Safe and Successful Youth Initiative:

Understanding the Influence of Outreach, Case Management, and Service Engagement on Improving Client Outcomes

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FEBRUARY 2022

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Executive Summary

Since its inception, the Safe and Successful Youth Initiative (SSYI) has shown promise for reducing violent crime at the community level in Massachusetts. Based on the cumulative results of evaluations conducted by the American Institutes for Research® (AIR®) and WestEd, SSYI was designated as a "promising program" in 2021 by the U.S. Department of Justice CrimeSolutions evidence review repository and the Office of Juvenile Justice and Delinquency Prevention Model Programs Guide.[i] Most recently, the Massachusetts Executive Office of Health and Human Services contracted with AIR and WestEd to evaluate SSYI at the individual level of impact. Using extant data on offense history and case management records for 313 SSYI clients through July 2019, the current study focuses on four research questions that examine client recidivism outcomes affected by the dosage and cumulative impact of SSYI client outreach, case management, and service engagement strategies.

Findings

The results provide substantial support for the SSYI theory of change, whereby frequent client involvement with outreach workers and case managers is associated with greater service engagement, program retention, and decreased recidivism. Specifically:

- Outreach frequency (e.g., once a week, once a month) and outreach amount (count of outreach contacts) were directly related to an SSYI client's time to enrollment and eventual program participation, and this relationship was statistically significant.

- The total number of outreach contacts that clients experienced correlated positively with the total number of priority risks and needs assessed after enrollment; and case managers were statistically more likely to meet more frequently with clients who were assessed for risk and needs.

- The overall level of SSYI clients' engagement in services was directly related to their total amount of contact with outreach workers and case managers. Having a case plan with goals and objectives for clients was related to greater levels of contact with outreach workers and case managers. Both results were statistically significant.

- The total number of contacts between clients and outreach workers and the total number of meetings between clients and case managers were each inversely related to recidivism after program exit. These relationships were statistically significant.

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[i] SSYI evidence rating and review are available at https://crimesolutions.ojp.gov/ratedprograms/717.

- The more services clients engaged with, the less likely they were to reoffend after leaving SSYI. There was an inverse relationship between engagement in multiple SSYI services and recidivism. This relationship was statistically significant.

- The most typical SSYI clients did not have any recidivism events during their enrollment in SSYI and recidivism events declined as clients remained engaged in the program. Only 20% of clients who left the program recidivated within 18 months after exit.

Although this study shows the critical importance of frequent contact between SSYI clients and their outreach workers and case managers for engaging clients in the program and services and for impacting recidivism, data are not available from these cases on the quality or evolution of these relationships over time. From related studies, survey and anecdotal information suggest that a mentor-like relationship is the glue that connects clients and SSYI staff; however, that information comes from a different sample of SSYI clients and could not be credibly tied to the current analysis. Future research is needed to understand in greater detail how SSYI program practices influence these relationships and the resulting impact on client outcomes.

Similarly, the study found that clients older than age 21 had the greatest success in SSYI and appear to engage most frequently with outreach workers and case managers. Understanding the desistance pathway for *younger* clients in SSYI will be important for maximizing violence reductions in each city because younger clients will have more years ahead of them to reoffend if prevention efforts are unsuccessful.

The study also showed that the more services clients receive, the stronger the recidivism prevention outcome becomes. However, after controlling for previous offense history, no single service on its own was related to reduced recidivism. This result begs the question of whether the services themselves are tied to behavior changes or accrue from collateral benefits from SSYI engagement (e.g., developing new peer networks, having less free time to engage in antisocial behavior). This is a key question to answer so SSYI can fine tune its service array to maximize results while spending dollars wisely.

Introduction

The Safe and Successful Youth Initiative (SSYI) is a multifaceted, community-based strategy that uses a public health approach, in partnership with law enforcement, to eliminate lethal and nonlethal violence among young people, 17–24 years of age, who have already committed, and often been the victim of, gun and gang violence (i.e., proven-risk youth). Today, SSYI sites serve nearly 2,000 young people at any given time in many communities in Massachusetts: Boston, Brockton, Chelsea, Fall River, Haverhill, Holyoke, Lawrence, Lowell, Lynn, New Bedford, North Adams, Pittsfield, Springfield, and Worcester. The American Institutes for Research (AIR), in partnership with WestEd, has served as the evaluator for SSYI since 2013. AIR has authored several reports about SSYI's effectiveness at impacting violent crime and victimization at the community level. Most recently, the Massachusetts Executive Office of Health and Human Services contracted with AIR and WestEd to evaluate SSYI at the individual level of impact. Using extant data on offense history and case management records for 313 SSYI clients, the current study examines relationships between core program components and the well-being and recidivism outcomes of clients.

Literature Review

The Scope and Impact of Violent Crime

Across the United States, homicide is the third leading cause of death for all youth 15–24 years of age, and it is the leading cause of death for Black youth. Firearms are used in more than 90% of these homicides.[1] Massachusetts is no exception. From 2010 to 2019, there were 176,598 victims of violent crime in the state. These offenses included homicide, aggravated assault, and sexual assault. Youth and young adults, 16–24 years of age, were offenders in 44,379 of these violent crimes (25%).[2] With gun violence increasing in nearly every major city in the United States in 2020,[3] there is a continued need for violence prevention programming focused on reducing violent offenses among people in this age group.

Identity Development and Violence Desistance

Research in developmental psychology shows that human adolescence persists well beyond the teenage years into early adulthood. Development of the adolescent brain continues until age 25 and can be delayed or harmed by adverse childhood experiences, such as exposure to violence.[4] Therefore, violence prevention programming should consider the developmental needs and supports of youth and young adults—the programming's potential participants.

