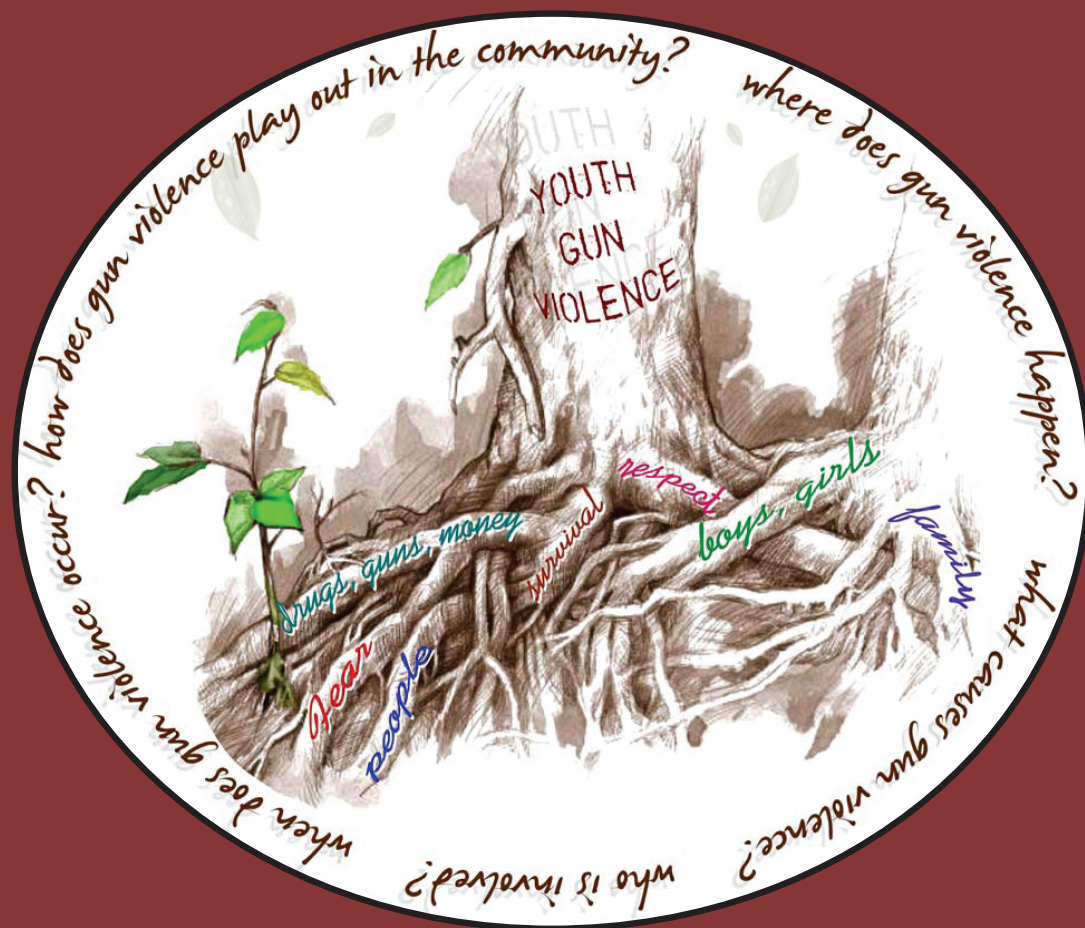


ROBERT WOOD JOHNSON CLINICAL SCHOLARS PROGRAM YALE UNIVERSITY SCHOOL OF MEDICINE

QUANTITATIVE EVALUATION OF THE NEW HAVEN FAMILY ALLIANCE
STREET OUTREACH WORKER PROGRAM



October 2009

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**A Quantitative Evaluation of
The New Haven Family Alliance Street Outreach Worker Program**

Background and Introduction

As the second leading cause of death among 10 to 24-year-olds in the United States,¹ youth violence is widely regarded as a significant public and community health issue. In addition to the deaths, disabilities, and personal costs associated with youth violence, it has been linked to higher health care costs, decreased property values, and disrupted social services, affecting the health of neighborhoods and communities nationwide.²

In New Haven, youth gun violence remains one of the city's most pressing health concerns. Between 2005 and 2008, over 500 people were victims of shootings in New Haven, 25 of whom were youth between the ages of 10 and 24 years.³ Although the percentage of homicide victims in New Haven 18 and under has dropped from 25% in 2006⁴ to 4.5% in 2008,³ youth violence continues to be an urgent concern for city officials, police, and residents alike. Since 2007, numerous efforts including gun policy, police action, community-based conflict resolutions, mediations, mentoring, and job opportunities have been launched to combat this epidemic of youth violence, and they continue to evolve to reflect city officials', community agencies', and other stakeholders' understanding of youth gun violence in New Haven.

