.2%	62.3%	63.2%	63.8%
White	3.6%	4.4%	4.6%	31.3%	29.7%	29.1%
Hispanic/Other	1.1%	1.6%	1.2%	6.4%	7.1%	7.2%
Sex	Baltimore City			Maryland (Total)		
Male	79.1%	77.1%	83.8	72.4%	72.5%	73.8%
Female	20.9%	22.9%	16.2%	27.6%	27.5%	26.2%
Age	Baltimore City			Maryland (Total)		
11 and Under	3.8%	2.8%	2.2%	3.5%	3.7%	3.6%
12	3.6%	3.7%	4.0%	3.9%	4.5%	4.7%
13	8.0%	7.3%	7.3%	7.6%	7.9%	7.9%
14	15.1%	15.2%	11.8%	13.0%	13.6%	12.9%
15	20.0%	21.3%	21.6%	19.2%	19.2%	19.8%
16	22.8%	23.3%	24.6%	22.5%	22.7%	23.4%
17	25.2%	24.5%	25.7%	26.8%	25.5%	25.0%
18-20	1.5%	1.9%	2.9%	3.5%	3.0%	2.7%
Total Complaints	4,016	3,408	2,490	25,135	23,473	22,429

Source: Department of Juvenile Services 2016 Data Resource Guide.

“The Department of Juvenile Services has implemented significant reforms within Maryland’s juvenile justice system that are achieving positive results. More youth are being diverted from the system at intake, and more juvenile offenders are receiving treatment in their communities or at home. Fewer youth are being placed in the department’s care, and those who are committed by a court are receiving robust, highly informed, and well-integrated treatment services.”³⁹

As Governor Hogan alluded to, statewide complaints to the Maryland DJS have fallen by roughly one-half since 2009 (see Table 2, page 11). The trend is even more pronounced in Baltimore

City, with complaints and admissions decreasing by nearly two-thirds. We also observe that the percentage of complaints leading to detention center admission has increased over the same time frame, suggesting a reduction in the volume of admissions for minor infractions.

Table 3 (above) provides a demographic breakdown of complaints by DJS fiscal year.⁴⁰ It is worthy to note that 94.2 percent of the juvenile intake population in Baltimore City are black youth. This is in the context of Baltimore City’s racial composition; 71.6 percent of Baltimore

Table 4: BCJJC Complaints by Offense Type* (%), Fiscal Year 2016

Person-to-Person		Property Offense		Drug-Related Offenses	
Assault (Felony)	3.0%	Arson	0.6%	Narcotics (Felony)	7.3%
Assault (Misd.)	17.5%	Auto Theft	8.1%	Narcotics (Misd.)	4.9%
Carjacking	1.0%	Burglary (Felony)	3.3%		
Child Abuse	0.1%	Burglary (Misd.)	2.7%		
Deadly Weapon	2.3%	Malicious Destr.	4.3%		
Handgun Violations	3.4%	Other	2.7%		
Harassment	0.5%	Theft (Felony)	3.0%		
Kidnapping	0.0%	Theft (Misd.)	9.9%		
Manslaughter	0.0%				
Murder	0.3%				
Other	3.2%				
Robbery	11.0%				
Sex Offense (Felony)	1.3%				
Sex Offense (Misd.)	0.8%				
Total	44.4%	Total	34.6%	Total	12.2%

*Note: We omit "Other Offenses" such as traffic, probation, and ordinance violations
Source: Department of Juvenile Services Data Resource Guide 2016, pg. 29.

youth aged 11-17 are black, compared to 31.7 percent statewide.⁴¹

Table 4 (above) provides a breakdown of complaints by the type of offense. Property and drug-related crimes (for which CBT was less effective) represent slightly more than half of all complaints. Nearly 45 percent of all complaints arise from murder, assault, possession of a handgun or deadly weapon, or malicious destruction — offenses that have been shown to have significant positive responses to CBT intervention.

Finally, we consider recidivism trends, which the DJS measures by whether an individual who has been released from a detention center re-enters the juvenile or adult criminal

justice system within 12 months. Table 5 (page 14) summarizes the trend in recidivism rates (encompassing re-arrest, re-conviction, and re-incarceration) for Baltimore City and the state of Maryland. Importantly, all three forms of recidivism decreased substantially statewide, but have remained relatively constant in Baltimore City between 2008 and 2015. Currently, Baltimore youth are nearly 50 percent more likely to recidivate than the typical Maryland juvenile, and the trend has not improved over time.