Furthermore, the developmental life course directly affects desistence from both violence and criminal offending. Most people who commit crimes desist over time. Late adolescence (18–21 years of age) is a critical period for steering the trajectories of young people involved in violence toward desistence.[5]

The literature suggests that the concepts of desistance and identity development are intimately intertwined. For an individual to move from the present self (i.e., engaged in criminogenic behavior) toward the future self (i.e., ideally a "positive possible self"), the individual might believe that the costs or consequences of the current path outweigh the potential benefits. This process may be set in motion when an individual perceives that they may, in fact, be headed down a path toward their "feared self"; that is, a future self-marked by failure across the life course that shifts individual's preferences and motivations toward non-offender behaviors and actions, and ultimately desistance.[6,7] This recognition can be realized in isolation or through targeted and individualized support. In the context of SSYI, outreach workers and case managers often set in motion the self-realization and chart the course, through holistic services, to support the client in their transformation toward the "positive possible self." Furthermore, these supportive peers and community members serve as "important sources of social capital who provide support for clients' new identities," and who identify supports and services focused on bolstering well-being through, for example, employment, education, housing, and mental health support.[8] This theoretical framing underlies assumptions of how SSYI intercedes with the crime trajectories of clients and recharts the path toward prosocial and positive individual outcomes.

What Works to Prevent and Reduce Violent Crime

Acknowledging adolescent development and desistance, a growing body of research in the violence prevention space increasingly supports the notion that violence prevention programming for youth and young adults, 16–24 years of age, should be comprehensive to include multiple types of support.[9] During the past 15 years, policies and practices have changed from a focus on police suppression to efforts that promote prevention and intervention through multisector partnerships with and without law enforcement involvement. Researchers in public health and criminology generally categorize violence prevention strategies in either a police framework or a health framework. Law enforcement agencies typically lead a police-based framework that (a) focuses on individuals or groups of people (as well as places) who are most susceptible to violence and (b) seeks to deter people through general (e.g., incarceration) or specific deterrence strategies, most notably using focused deterrence approaches.[10] Health institutions (e.g., health departments or hospitals) generally apply a health-based framework that focuses on hospital or community-based interventions to address violence. The health-based framework views violence as a health problem for those

who commit, are injured by, or even exposed to it because of the direct physical, emotional, and mental health consequences.

Community-based, multisector strategies utilize a cross-system approach to address violence through a public health lens. This strategy most often includes instrumental supports that focus on providing participants with individualized support and access to educational, employment, therapeutic, and housing opportunities.[11] Strategies often include trauma-informed recovery support services that focus on substance use disorder and mental health needs of participants. Programming efforts typically provide participants with opportunities to connect with family members, healthy peer groups, and other natural supports in communities, and parenting support is often available for both male and female participants. Unfortunately, the empirical literature to date has been stymied by methodological constraints that have largely limited findings to community-level outcomes, such as crime rates and shooting injuries. Although critical, these outcomes are downstream and lack the ability to assess individual-level outcomes over time, which, in the context of desistence theory and identity development, is important to consider because "identity transformation . . . is a slow, gradual process."[12]

To begin to address this gap, the current evaluation examines the impact of SSYI at an individual level over time. This includes how addressing progressive risks and needs can lead to improved well-being and crime outcomes.

Background and Research Questions

SSYI Background

Since its inception, SSYI has shown promise for reducing violent crime at the community level in Massachusetts. Researchers from our team evaluated the intervention's impact on community-level violent crime victimization from 2010 to 2013 in 33 cities. We examined 11 cities that received SSYI funding and 22 comparison cities with comparable rates of violent crime. The evaluation found 5.5 fewer violent crime victimizations per month in cities that received SSYI funding.[13] Using propensity score matching in 2014, our research team also found that SSYI clients were 40% less likely to be incarcerated than their comparison peers who were not involved with SSYI but had similar propensities for violence.[14] In a cost-benefit analysis that same year, we estimated that SSYI prevented violence in the two largest SSYI sites resulting in justice and healthcare benefits of just under $14 million.[15] This same analysis was extended in 2017 and we found that, from 2010 to 2016, cities with SSYI funding, compared with 32 similar cities not operating SSYI, experienced 2.1 fewer violent crimes each month per 100,000 residents after the program started.[16]

In 2020, our research team replicated this analysis to examine (a) trends in violent crime in SSYI and non-SSYI cities in Massachusetts from 2007 to 2017 and (b) the cost-effectiveness of SSYI in the context of these trends. Using program costs from 2018, results showed that each dollar invested in SSYI led to societal savings of approximately $5.10 in cities with SSYI (Exhibit 1).[17] In a related analysis within this same study, which included Criminal Offender Record Information (CORI) data for more than 800 individuals who were eligible for SSYI, individuals who were eligible but not enrolled in SSYI during the program implementation period from 2012 to 2019 experienced an 8% higher number of arraignments, on average, than SSYI clients. This difference was statistically significant.