The Street Outreach Worker Program (SOWP) is a private and publicly funded,* city-administered, community-based youth gun violence prevention initiative based out of the New Haven Family Alliance (NHFA), a non-profit agency whose mission is to improve the quality of life for all families in New Haven. Launched in July 2007, the SOWP aims to reduce gun violence in New Haven among youth aged 13 to 24 years through outreach, education, advocacy, and mentoring interventions as well as working to change community norms around youth gun violence. The SOWP is based on similar programs in Providence, Chicago, and Boston but has been adapted to the needs and resources of New Haven.

The eight Street Outreach Workers (SOWs), 75% of whom have been in the position for more than a year, work with youth at "high-risk" of gun violence on the street, in schools and in the NHFA offices. The senior case manager at NHFA leads life-skills classes and the SOWs interact with youth on a daily basis during the day and during the night including preventing or de-escalating potentially violent situations. SOWs also engage youth in a range of activities that get them out of their neighborhoods, expose them to life outside New Haven, and provide positive pro-social outlets and interactions. This includes a summer youth basketball league, engagement in the dramatic arts, and field trips. Both the life skills classes and the

* Funded by a Consortium of local funders including Casey Family Services, Community Foundation of Greater New Haven, Empower New Haven, New Alliance Foundation, State of Connecticut, United Way of Greater New Haven and Yale University.

SOW engagement of youth are intended to provide alternative means for problem solving, conflict mediation, and demonstrating respectful behaviors. When their youth clients need such services, the SOWs interventions and services include helping youth obtain jobs, providing educational supports, meeting youth's basic needs, resolving conflicts, and providing court advocacy. Initially, youth were referred to the program by the New Haven Police Department (NHPD); however, referral sources have since expanded to include the school system, probation/parole departments, NHPD district managers, community agencies, and the families of youth.

In May 2009, the NHFA Executive Director approached the Yale Robert Wood Johnson Clinical Scholars Program (RWJCSP) to perform a quantitative evaluation of youth outcomes for the SOWP. This evaluation follows two qualitative reports conducted jointly by the NHFA and the RWJCSP, namely a photovoice project⁵ to elicit the views and perspectives of selected youth engaged in the SOWP and a participatory evaluation of the evolving SOWP from the perspectives the NHFA administration, SOWs, and the youth themselves⁶. Both reports include findings and recommendations and have been distributed to city officials and funders.

The purpose of the present study was to supplement the findings of the qualitative reports with quantitative results. Our aims were threefold:

- 1) To summarize the outcomes of youth who have participated in the program
- 2) To examine associations between various sociodemographic and baseline characteristics with program participation
- 3) To examine the relationship between program participation levels and outcomes

Methods

Research Design

We utilized a retrospective study design to characterize the participation and outcomes of youth that had been referred to the SOW program. All data were collected or abstracted from client files after all outcomes had occurred. Members of both the NHFA and RWJCSP were involved in data collection; however, data analysis and interpretation was done independently by the RWJCSP to ensure the objectivity of the results.

Participants

We began with all youth who had been referred to and/or participated in the SOW program as of July 2009 (N=476). Appendices A and B provide a flow chart on the inclusion of youth for the analysis. For the purposes of this study, we considered eligible participants to be all youth who:

- 1) Were aged 14-24 years;
- 2) Had provided correct contact information allowing for follow-up;
- 3) Had not been incarcerated immediately after referral;
- 4) Had agreed to participate in at least one component of the SOW program;
- 5) And were considered at high-risk for participation in youth gun violence by their parents, their school, or the police.

Although we attempted to collect data on all eligible youth (N=361), we could not locate 60 youth. As such, analyses were limited to 301 youth for whom both program-related data and outcomes could be determined.