In summary, juvenile delinquency remains an outstanding issue in Baltimore, despite aggressive efforts from the DJS to combat it. In Baltimore City, juvenile offenders are overwhelmingly represented by black youth

Table 5: Annual Recidivism Statistics, 2008-2015

Year	Baltimore City				Maryland (Total)			
	Releases	Re-arrest	Re-conviction	Re-incarceration	Releases	Re-arrest	Re-conviction	Re-incarceration
2008	329	68%	25%	20%	1,657	56%	20%	14%
2009	329	73%	22%	17%	1,586	57%	19%	14%
2010	374	65%	20%	17%	1,580	56%	19%	13%
2011	390	66%	20%	16%	1,469	56%	21%	14%
2012	353	56%	24%	20%	1,570	48%	21%	16%
2013	326	60%	26%	23%	1,530	47%	17%	17%
2014	257	63%	28%	23%	1,338	46%	17%	17%
2015	214	65%	26%	21%	1,143	44%	13%	13%
Change*	-35%	-3%	+4%	+6%	-31%	-22%	-15%	-11%

Note: Change* refers to the percent difference between the year 2008 and the year 2015.
Source: DJS Data Resource Guides, 2011-2016.

who are more likely to recidivate than their peers throughout Maryland. Moreover, the juvenile recidivism rate in Baltimore City has not changed substantially since 2008, despite significant recidivism decreases statewide. Although we have observed a promising downtrend in the volume of complaints and admissions in Baltimore City, it is unclear whether this is a result of a real reduction in juvenile crime as opposed to a nominal, policy-oriented decision to stem the number of adolescents who enter the juvenile justice system.

Policy Recommendations and Approach

We now outline our policy recommendations for demonstrating and researching CBT interventions in Baltimore City. We focus on youth in detention

centers and in high-risk public schools, given the immediate need for evidence-based interventions in those settings. However, because Baltimore City differs from Chicago in fundamental ways, our proposal differs from the Heller et al. implementation in several key respects. In a press release from the Brookings Institution, authors Jens Ludwig and Anuj Shah discuss the implications of expanding CBT to other cities:

“Adaptation to local conditions may be critical because CBT is about helping youths recognize those particular situations in which their automatic responses are maladaptive; in principle, the key situations and maladaptive automatic responses that are adversely affecting

disadvantaged youths could look different across areas. The scaling-up process itself provides an important opportunity to address these key open questions.”⁴²

To better understand the extent of such differences, we carefully incorporated feedback from various stakeholders who are deeply involved in work with youth in these settings. Through these conversations, we identified several key considerations, to which we turn now.

Use CBT to channel youth out of the school-to-prison pipeline.

In 2000, the DOJ conducted a comprehensive investigation regarding the treatment of detained youth at BCJJC and concluded that many of the center’s practices were in violation of youth’s constitutional rights.⁴³ Since then, the DOJ has conducted several follow-up reviews calling for additional reform. In the most recent communication, the DOJ identified three “continuing violations of federal law,” including lack of staff training and lack of “structured rehabilitative programming.”⁴⁴ In light of this, we believe that adaptation of the JTDC intervention could confer the dual benefit of reducing long-term recidivism rates and enhancing BCJJC’s compliance with DOJ. We discuss specific considerations next.

Content, Structure, and Delivery. Through a collaboration between JTDC, the UChicago Crime Lab, and the social sciences lab Ideas42, a group of researchers recently finalized development of a new curriculum based on the most effective parts of the JTDC intervention. This curriculum, called “CBT 2.0,” is publicly available online⁴⁵ and includes a 110-page curriculum as well as a detailed user’s guide for practitioners.⁴⁶

Via interviews with a services coordinator at BCJJC, we learned that youth at the BCJJC

are currently required to attend daily or semi-daily group sessions with behavioral specialists employed by the institution. At this time, CBT programming is not explicitly being used. Because the integration of CBT goes beyond simply providing BCJJC practitioners with these manuals, our vision is for eventual institutionwide adaptation of CBT 2.0 into the BCJJC youth rehabilitation process, beginning with adaptation from onsite behavioral specialists and eventually achieving adaptation by all onsite staff who interact with youth. To make this possible, we propose connecting BCJJC with Ideas42 (located in downtown Washington, D.C.) to determine possible avenues for gradual integration of CBT.