Based on the cumulative results of these evaluations, SSYI was designated as a "promising program" in 2021 by the U.S. Department of Justice CrimeSolutions evidence review repository and the Office of Juvenile Justice and Delinquency Prevention Model Programs Guide.[ii]

Exhibit 1. Results of a cost-benefit analysis of SSYI on violent crime in SSYI-funded cities

815 fewer victims, 14–24 years of age, of violent crime annually in SSYI cities

$46,890 Average cost <u>per</u> violent crime victimization in MA

$38.2M in total annual benefits of reduced violent crime victimization

$7.5M in 2018 SSYI program costs

For every $1 invested in SSYI, SSYI cities save $5.10 in victimization costs
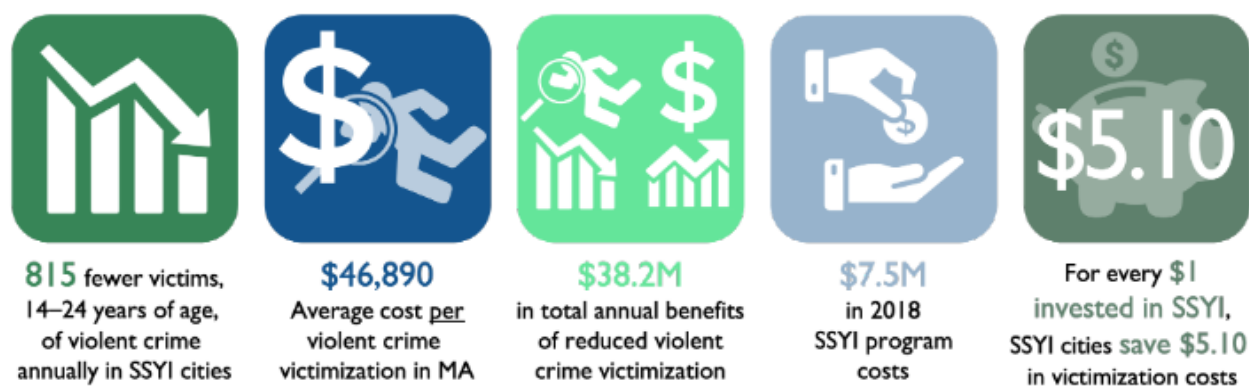
Note: For the return on investment (ROI) analysis, researchers used victimization counts instead of violent crime offenses to estimate the cost-benefit ratio. This was because crime costs in the research literature are almost always estimated based on victimization counts. Also, the victimization data were more accurate than the offense data because the researchers had to impute missing offense data for the cities of Boston and Lawrence before 2010.

Research Purpose

The SSYI theory of change (Exhibit 2) guides the current study. The research team developed this theory from our previous evaluation results described above. Although each funded site has developed unique means to implement SSYI within the context of its communities and clients, each site deploys client outreach, case management, and services targeted to meet the priority needs of each client. Outreach and case management roles are designed to work in complementary fashion during a client's stay in the program to maintain contact with and strengthen support for clients.

[ii] SSYI evidence rating and review are available at https://crimesolutions.ojp.gov/ratedprograms/717.

Exhibit 2. SSYI theory of change
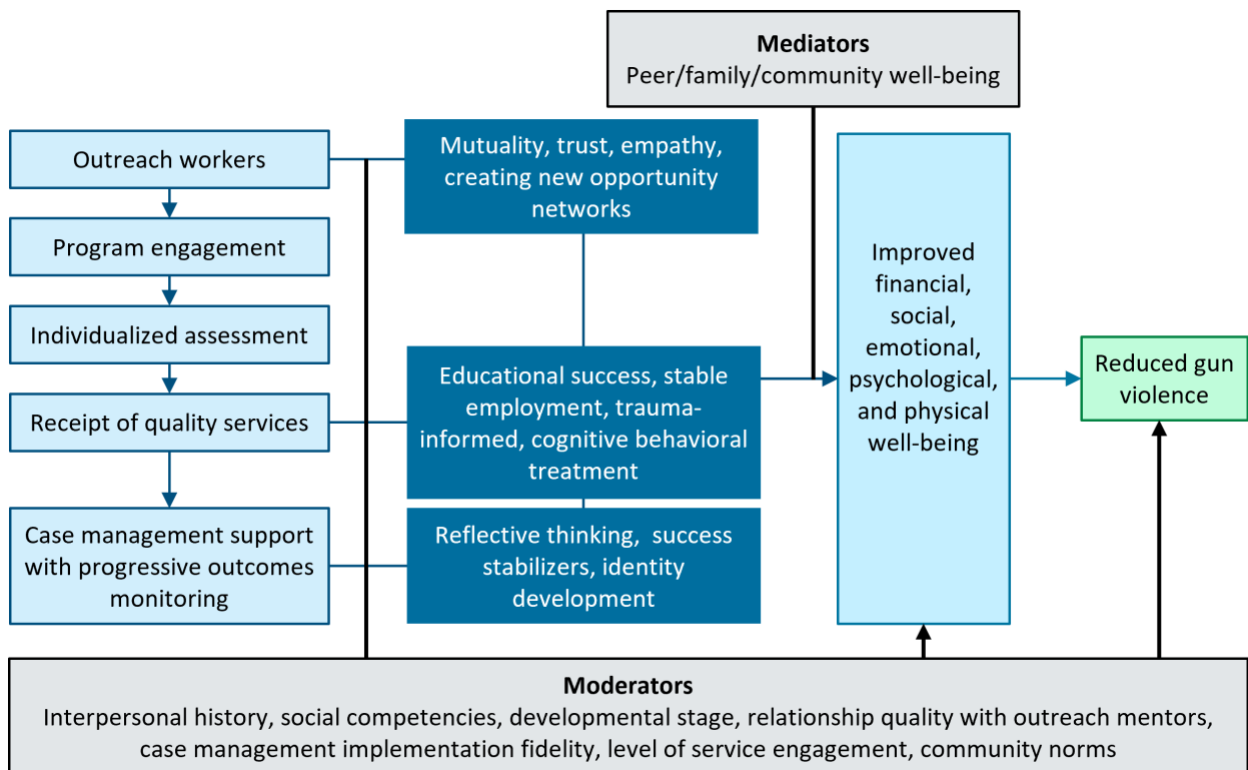
The study focused on four core research questions that are hypothesized to influence client outcomes as clients begin to engage through client outreach contact and, once enrolled, then move into case management and service engagement, leading to improved client well-being and desistance from violence and crime.