Youth were divided into two cohorts based on the source of their referral and their time of entry into the program. The NHPD cohort (N=51 for this report) includes those youth who had been identified in 2007 by the NHPD as youth at high-risk for gun violence, had completed outcome data, and had served as the original target population for the SOWP. Initially, there were 142 youth referred by the NHPD for the program; however, 15 did not meet the age requirements, 16 had been immediately incarcerated, 8 refused to participate, 1 moved out of state, 2 were deemed not at high-risk, 32 provided an incorrect address, and we were unable to obtain outcome data on 17 youth. Appendix A shows how we arrived at the 51 NHPD referrals used for analysis. The other referral cohort, referred to as the community referrals cohort (N=251), contains all youth who were subsequently referred from the school system, community agencies, NHPD district managers, parole department or families as well as those followed by the SOWP after the initial NHPD-referred cohort.

Data Collection

Data collection involved two components: 1) abstraction of socio-demographic characteristics and baseline goals from files of the youth, and 2) active follow-up of all youth to determine program participation and outcomes as of June 2009.

File abstraction occurred at NHFA and was conducted by a trained member of the research team (EB). Both intake and referral forms were used to collect socio-demographic information about the youth and their baseline goals. SOWs typically complete intake forms at the first contact with youth prior to placing them into classes or signing them up for activities. These forms query youth about their age, race, ethnicity, living arrangements, current involvement in school, current involvement in work, and motivations for joining the program. In particular, the variables abstracted for these analyses included the youth's gender, race, age at baseline, family income level, head of household, intake date, neighborhood/district, school participation, referral source, and goals for the program including employment, school, redirection, recreational activities, and counseling.

To determine youths' outcomes and their level of participation in the program, the research team designed an Outcomes Collection Form (Appendix C) for the SOWs to complete as they followed up youth in the program. This form queried SOWs about youths' primary outcome as of June 2009, outcomes in the past year, involvement with violence and the criminal justice system since joining the program, and participation in the various components of the SOW program.

The primary outcome as of June 2009 was defined as the youth's primary activity or status at that time: school, employment, incarceration, unemployment, death, other. In contrast, multiple outcomes could be selected for the question inquiring about outcomes in the past year as well as the question inquiring about youths' involvement with violence and the criminal justice system.

Youth involvement in the SOW program was assessed by inquiring about each aspect of the program: the life-skills classes, activities and field trips, the number of street contacts, involvement in street interventions/mediations, and court advocacy. Although we examined the relationship between each of these program components

and outcomes separately, we also created a separate “program engagement” variable to characterize youth who had fulfilled the expectations of the program. Engagement was defined as either 1) successful completion of the life skills class, or 2) participation in program activities or greater than 15 street contacts with SOWs.

Outcome forms were completed by the SOW supervisor and the SOWs using several methods including client files, SOW recall, direct inquiry on the street, phone calls to youth and their relatives, and contacting various other youth advocates.

All data entry was done at NHFA by a trained member of the research team (EB) to ensure confidentiality and consistency of entry. Before removing the database from NHFA for analytic purposes, all names, addresses, and other personal identifiers were removed from the database, and each youth was assigned a unique sequence ID.

Statistical Analyses

All analyses were performed using the SAS statistical software package (version 9.1, SAS Institute Inc., Cary NC) by a trained member of the research team (EB). Baseline data and outcomes were summarized using descriptive characteristics and univariate analyses and are reported both overall and by cohort. Given the small sample size of the NHPD cohort, we chose to combine the NHPD and the community referral cohort derived from other referral sources to examine the association between baseline characteristics, program involvement, and outcomes.

Bivariate analyses were used to compare the distribution of primary outcome and outcomes in the past year across socio-demographic groups and levels of program involvement. Chi-squares and Fisher’s exact tests were used to test the significance of these associations. Lastly, we compared the outcomes of youth who had met the engagement criteria with those who had not.