Staffing, Training, and Costs. A large number of youth at the facility are diagnosed with some level of oppositional defiance disorder, which makes it difficult — if not impossible — for well-intentioned counselors without a connection to the youth to “get through.”⁴⁷ As we were advised, it may be best to utilize existing staff who the youth are already familiar with. BCJJC currently employs a team of behavioral health specialists with educational and professional backgrounds in counseling and social work. We believe these professionals would receive the most significant benefit from being trained in CBT and would also be in the best position to train other staff at BCJJC in everyday techniques to utilize in their interactions with the detained youth. Moreover, these professionals would be most familiar with the individual needs of the youth and could address the concern that a staff member at BCJJC shared with us about how “some of the programs don’t meet the exact needs of the youth since they are a one-size-fits-all.”

Although no formal training currently exists for such interventions, we believe it would be beneficial for staff to see and experience CBT in action at JTDC. We propose a five-day shadowing session for any behavioral staff

member at BCJJC interested in gaining CBT skills. Such training may be less directly relevant for other staff, but could be considered at the discretion of BCJJC's administration.

We estimate the costs for implementing this idea as follows:

- *Per specialist:* \$2,100 in training costs via shadowing at JTDC (\$600 for transportation to JTDC; \$1,000 for accommodations; \$250 gratuity; \$50 per diem for five days).
- *Contracting Ideas42:* Three eight-hour planning/brainstorming sessions with consultants from Ideas42 at a rate of \$300/hour (\$7,200).

Assuming we train, at minimum, five behavioral specialists, this leads to a baseline cost of \$17,700 for the year. If these specialists interact with one-third of BCJJC admissions (approximately 300 youth), this comes out to a cost of roughly \$59 per admission.

Research and Evaluation. Finally, in line with our “research-and-evaluate” proposal, we recommend randomizing CBT delivery in the first iteration of the program to a subset of BCJJC residents in order to determine its efficacy. Doing so would require initiating a dialogue with BCJJC about how to conduct randomization in a nondisruptive manner. One possible method could involve training only a subset of behavioral health specialists and tracking youth outcomes based on random assignment to specific staff.

Emphasize local high-risk schools as key partners in delivering CBT-based violence prevention methods.

In-school CBT interventions such as BAM have been shown to substantially reduce arrests for violent crimes, while simultaneously reducing dropout rates. However, compared to detention center programming, in-school CBT interventions require additional resources and coordination

with school administration, which complicates implementation. We discuss key considerations as follows.

Content and Structure. In principle, we anticipate that the curriculum used in Baltimore will be highly similar to the BAM curriculum. Thus, a key priority will be to obtain BAM's manualized curriculum. However, the curriculum should not be used as a “one-size-fits-all” approach to integrating CBT into an in-school setting. We discuss training and other considerations in the following section. To minimize the burden on providers, we propose weekly sessions where each teacher is responsible for assigned groups of no more than 15 students. Assuming an attendance rate of 70 percent,⁴⁸ each provider would likely work with 10 students per session.⁴⁹ To the extent possible, we believe that the programming should still be administered during class time. As mentioned by the Youth Guidance providers, missing an hour of class each week was a potential draw among students who participated in the program.

Our target demographic is the same as that of BAM: seventh- through 10th-grade male students. To determine who would receive the intervention, we would use the BAM methodology to construct a risk index composed of four factors: 1) whether the student was at least one year older than the assigned grade level, 2) the number “F” grades received in the prior year, 3) the number of unexcused absences, and 4) the number of in-school suspensions.

Staffing, Training, and Costs. The staffing structure for the in-school intervention includes several counselors at each school, each of whom reports to a program director. We propose hiring a program director with some sort of clinical or public health background. One possible source of hires would be the Master's Program at the Johns Hopkins School

Baltimore City is composed of numerous neighborhoods, each with unique characteristics and distinct social epicenters. The ideal location for an in-school intervention would be in a school located in a neighborhood with high concentrations of both youth and crime.

of Public Health. Possible credentials include an educational background in psychology and a familiarity with the state of youth public health in Baltimore. In addition, as mentioned by the Managing Director of Programs at THREAD, there are dedicated people who “work under the radar” with disadvantaged youth in Baltimore City, whose efforts are diffuse and not publicly recognized. Several names were mentioned to us, and it is possible that these people may be interested in leading a CBT intervention in Baltimore.