- **Research Question 1 (RQ1):** If SSYI outreach workers use an approach that is empathetic, inspires trust, and rooted in mentoring and guiding clients to take on a new identity that supports desistance from violence and crime, will clients respond more quickly to outreach or recruitment efforts and engage consistently with program staff and service providers?

- **Research Question 2 (RQ2):** If SSYI case managers use a progressive, incremental approach to meet clients where they are at, so they can accomplish goals tied to risk or need assessments and proactively support clients to get back on track when they relapse or reoffend, will clients demonstrate improved outcomes related to their targeted goals (e.g., mental health, employment, prosocial behavior)?

- **Research Question 3 (RQ3):** If SSYI programs successfully engage clients who have their priority needs addressed with high-quality and evidence-based services to meet these needs, will clients be more likely to complete their service commitments and experience improved well-being outcomes?

- **Research Question 4 (RQ4):** If SSYI clients experience improved well-being outcomes through SSYI services, will they be more likely to desist from future violence, and will community violence and victimization also decrease?

Sample

Eleven of the 14 current SSYI sites, all in Massachusetts, participated in the study. Two of the nonparticipating sites were expansion sites that were still in the program start-up phase at the time of the study or newly awarded after the study period, and one other site did not have sufficient staff capacity to participate in the study, without taking time away from direct service to clients. SSYI sites provided case management data for clients who were eligible for SSYI and were either (a) currently enrolled at the time of data collection (between May and September 2019) or (b) never enrolled, despite outreach attempts. Lifetime CORI data (including that for juvenile offenses) were obtained from the Massachusetts Department of Criminal Justice Information Services for 827 individuals who were eligible for SSYI through June 30, 2019. This dataset included individuals who were identified and engaged in SSYI services and those who were identified by SSYI sites but never engaged in the program. The CORI cases were matched to case management records provided by SSYI sites for clients who were actively or formerly engaged in program activities through September 2019. The total sample used for analysis represented 313 male clients across 10 SSYI sites (Exhibit 3). Lifetime offending histories were available for 212 of these clients.

Exhibit 3. Study sample (n = 313)

Age	Race	Immigrant	Parent	Substance Use Disorder (SUD)	Mental Health (MH) Issues	Unstable/ Unsafe Housing	Gang- Involved	Employed	GED or HS Diploma
μ 19.5 R:16– 24	51% Latino; 41% Black	8%	25%	58%	26%	79%	62%	21%	25%

Methods

Overall Approach

The current study seeks to understand the relationship between program dosage and duration and the related impacts on client well-being and recidivism. Criminal court and case management data provide the quantitative means to explore these relationships for the purpose of understanding the SSYI theory of change. Qualitative data from case managers are used to contextualize findings and deepen understanding of how SSYI influences client

outcomes. Results are shown for key research findings. The results discussed but not shown are available upon request.

Recidivism

Recidivism in the current study is defined as any technical violation (e.g., failure to appear, possessing a firearm without a permit) or new criminal offense. Per normal convention, convictions are not included in our definition of recidivism. Each offense was analyzed separately to understand the nature of the client's contact with the criminal justice system after enrolling in SSYI. Recidivism data were available through CORI for SSYI clients known to programs between July 2016 and June 2019. CORI records included lifetime offending histories through June 30, 2019. Recidivism was calculated at three points in time: between program identification and program enrollment, while enrolled in SSYI, and up to 18 months after exiting SSYI.

Program Dosage and Duration

SSYI sites provided case management records through an online data entry system developed by the research team, and from data extracts of site case management systems. Programs reported on client demographics and characteristics, as well as the frequency and amount of both outreach and case management contacts for each client. Programs also reported on level of engagement in education, employment, and mental health services, and on barriers that impeded engagement and facilitators that supported engagement.

Results

Client Offending History

Because SSYI is meant to serve individuals at "proven risk" for violence, CORI data were analyzed to determine lifetime and age-of-onset offending patterns of the subsample of 212 SSYI clients for whom CORI data and case management data were available (Exhibit 4).

Exhibit 4. Historical and age-of-onset offending patterns (*n* = 212)

Mean number of arraignments for violent and non-violent offenses through May 2019	Mean age (years) of first offense Minimum age/mode
Violent offenses: 6.24	15.65
Non-violent offenses: 19.42	11/15

Violent offenses included armed robbery, armed burglary, and any type of assault (e.g., sexual, simple, aggravated). Weapons-related offenses that did not involve an act of violence (e.g., illegal possession, probation/parole violation) were included in nonviolent offenses.

Program Dosage: Outreach

RQ1 examines the relationship between the amount and frequency of outreach with potential SSYI clients and client enrollment and retention.

Overall, most clients (54%) enrolled in SSYI after more than one month of outreach attempts by the program; slightly more than one quarter of clients (28%) enrolled between a week and a month of being contacted by outreach staff. Clients who engaged after one week tended to be younger than 21 years of age, White or Latino, and served by two SSYI sites. The majority of SSYI clients (83%) experienced contact by an outreach worker one or more times per week.

Correlation analyses examined how key outreach factors were related to each other and whether that relationship can be explained by chance alone. ***Outreach frequency (e.g., once a week, once a month) and outreach amount (count of outreach contacts) were directly related to a client's time to enrollment and eventual program participation, regardless of time to enroll*** (Exhibit 5).

Exhibit 5. Client outreach, enrollment, and retention

	Time from eligible to enrolled	Client still enrolled
Outreach frequency	.120*	.114*
	(.033)	(.049)
Total outreach amount	-.071	.252**
	.210	(.000)

* Correlation is significant at the .05 level (2-tailed). ** Correlation is significant at the .01 level (2-tailed).