Results

Description of Sample

As of July 2009, a total of 476 youth have been referred to the New Haven SOW program. Of these youth, 361 were eligible for participation in this study, and outcomes were obtained for 301 youth (Appendices A and B, Table 1) The majority of youth were male (71.2%) and between the ages of 14-18 (63.3%). Fair Haven had the greatest representation of youth in the program (27.3%), followed by Hill North (19.7%), Dixwell (15.9%), and Dwight (14.4%) neighborhoods. The majority of youth were attending school at the time of intake (60.8%). Most youth came from families with female heads of household (82.2%) and almost half had no income to very low income levels (48.9%), using federal poverty guidelines. Compared to the community referral cohort, the NHPD cohort had a greater proportion of males and a greater proportion of African Americans, but was comparable to the community referral cohort with respect to other baseline factors.

Almost half of all youth involved in the program participated in and completed the life skills class (46.8%) (Table 2). The majority of youth (61.8%) participated in at least one SOW-organized activity or field trip, and most youth (59.5%) had greater than 15 contacts with their SOW on the street since joining the program. Sixty-two percent of youth met the engagement criteria as defined as either: 1)

successful completion of the life skills class or 2) participation in program activities or greater than 15 street contacts with SOWs.

For the majority of youth (52.2%) attending school was the primary activity in June 2009; an even greater percentage (63.8%) attended school in the past year (Table 3). Similarly, although employment was the primary activity in June 2009 for only 7.3% of youth, 39.2% held a job at some point in the last year. In June 2009, 18.6% of youth were incarcerated, 18.6% were unemployed, and three youth (1.0%) had been killed since joining the program. Almost 40% of youth spent time in prison and 13% had been victims of shootings since joining the program. Compared to the community referral cohort, the NHPD cohort spent more time in prison: (58.8% vs. 36.0%), were more often a victim of shooting: (35.3% vs. 8.8%), spent time in court for violent crimes: (47.1% vs. 25%) and nonviolent crimes: (70.6% vs. 47.6%).

Bivariate Analyses

The purpose of the bivariate analyses was to characterize the relationship between various sociodemographic characteristics, program involvement, and outcomes.

Sociodemographic Characteristics and Baseline Goals

Characteristics that were associated with attending school as a primary outcome in June 2009 were female gender (60.0% vs. 49.1% for males, $p=0.005$ for trend), age 14-18 (63.0% vs. 31.4% for ages 19-24, $p<0.001$), and attending school at baseline (74.2% vs. 20.0% for youth not attending school, $p<0.001$) (Table 4). When examining outcomes over the past year, however, females and males had comparable rates of school attendance (70.6% and 61.1%, $p=0.124$) (Table 5).

Characteristics associated with incarceration as a primary outcome in June 2009 were male gender (15.9% vs. 5.9% for females, $p=0.005$) and lack of school attendance at baseline (26.3% vs. 13.7% for attending school at baseline, $p<0.001$) (Table 4). When examining outcomes in the past year characteristics associated with incarceration still included males (40.3% vs. 11.8% for females, $p<0.001$) and lack of school attendance at baseline (43.8% vs. 25.8% for school attendees, $p=0.008$) (Table 5).

Youth who had attended school at baseline were also more likely to be employed in the past year (46.8% vs. 30.0%, $p=0.017$) and less likely to be incarcerated in the past year (25.8% vs. 43.8%, $p=0.008$).

There was no association between neighborhoods and school attendance or neighborhood and incarceration. Although youth from families with more income were more likely to have attended school in the past year ($p=0.009$ for trend), there was no association between family income level and employment or family income and incarceration overall outcome (Table 5). Neither client goals nor referral source were associated with any of the outcomes.

Program Involvement

Participation in the life-skills classes was highly associated with both overall and past year outcomes. Youth who participated in the life skills program were more likely to attend school in June 2009 (70.9% v 35.6% $p<0.001$) and less likely to be incarcerated (8.5% v 27.5% $p<0.001$) ($p<0.001$) (Table 4). Youth who participated in the life skills program were also significantly more likely to have attended school

(78.0% vs. 51.3% for non-participants, $p < 0.001$) or been employed (56.0% vs. 24.4%, $p < 0.001$) in the past year and significantly less likely to have been incarcerated (15.6% vs. 46.9%, $p < 0.001$) in the past year (Table 5). Similarly, youth who participated in program activities and field trips were more likely to have attended school in the past year (76.3% vs. 43.5% for non-participants, $p < 0.001$) and been employed in the past year (47.3% vs. 26.1%, $p < 0.001$); however, they were no less likely to have been incarcerated in the past year (30.1% vs. 35.7%, $p = 0.317$).