Although there was initially some debate as to whether to hire external counselors or utilize existing staff at schools, the consensus across our interviews with stakeholders was that utilizing teachers would be more effective. As a high school teacher at Frederick Douglass mentioned: “I think it is dangerous to bring a specialist in this specific area [Baltimore City] who does not know the students. There is a common phrase in teaching: ‘No one cares about what you know until they know you care about them.’ [Thus], it is more effective to use personnel that is already there.”

We propose that teachers who are willing to receive training for CBT and run a weekly CBT session should be subsidized for their time (see cost breakout below). For this to be possible, it is crucial that buy-in from administration be achieved, which we discuss in our closing section on obstacles, limitations, and mitigating factors. Notably, principals should be a part of any discussion about initiating a CBT intervention at their schools and using their staff infrastructure.

We offer two possibilities for the training in the BAM curriculum, both of which could be used to inform the work of future counselors and directors of the program in Baltimore:

Visiting BAM: In our interviews with Youth Guidance, we were informed that BAM has hosted groups and individuals around the nation, allowing them to shadow counselors and directors to experience BAM in its original form. Counselors/directors could have the option to spend a workweek with BAM in Chicago to learn and experience the program, with the goal of developing a vision of how to bring BAM practices to Baltimore schools.

The Mankind Project (MKP): In our conversations with Youth Guidance, we were informed that the original founder of BAM was motivated in part by his involvement in The Mankind Project, a global network of trainers dedicated to “hosting life-changing experiential personal development programs for men” since 1985. The original concept behind “Becoming a Man” was spurred by MKP’s “New Warrior Training Adventure” (NWTAs), a boot camp of sorts for emotional training for men.⁵⁰ The teaching methods from NWTAs have strong CBT elements and are integrated into an extended dialogue of what masculinity and manhood truly mean from individual and relational perspectives. NWTAs are hosted biannually in the Mid-Atlantic region, within a 1.5-hour drive from Baltimore City.

We note that these training options do not nearly match the robustness of the current training regimen at BAM, which has been built up after years of refinement and

millions of dollars in funding. The YG associate we interviewed lamented that the training component of BAM is something that is not yet replicable in its current form, which is one important reason why BAM has not franchised or piloted similar interventions in other cities as of May 2017. Our training proposal provides one possibility of replicating an adequate training experience in a scalable manner.

We summarize costs as follows. Given the comparatively imprecise nature of expenses for the in-school intervention (as compared to the detention center intervention), we emphasize that these are preliminary estimates. We have, however, attempted to estimate conservatively, striving to overstate — rather than understate — costs.

- *Per director:* \$60,000 in salary; \$2,000 in equipment/technology costs; \$2,100 in BAM training costs (\$600 for transportation to Chicago; \$1,000 for accommodations; \$250 gratuity; \$50 per diem for five days); and \$800 in The Mankind Project training (\$700 registration, plus \$100 travel expenses—lodging is included in registration). Total: \$64,900 per director.
- *Per teacher/counselor:* \$5,000 annually to subsidize the addition of a new “course” offering; \$800 in elective MKP training; and \$1,000 annual budget for students. Total: \$6,800 per instructor.

If we hired one director and recruited a minimum of two teachers at four target schools, the baseline cost for this intervention would be \$119,300. Assuming each instructor leads a group of 15 students (for a total of 120 students), we arrive at a per-student cost of \$994.17. The substantial difference between this estimate and the BAM estimate is due to the fact that BAM employs full-time counselors as opposed to subsidizing existing teaching staff.

Geographic Targeting. Choosing where to implement a CBT pilot is also of foremost

importance. Baltimore City is composed of numerous neighborhoods, each with unique characteristics and distinct social epicenters. The ideal location for an in-school intervention would be in a school located in a neighborhood with high concentrations of both youth and crime. In particular, research suggests that youth who live and grow up in proximity to crime are more likely to externalize violent tendencies.⁵¹ By combining locational elements of our BPD crime data with 2015 Census demographic data, we conducted a geospatial analysis of youth exposure to crime throughout the city. Specifically, we plotted each individual crime in the dataset to a Baltimore City map, while simultaneously overlaying the concentration of youth in each of Baltimore City’s 55 census tracts. Figure 2 (page 19) summarizes our results; darker-shaded areas represent higher concentrations of both crime and youth.