Table note: The correlation coefficients (above the parentheses) in Exhibit 6 measure both the direction and the strength of the tendency of outreach and enrollment factors to vary together. A positive number indicates that as one factor increases, the related factor also increases. A negative number indicates the opposite type of relationship. The strength of the relationship increases as the correlation coefficient increases. The probability that the relationship is due to chance alone, or is random, is shown in parentheses under each correlation coefficient.

Total outreach attempts were also strongly related to client retention in the program, as clients in the top quartile of contact (80–125 contacts) were the most likely group to remain in the program (Exhibit 6). At the time of the study, client retention was an average of 18 months, and some clients stayed in the program as long as 44 months. Lower levels of outreach were related to longer time to enroll, but this relationship was not statistically significant.

The total number of outreach contacts that clients experienced correlated positively with the total number of priority risks and needs assessed after enrollment. Greater outreach frequency was related to a client being gang-involved, the client's race, and the client being identified for the program based on police-generated data.

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Several client characteristics were statistically associated with program retention, including employment needs, being older than 21 years of age, and being gang-involved (Exhibit 6). Older clients were more likely to be parents, to have been gang-involved, and to have greater employment needs and trouble with substance use. Needing help with educational services was inversely associated with substance use needs, indicating that clients who have substance use needs did not have priority needs related to education.

Exhibit 6. Client characteristics and program retention

	Client >21	Client is gang-involved	Client is a parent	Client Race	Client employment needs	Client substance use needs	Client education needs
Client still enrolled	.323**	.141*	.024	-.061	.213**	.026	.105
	(.000)	(.014)	(.681)	(.295)	(.000)	(.653)	(.069)

* Correlation is significant at the .05 level (2-tailed). ** Correlation is significant at the .01 level (2-tailed).

Table note: The correlation coefficients (above the parentheses) in Exhibit 7 measure both the direction and the strength of the tendency of outreach and enrollment factors to vary together. A positive number indicates that as one factor increases, the related factor also increases. A negative number indicates the opposite type of relationship. The strength of the relationship increases as the correlation coefficient increases. The probability that the relationship is due to chance alone, or is random, is shown in parentheses under each correlation coefficient.

Program Dosage: Case Management

RQ2 explores (a) the experiences of clients after they enroll in the program and (b) clients' interactions with case managers who assess the needs of clients, identify and support the goals of clients, and serve as a consistent touchpoint between clients and the SSYI program.

Meeting frequency with case managers was inversely related to increased outreach frequency (-.356 correlation), and this relationship was statistically significant (.000 probability of chance at the 99% confidence level) indicating that outreach workers and case managers may perform in a complementary manner when engaging with SSYI clients, or some sites may use outreach workers and case managers interchangeably.

When examining the frequency of case management contact based on level of risk or need, results indicate that ***SSYI clients were more likely to meet more often with case managers when the client was assessed at greater need.*** However, even clients assessed to have fewer needs still met more frequently with case managers than did clients who were not assessed for risks and needs at all (Exhibit 7).

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Exhibit 7. Client characteristics and contact with case managers

Characteristic	Case management meeting frequently
Parent	-.003
Race	-.006
Immigrant	.119
Crime-related needs	-.131* (.020)
Education needs	.189** (.001)
Substance use needs	-.192** (.001)
Mental health needs	.209** (.000)
Employment needs	-.044
Peer/family relationships needs	.030
Housing needs	-.018
Age	-.091

* Correlation is significant at the .05 level (2-tailed). ** Correlation is significant at the .01 level (2-tailed).

Table note: The correlation coefficients (above the parentheses) in Exhibit 8 measure both the direction and the strength of the tendency of outreach and enrollment factors to vary together. A positive number indicates that as one factor increases, the related factor also increases. A negative number indicates the opposite type of relationship. The strength of the relationship increases as the correlation coefficient increases. The probability that the relationship is due to chance alone, or is random, is shown in parentheses under each correlation coefficient.

Several client characteristics beyond those shown in Exhibit 8 affected the frequency of meetings between clients and their case managers, including consequences around the client's past criminal involvement, immigrant status (inverse relationship), and risk or need priorities that focused on substance use disorders (positive relationship) and education (inverse relationship). ***These results suggest that some circumstances—such as working through court-related issues, expunging criminal records, or ongoing relapse and recovery from substance use—require case managers to provide more support and spend more time with clients.***

Most clients (62%) met with case managers, either virtually (e.g., text, phone) or in person, one to four times per month, with more than one quarter (29%) meeting with case managers one or more times per week. The majority (87%) of meetings with case managers lasted one hour or less. On average, clients met with their SSYI case managers 111 times during their time in the program. Some clients who were in the program for several years met with their case manager as many as 800 times.

Program Dosage: Well-Being Services

RQ3 examines the assumption that if SSYI outreach is effective and clients meet regularly with case managers to have their priority needs met, then clients will demonstrate greater engagement in well-being services.

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The overall level of clients' engagement in services was directly related to their total amount of contact with outreach workers and case managers. Having a case plan with goals and objectives for clients was statistically related to greater levels of contact with outreach workers and case managers (Exhibit 8).

Exhibit 8. Client level of engagement in services and programmatic characteristics

	Outreach frequency	Total outreach contacts	Total number of case manager meetings	Case manager meeting frequency	Case manager meeting duration	Case plan with goals	Risks and needs assessed
Engaged in services	-.114* (.045)	.643** (.000)	.697** (.000)	.239** (.000)	.179** (.001)	.114* (.043)	.003 .963

* Correlation is significant at the .05 level (2-tailed). ** Correlation is significant at the .01 level (2-tailed).