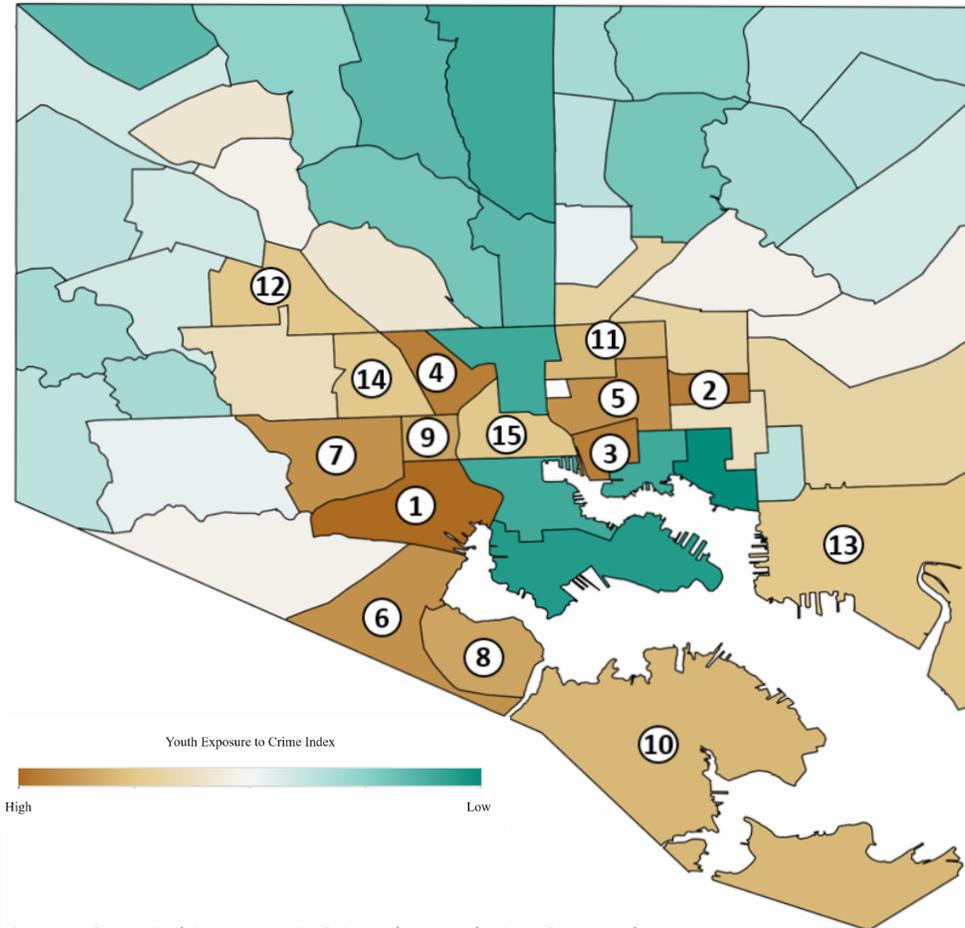
To proxy for the exposure of youth to neighboring crime, we constructed an index that combines youth density and crime density. This index is based on the intuitive assumption that higher concentrations of youth and higher concentrations of crime in an area should imply greater youth exposure to crime. Our “exposure” index is defined as follows:

$$\text{Exposure Index} = \% \text{ Population Aged 5-17} * (\# \text{ Violent Crimes} / \text{Population})$$

The term in parentheses measures violent crime density; when multiplied against youth density, it produces a social measure of youth exposure to violence. Table 6 (page 20) shows 15 census tracts with the highest crime exposure indices in Baltimore. Each of these neighborhoods is also labeled in Figure 2 according to their “Label” in Table 6.

Under the assumption that Baltimore youth attend high schools near their residence, we focused on schools located in the “hot zones” of Figure 2. Due to the sheer volume of schools in our dataset (191 in total), we limited our

Figure 2: Geographic Density of Crime and Youth



Source: Open Baltimore, BPD Crime data and 2015 Census data
 Note: See Table 6 for the census tract associated with each numerical label.

attention to Maryland “Priority Schools,”⁵² which are schools that place among the lowest five percent of all Maryland Title I schools in reading and mathematics, according to the 2016 Maryland Report Card.⁵³ Choosing schools that the state has identified as “Priority Schools” confers two advantages: First, it is more likely that the student population will have a greater proportion of students that we deem as “high risk.” Second, these schools may have greater agency and incentive to implement new, evidence-based programming.

Conditional on resource availability, it may be appropriate to test the efficacy of CBT at one of the

schools in the second category of Table 7 (page 24) even though these schools lie under the grade range of the results from Heller et al.

Figure 3 (page 25) shows the same map of Baltimore City, overlaid with the list of targeted schools serving grades seven to 10 that have been designated “Priority Schools” by the state of Maryland.⁵⁴

Obstacles, Limitations, and Mitigating Factors

We conclude with a discussion of obstacles and limitations to our policy proposal. For each

Table 6: Baltimore Census Tracts by Crime Exposure Index

Label	Census Tract	% Population Age 5-17	Crimes/Population	Exposure Index
1	Washington Village/Pigtown	13.8%	0.180	2.491
2	Madison/East End	22.3%	0.109	2.441
3	Harbor East/Little Italy	15.8%	0.154	2.439
4	Upton/Druid Heights	19.9%	0.121	2.409
5	Oldtown/Middle East	17.2%	0.137	2.350
6	Westport/Mount Winans/Lakeland	20.7%	0.106	2.202
7	Southwest Baltimore	19.1%	0.115	2.185
8	Cherry Hill	24.3%	0.081	1.972
9	Poppleton/TheTerraces/Hollins Market	18.1%	0.108	1.959
10	Brooklyn/Curtis Bay/Hawkins Point	18.2%	0.100	1.824
11	Greenmount East	18.0%	0.098	1.777
12	Greater Mondawmin	15.7%	0.110	1.732
13	Southeastern	15.1%	0.114	1.716
14	Sandtown-Winchester/Harlem Park	18.3%	0.093	1.701
15	Downtown/Seton Hill	4.6%	0.365	1.695

Note: The 15 census tracts listed rank highest on the exposure index of all 55 city tracts.

Source: Open Baltimore BPD Crime data and 2015 Census.

obstacle or limitation, we identify possible mitigating factors, and in some cases, propose alternative solutions.

Program Longevity/Continuity: One of the major difficulties for programs such as this is to remain at an institution long enough to generate change in culture and behavior. Several of the stakeholders we interviewed mentioned this

challenge and the importance of a sustained relationship with students and leadership despite barriers. One stakeholder even stated that it is the “obligation” of the program leadership to continue pressing forward no matter “how dark, difficult, or bleak it seems.” The withdrawal of a “research-and-evaluate” intervention too early can be a major detriment. It not only disillusion youth, but it

Table 7: Categorization of Priority Schools in Baltimore, 2016

High-Risk Priority Schools Serving Grades 9-10	Frederick Douglass High School (Grades 9-12)
	Benjamin Franklin#239 at Masonville Cove (Grades 9-11)
	New Era Academy (Grades 6-7, 9-12)
	Augusta Fell Savage Institute of Visual Arts (Grades 9-12)*
Other High-Risk Priority Schools	Arundel (Grades Pre-K-8)
	Harlem Park Elementary (Grades 6-8)
	Booker T. Washington (Grades 6-8)
Other Priority Schools	Academy for College and Career Exploration
	Friendship Academy of Math, Science, and Technology
	Hazelwood
	Knowledge, Achievement, and Success Academy
	Baltimore IT Academy**

*Recommended for closing in June 2018 due to poor performance.

**Closed in June 2017 due to poor performance

Possible additional schools to consider include Renaissance Academy High School and Excel Academy at Francis M. Wood High School, both of which experienced a number of murders over the 2016-2017 academic year. *Source: Maryland Report Card, 2016.*

can also send a message to the disadvantaged community that they are being used for “research purposes.”