Table note: The correlation coefficients (above the parentheses) in Exhibit 9 measure both the direction and the strength of the tendency of outreach and enrollment factors to vary together. A positive number indicates that as one factor increases, the related factor also increases. A negative number indicates the opposite type of relationship. The strength of the relationship increases as the correlation coefficient increases. The probability that the relationship is due to chance alone, or is random, is shown in parentheses under each correlation coefficient.

Dosage of services was assessed based on the level with which clients engaged in each SSYI service and overall, across all SSYI services. Using case records, case managers reported on whether the client was not at all engaged, engaged a little, or engaged a lot in each service. Because specific SSYI services may vary by site, this study assessed the services that all SSYI sites are required to offer as core components—employment, education, and mental health supports—as mandated through their funding agreements with the Commonwealth of Massachusetts.

Several client characteristics were correlated with level of engagement in services. Duration in the program and employment needs were most strongly related to greater level of engagement. ***Clients who reported substance use disorders, gang involvement, or multiple risk or need priorities were more likely than other clients to show greater levels of engagement in SSYI services*** (Exhibit 9).

Exhibit 9. Level of engagement in services and client characteristics

	Age	Parent	Race	Substance use needs	Mental health needs	Education needs	Employment needs	Gang-involved	Multiple risk/need priorities
Level of engagement in services	-.019	.060	.194**	.166**	.089	.047	.259**	.146**	.156**

* Correlation is significant at the .05 level (2-tailed). ** Correlation is significant at the .01 level (2-tailed).

Table note: The correlation coefficients in Exhibit 10 measure both the direction and the strength of the tendency of outreach and enrollment factors to vary together. A positive number indicates that as one factor increases, the related factor also increases. A negative number indicates the opposite type of relationship. The strength of the relationship increases as the correlation coefficient increases.

Program Outcomes: Recidivism

RQ4 assumes that if SSYI clients experience improved well-being outcomes (e.g., economic, physical, psychological) through SSYI services that also support noncriminogenic identity development, then they will be more likely to desist from future violence. In turn, community violence and victimization will decrease because SSYI targets the small group of individuals who are committing the majority of violence in each SSYI city.

Client Recidivism

Recidivism data were analyzed during three time periods for the 313 clients in the study:

1. Between identification and enrollment in SSYI (203 clients)

2. While enrolled in SSYI (140 clients)

3. Up to 18 months after exiting SSYI (55 clients)

As shown in Exhibit 10, ***the most typical SSYI clients did not have any recidivism events during their enrollment in SSYI, and recidivism events declined as clients remained engaged in the program.*** Recidivism was correlated across time periods, suggesting a core group of clients was reoffending within each period, as opposed to a completely unique or different group of clients offending during each period. Prior history of nonviolent offending was related to recidivism just before enrollment and once enrolled, while prior history of violent offending was correlated with recidivism after program exit. This result suggests that early recidivism might be tied to technical violations stemming from earlier violent offenses that made clients eligible for SSYI, but recidivism after leaving the program might be tied to new criminal offenses. Individuals with substance use needs and a greater number of needs overall (e.g., mental health, employment, housing, education, substance use) were the most likely groups to recidivate while enrolled in SSYI. Being a parent was inversely related to reoffending (e.g., parents were less likely to reoffend), but the relationship was not statistically significant.

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Exhibit 10. Client recidivism over time

	Clients recidivating between identification and enrollment (N = 203)	Clients recidivating while enrolled in SSYI (N = 140)	Clients recidivating within 18 mos. of exiting SSYI (N = 55)
	46%	11%	20%
	Clients recidivating between identification and enrollment	Clients recidivating while enrolled in SSYI	Clients recidivating within 18 mos. of exiting SSYI
Clients recidivating between identification and enrollment	-	.323** (.000)	.258** (.000)
Clients with Substance Use Needs	.010 (.893)	.145* (.043)	-.024 .744
Clients with Multiple Needs	.160* (.030)	.191** (.010)	.017 (.816)

* Correlation is significant at the 0.05 level (2-tailed). ** Correlation is significant at the 0.01 level (2-tailed).

Table note: The correlation coefficients (above the parentheses) in Exhibit 11 measure both the direction and the strength of the tendency of outreach and enrollment factors to vary together. A positive number indicates that as one factor increases, the related factor also increases. A negative number indicates the opposite type of relationship. The strength of the relationship increases as the correlation coefficient increases. The probability that the relationship is due to chance alone, or is random, is shown in parentheses under each correlation coefficient.

SSYI Core Components and Recidivism

The total number of contacts between clients and outreach workers and the total number of meetings between clients and case managers were each inversely related to recidivism after program exit, and these relationships were statistically significant (Exhibit 11). These results suggest that clients exposed to greater contacts with outreach workers and greater numbers of meetings with case managers are less likely to recidivate after they leave the program.

Exhibit 11. Outreach and case management relationship with post-program recidivism

	Total number of outreach contacts	Total number of case management contacts
Clients recidivating within 18 mos. of exiting SSYI	-.177* (.012)	-.148* (.035)

* Correlation is significant at the .05 level (2-tailed). ** Correlation is significant at the .01 level (2-tailed).

Table note: The correlation coefficients (above the parentheses) in Exhibit 12 measure both the direction and the strength of the tendency of outreach and enrollment factors to vary together. A positive number indicates that as one factor increases, the related factor also increases. A negative number indicates the opposite type of relationship. The strength of the relationship increases as the correlation coefficient increases. The probability that the relationship is due to chance alone, or is random, is shown in parentheses under each correlation coefficient.

The more services clients engaged with, the less likely they were to reoffend after leaving SSYI. There was an inverse relationship between engagement in multiple SSYI services and recidivism, and this relationship was statistically significant. Except for mental health services, participation in programming was significantly related to a lower recidivism (Exhibit 12).