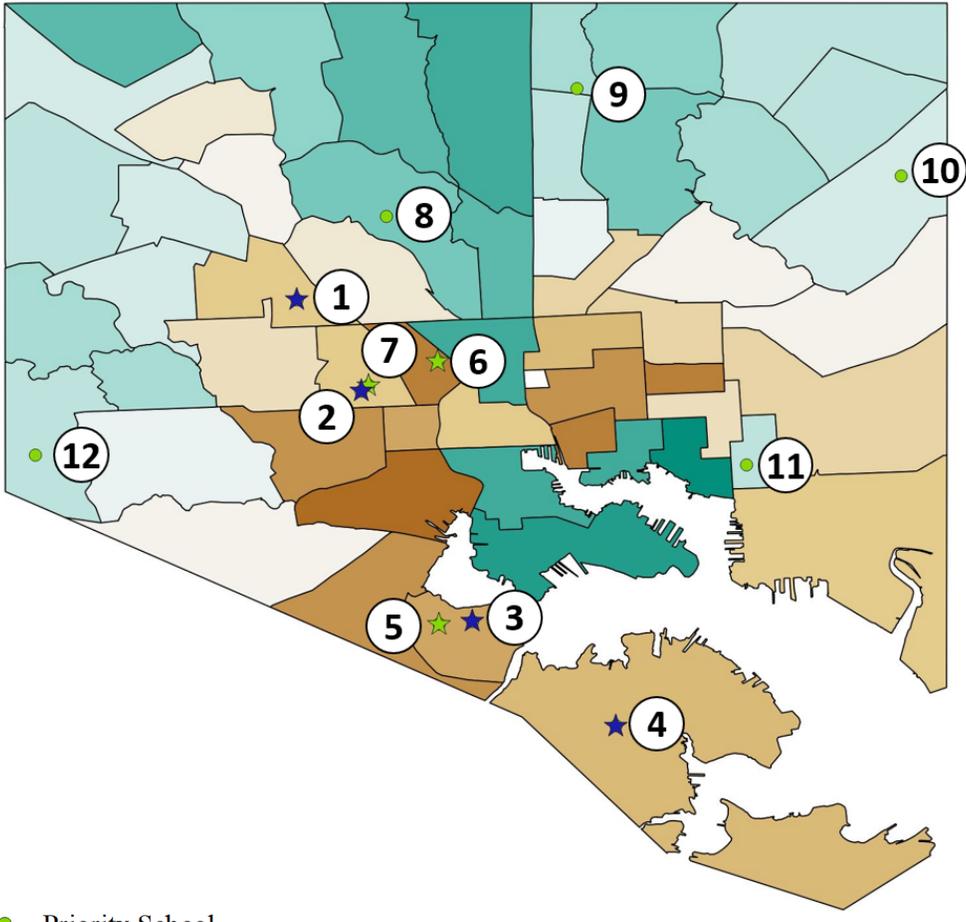
Funding: Initial funding may be able to come from the City of Baltimore. At an estimated cost of less than \$150,000 for the pilot proposal, such funding could indeed be feasible. Beyond that, several social sciences organizations may be interested in funding studies on CBT and youth violence following the findings of Heller et al. In particular, as noted earlier, the initial BAM partnership with the UChicago Crime Lab ultimately resulted in a \$1.25 million grant from the MacArthur Foundation. We certainly do not

expect the same scale of funding, and have considered the possibility of limiting delivery of the in-school component in case of funding constraints, including:

- Decreasing the number of weekly sessions; and
- Limiting the target grade range (targeting youth in grades nine and 10 only).

Measuring Intervention Outcomes: A significant percentage of juvenile crimes are not reported, and the majority of juvenile crimes do not result in detention. Without a reliable way of quantitatively measuring juvenile outcomes as a result of introducing

Figure 3: Dispersion of Priority and Target Schools in Baltimore City



- Priority School
- ★ Priority School (In High-Risk Neighborhood)
- ★ Priority School (In High-Risk Neighborhood; Serves Grades 9-10)

1. Frederick Douglass High School	7. Augusta Fells Savage Institute of Visual Arts
2. Harlem Park Elementary School	8. Academy for College and Career Exploration
3. New Era Academy	9. Baltimore IT Academy (CLOSED June 2017)
4. Benjamin Franklin at Masonville Cove	10. Hazelwood
5. Arundel Elementary/Middle School	11. Friendship Academy of Math, Science, and Technology
6. Booker T. Washington Middle School	12. KASA (Knowledge Achievement Success Academy)

CBT, we will not have a basis for expanding the scope of our proposal beyond the initial pilot stage. Although the ideal setting for measuring outcomes is the RCT, in this case, administering an intervention using an RCT may be undesirable or infeasible for a school that desperately needs intervention. In the absence of an RCT setting, social scientists have developed a number of “quasi-experimental” statistical methods that are able to approximate causal treatment effects, provided that the appropriate data are available.⁵⁵ Clearly, the quality of such methods cannot be compared to that of an RCT, but the methods are rigorous enough to provide suggestive evidence of a causal relationship between an intervention and its outcomes.

A secondary concern with measuring outcomes is sample size. If the pilot trials are unable to generate sufficient participation, any resulting outcomes may be subject to high levels of statistical noise. Such issues would render most attempts to measure outcomes unreliable.

Similarly, it should be noted that the ideal time frame for evaluating a pilot is 12 months, which coincides with the recidivism measure used by DJS, and captures one entire school year. Without enough data to evaluate short- and medium-term impacts, we risk arriving at potentially misleading conclusions about the efficacy of CBT interventions in Baltimore.

Lastly, we understand that a CBT intervention in Baltimore would be one of several existing programs that students may interact with. As the Managing Director of Programs at THREAD shared, each program works within a “constellation of programs” that “capture another niche of students, but not all of them” — and these programs often come and go. Given this constantly changing environment, it may be difficult to clearly separate the effect of a CBT program from other factors.

Barriers to Entry: Implementing our pilot cannot occur without addressing several key barriers to entry. We anticipate that the primary ones will include:

Administration and Oversight: Baltimore City does not currently have an organization dedicated to CBT-based interventions for adolescents, especially those in juvenile detention. Without an organization overseeing the development and deployment of the pilot, it will be a challenge for our intervention to gain traction in its infant stages. Given resource and staffing constraints, a practical solution would be to partner with an existing organization (public or private) that has sufficient infrastructure and staff. For such an organization, it would be important to prioritize prior experience with conducting in-school programming, connections with the Baltimore City Public School System, and availability of trained counselors on staff who have worked with at-risk adolescents. To partially offset this barrier, we have proposed hiring a full-time director, which we discussed in the prior section.

Relations with School and BCJJC Leadership: Collaboration with Baltimore schools and BCJJC will be integral to the delivery of the intervention. Naturally, both of these institutions may be reluctant to open their facilities to an intervention without some degree of relationship-building. For example, some teachers and administrators may consider the idea of in-school programming a disruption to daily class activities. In our interviews with a Frederick Douglass High School teacher and the Managing Director of Programs at THREAD, we learned that:

“[The principal] is the driving force of the school. He has to be on board because the students selected will miss some school. He has to believe that building these social skills produces educational results. Their positive behavior has to be positively correlated with an increase in test scores or reading levels, something educational.”

Youth Guidance concurred with this sentiment, responding that “the ultimate irony of BAM is that missing class for this in-school intervention increases attendance and graduation rates in the long run.” According to these stakeholders, buy-in from the principal is key for allowing the program to become a part of school culture, which can be made more difficult with frequent leadership turnover.

Interest from Students: Although implementation at the BCJJC may rely more on the detention center leadership, it is possible that BAM may be implemented using an opt-in program at Baltimore City Public Schools. Initial reactions from Frederick Douglass High School students who heard a brief description of the program included “I don’t need it” and “It sounds like therapy.” These sentiments persisted even when students were told that they would be able to miss one class each week. Thus, we recognize the importance of incentivizing participation in the CBT curriculum at the student level.

Muted Effects on “Non-Automatic” Crime: The effects of BAM on crimes such as substance possession and distribution and property crime, which may not invoke the psychological automatic response, were muted (see section entitled, “Theory and Application of CBT”). Therefore, we would not expect to see effects on these forms of juvenile crime in Baltimore City should a CBT-based intervention be implemented.

Despite the aforementioned obstacles, we believe that the potential restorative effects of CBT on youth violence are well-worth the risk and challenge of implementing such a program in Baltimore. We recognize and applaud the existing efforts in Baltimore that are dedicated to keeping its young out of the juvenile incarceration system. It is our hope that this research and proposal may be of both theoretical and practical use to local community organizations, as well as city leaders and stakeholders, as they consider the best methodology to address the difficult issue of juvenile crime in our city.

About the Abell Award in Urban Policy

The Abell Award in Urban Policy is an annual competition for the best student paper that provides a cogent analysis of a critical issue facing the City of Baltimore and proposes well-reasoned, feasible solutions. It is open to matriculated students at all Baltimore area colleges and universities. The submissions are blind-reviewed by a panel of distinguished judges. The winning paper receives a \$5,000 award and is distributed to key policymakers and opinion leaders and posted on the Abell Foundation’s website.

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Note: To view appendices, please visit: <http://abell.org/publications/winner-2017-abell-award-urban-policy>

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55. Such methods might include “differences-in-differences” and “propensity-score matching,” both of which require substantial assumptions in the data structure to generate reliable estimates of treatment effects.

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Juvenile Crime and the Heat of the Moment: A
Proposal to pilot cognitive behavioral therapy
interventions to reduce crime and recidivism in
Baltimore City

By George Zuo and Stephanie W. Zuo
July 2016

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The Abell Foundation is dedicated to the enhancement of the quality of life in Maryland, with a particular focus on Baltimore. The Foundation places a strong emphasis on opening the doors of opportunity to the disenfranchised, believing that no community can thrive if those who live on the margins of it are not included.

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