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Exhibit 12. Service engagement and recidivism after leaving SSYI

	Engagement in >1 service	Engagement in education services	Engagement in job training services	Engagement in job placement services	Engagement in mental health services
Recidivism after exiting SSYI	-.142* (.022)	-.144* (.020)	-.117* (.048)	-.121* (.043)	-.077 (.138)

* Correlation is significant at the 0.05 level (1-tailed).

Table note: The correlation coefficients (above the parentheses) in Exhibit 13 measure both the direction and the strength of the tendency of outreach and enrollment factors to vary together. A positive number indicates that as one factor increases, the related factor also increases. A negative number indicates the opposite type of relationship. The strength of the relationship increases as the correlation coefficient increases. The probability that the relationship is due to chance alone, or is random, is shown in parentheses under each correlation coefficient.

When examining the overall effect of individual- and program-level factors, regression analyses indicated that history of past offending *and prior* violent offenses were the strongest predictors of client recidivism. This result is consistent with prior research.[18] However, ***recidivism could not be explained by prior history of offending alone.*** The total number of outreach contacts and case manager contacts with clients, and the client's engagement score added more explanatory strength to the statistical model and were all inversely related to recidivism*. **These results suggest that more outreach and case manager contact with clients, and greater engagement in services, are related to lower client recidivism*** (Exhibit 13).

Exhibit 13. Recidivism and client/program factors within 18 months of program exit

Predictor	Model 1 Beta	Model 1 p-value	Model 2 Beta	Model 2 p-value	Model 3 Beta	Model 3 p-value
Number of arraignments data (lifetime)	.255	.000				
Number of arraignments (lifetime)			.243	.000		
Total number of outreach contacts			-.159	.020		
Number of arraignments (lifetime)					.261	.000
Total number of outreach contacts					-.202	.004
Total number of case manager contacts					-.160	.023
Engagement in SSYI services overall					-.142	.043
R^2		.065		.090		.113

Table note: The beta coefficient shown in Exhibit 14 compares the strength of the effect of each individual independent variable (e.g., number of arraignments) to the dependent variable (e.g., recidivism). The higher the absolute value of the beta coefficient, the stronger the effect. The probability that the relationship is due to chance alone, or is random, is shown as the p-value, next to the beta coefficient. The R^2 result measure the goodness of fit of the statistical model, or how well the variables in the model account for observed changes in the dependent variable, in this case, changes in recidivism. Exhibit 14 shows that the model fit improves as SSYI program variables are added to the equation predicting changes in recidivism.

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Client Successes and Barriers

The research team analyzed the content of open-ended questions answered by case managers, focusing specifically on client successes and barriers. Due to the optional nature of the open-ended questions, response rates were low (16–67 responses per question). However, the responses provide insight into clients' experiences with the SSYI program. Case managers were asked to respond to two questions about client successes and barriers:

1. How would you characterize the degree of success this participant has had taking advantage of what the SSYI program has to offer?

2. What are or were the most prominent barriers this participant faced or is still facing in SSYI?

Client Successes

- Client success was associated with gaining employment, furthering education, being a good parent, improved mental health, and having access to stable housing.

- Clients often demonstrated success across multiple well-being domains, such as education and employment.

- Client success was associated with several factors related directly to the SSYI program, including interactions with program staff and job training.

- Case managers noted individual-level factors that encouraged success, such as positive changes in clients' peer groups and personal motivation.

- Case managers often recognized multiple success factors for each client.

Client Barriers

- Barriers to success included clients' social circles and gang involvement; lack of commitment or motivation, employment, housing, or education; and parenting, mental health, and drug problems.

- Case managers noted overlaps between different barriers that clients needed to overcome, such as employment and housing.

Discussion

The SSYI approach had previously demonstrated positive impacts on community levels of violent crime in cities using the intervention. The current study indicates that SSYI also impacts client recidivism, which likely influences community levels of crime, given that SSYI clients are targeted specifically for their persistence in offending and their propensity for future involvement in violence. The findings of the current study deepen the understanding of SSYI's

impact at an individual level: Recidivism decreased over time as youth moved from pre-enrollment outreach to early engagement to full enrollment in the program, and only 20% of clients who left the program recidivated within 18 months after leaving the program, which is substantially lower than reported rates of recidivism for violent offending.[19,20] Notable client characteristics related to program engagement also surfaced that may be important for implementation staff to consider moving forward. Specifically, clients were more likely to remain engaged in the program if they:

- had employment needs,
- were older than 21 years of age (who also were more likely to be parents than younger clients), or
- were gang-involved.

For clients enrolled in SSYI, engaging in services varied by risks and needs. For example, gang-involved clients were more likely to have greater employment needs than clients not gang-involved, and employment needs overall were most strongly related to engagement in services. Furthermore, clients who had substance use disorders, were gang-involved, or were assessed to have multiple risk or need priorities were the most likely groups to show greater levels of engagement in SSYI services overall, including employment services.

Finally, findings demonstrate that, consistent with the theory of change, several programmatic characteristics are statistically related to overall level of engagement in services. Most notably, clients with a case plan that included individualized goals and objectives had the most frequent contact with outreach workers and case managers, and the total amount of contacts with outreach workers and case managers was associated with a greater overall level of engagement in services.

Although overall recidivism was best explained by prior, lifetime history of offending—an expected result based on the broader criminological research—contact with outreach workers and case managers and engagement in multiple SSYI services added predictive value to the estimate of recidivism. This result confirms that core SSYI services can counteract the influence of prior involvement with the criminal justice system on future client recidivism. Although client engagement in mental health services was not statistically related to recidivism outcomes, previous evaluations of SSYI suggest that this result may derive from lack of local availability or access to mental health services, rather than from services being ineffective for those receiving support.

Limitations

Recidivism is most reliably measured 2 years after an intervention experience. Although this study's results showing low recidivism 18 months after program exit are encouraging, it would

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be important to follow up on these cases to determine whether desistance was sustained over a longer period. Also, data on recidivism were not available for all clients served by the program because such data were not always complete within sites. Ten of the 11 sites in the study contributed at least partial data on recidivism, providing an opportunity to examine short-term recidivism estimates overall. However, additional data are needed to determine the extent, if so, to which site-specific variations for recidivism outcomes exist over time.

Service engagement is one area where case managers may not have had complete access to information, particularly if the services were delivered outside of the SSYI site—which is sometimes the case. Related to this point, this study did not have the means to measure the quality of services or the degree to which a client's actual well-being improved. There is anecdotal reason to believe that client well-being is improving while in the program, based on previous client survey results and information gleaned from site interviews and document reviews,[21] but this information was not available for clients included in the current study.

Implications for Policy and Practice

The study's results indicate that it takes time for SSYI clients to get their footing in the program and in the process of desisting from violence and crime. Furthermore, older clients, those who are gang-involved, and those seeking legitimate employment are more likely than other clients to stick with the program and have positive results. This finding is consistent with other research on desistance from gang-offending in particular, where it takes time for individuals to reframe their identities and the future they want away from the gang and criminal lifestyles. It appears evident that outreach workers and case managers may serve as a form of social capital for engaging prospective SSYI clients with positive social networks and prosocial supports and services. Furthermore, a strength of SSYI is allowing clients to stay in the program as long as they need, up to a maximum of 24 years of age. This unique aspect of SSYI participation might be important for producing the results seen in this study, as suggested in previous evaluations of SSYI as described earlier in this report.

Having a case plan with clear goals and objectives and assessing needs were associated with greater engagement and success in the program. However, the practice was not consistent across SSYI sites, and recidivism results might be strengthened with more uniform use of these practices across sites. Across the board, contact with outreach workers and case managers appeared to strongly influence a client's engagement in the program and reduce offending. Although this study could not measure the quality of those relationships, the relationship appears to be essential for bringing clients into SSYI, keeping them engaged as they find their unique paths to desistance, and leading to lower rates of recidivism after clients exit the program. Although employment supports were the single most used type of SSYI service, engagement in multiple services had stronger statistical relationships with greater contacts

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with outreach workers and case managers and lower recidivism. Engaging in multiple services may keep clients busy and engaged in prosocial activities, so they have fewer opportunities to fall back into past antisocial behavior and peer relationships, or the relationship strength between clients and outreach workers and case managers may drive the client's desire to stick closer to the program and engage in multiple activities.

Although having the case management and offending histories of more than 200 SSYI clients was sufficient for statistical analysis, this number represents only a fraction of the thousands of clients served by the program each year. SSYI programs could benefit from having access to user-friendly, mobile, online tools that allow outreach workers and case managers to document their essential work. With access to such tools, SSYI sites could better understand clients, improve programming, and contribute to evaluation studies that examine program impact.

Future Research

This study partially supported the SSYI theory of change, in that relationships between clients and outreach workers and case managers appear to drive the behaviors of clients to enroll in the program, engage in services, and stay in the program.

Although this study shows the critical importance of frequent contact between clients and their outreach workers and case managers for engaging clients in the program and services and for impacting recidivism, data are not available from these cases on the quality or evolution of these relationships over time. From related work, survey and anecdotal information suggest that a mentor-like relationship is the glue that connects clients and SSYI staff, but that information comes from a different sample of SSYI clients and could not be credibly tied to the current analysis. Future research is needed to understand in greater detail how program practices influence these relationships and the resulting impact on client outcomes.

Similarly, the study found that clients older than 21 years of age have the greatest success in the program and appear to engage most frequently with outreach workers and case managers. Understanding the desistance pathway for younger clients in SSYI will be important for maximizing violence reductions in each city because younger clients will have more years ahead of them to reoffend if prevention efforts are unsuccessful.

The more SSYI services in which clients engage, the stronger the recidivism prevention outcome becomes, but after controlling for previous offense history, no single service on its own was related to reduced recidivism. This result begs the question of whether the services themselves are tied to behavior changes or accrue from collateral benefits from engagement (e.g., developing new peer networks, learning prosocial behaviors, having less free time to engage in antisocial behavior). This is a key question to answer for the Commonwealth of Massachusetts to understand so it can fine-tune the SSYI service array to maximize results while

spending dollars wisely. Related to this, understanding the relationship between improved well-being and reduced recidivism is vital to deepening the prevention pathways for those eligible for SSYI, while perhaps pointing to earlier intervention with other youth.

Two previous SSYI studies, which were discussed earlier in this report, found that individuals who were never identified for the program, but who were otherwise eligible, were 40% more likely to be incarcerated than SSYI clients. They experienced a higher number of arraignments, by 8% on average, than SSYI clients. This difference was statistically significant. Although these results support claims of SSYI's effectiveness, the ultimate means to assess SSYI's impact would be an experimental study that controls for unobserved factors that might explain why similar groups of people, both eligible for SSYI, have different recidivism outcomes when one group experiences SSYI and the other does not. It is understandably difficult to justify randomly assigning participants to receive or not receive an intervention, such as SSYI, because the potential benefit of enrolling could literally be the difference between life or death for the participant or other community members. Given the promise of SSYI, its unique approach as a community violence intervention that addresses root causes and does not rely on police suppression, and the rising tide of urban violence sweeping the nation, innovative strategies should be explored to ethically randomize participants or SSYI services and produce research results that can be reliably generalized to other communities grappling with gun violence.

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