The number of street contacts was positively associated with school attendance and employment in the past year, but was not associated with the proportion of youth who had been incarcerated in the past year. As the number of street contacts increased, the percentage of youth who had been in school during the past year increased in a nearly linear fashion. The relationship between past year employment and street contacts was less well-defined, however, there were clear differences between youth who had fewer than 10 contacts and those with 11 or more: whereas only 23.8% of youth with 0-5 contacts and 20.0% of youth with 6-10 contacts were employed in the past year, nearly 47% of youth with greater than 11 contacts had been employed.

Neither emergency street contacts nor court advocacy was associated with school attendance or employment, but both were highly associated with current and past year incarceration. Compared with youth who had not required emergency street contacts, youth who had received these emergency interventions were more likely to have been incarcerated in the past year (35.6% vs. 16.7%, $p = 0.007$). Similarly, a greater proportion of youth who had received court advocacy services from the SOW program had been incarcerated compared to those who had not required these services (46.1% vs. 20.0%, $p < 0.001$).

For outcomes as of June 2009, youth who met the engagement criteria, compared to youth who did not meet engagement criteria, had a greater percentage in school (69.4% vs. 20.0%) and fewer incarcerated (9.7% vs. 35.2%) or unemployed (9.2% vs. 36.2%) ($p < 0.001$) (Table 6). Similarly, in the past year, those engaged youth were significantly more likely to have attended school (79.1% vs. 35.2%, $p < 0.001$) and been employed (52.6% vs. 14.3%, $p < 0.001$) and significantly less likely to have been incarcerated (19.4% vs. 56.2%, $p < 0.001$). Youth who were engaged in the SOW program were significantly less likely to be victims of shootings (6.6% vs. 25.7%, $p < 0.001$) and to have spent time in court for either a violent (21.9% vs. 41.9%, $p < 0.001$) or nonviolent crime (39.3% vs. 74.3%, $p < 0.001$).

Discussion

The SOWP provides outreach, mentorship, life-skills, conflict resolution, mediation and support for New Haven youth at high-risk for gun violence by teaching them how to engage in safer, healthier behaviors while guiding them to a more positive track and engaging them in more productive activities. The results from this study suggest that the SOWP has been highly successful in achieving these goals. Youth who had actively participated in the SOW program were not only more likely to be in school and/or employed, but they were also significantly less likely to have been incarcerated in the past year. Moreover, compared to youth who had dropped out of or only minimally participated in the SOWP, youth fully engaged in the

program were less likely to have spent time in court for both violent and nonviolent crimes or to have been victims of shootings since enrolling in the program.

These findings are consistent with the results of the earlier qualitative report conducted by the RWJCSP⁶, where researchers interviewed NHFA administrators, SOWs, and youth engaged in the program to solicit their opinions and feedback on the SOWP. Among the themes that emerged from these interviews were the positive impact of the SOWs presence in the community; the key roles SOWs played in improving the lives and relationship skills of youth; advocacy for youth in court and in school; and the enhancement of employment and school engagement. In combination, the quantitative and qualitative evaluations of the SOWP suggest that the program has had a beneficial effect on improving the outcomes of New Haven youth at high-risk of youth gun violence while providing them with the tools and skills for continued positive progression.

Study Limitations

As in all research studies, this research had its limitations. The small sample size of the NHPD cohort prevented us from observing any concrete associations between program participation and youth outcomes for this specific cohort. As a result, we combined the two cohorts and considered the youth as a whole in order to obtain sufficient power to relate demographic characteristics and program participation to outcomes. Thus, we were unable to determine whether there were differences between the two cohorts with regard to program-outcome associations.

As a retrospective study, the selection of youth into the program being evaluated was not random. Although SOWs recruited and encouraged youth to actively participate in the various program components, the decision as to whether or not to participate ultimately fell to the youth themselves. As a result, there is the possibility for bias due to self-selection. SOWs continued to make contact with youth on the streets, a program component associated with more positive outcomes in our analyses. In contrast, youth who required court advocacy or conflict mediations were probably at higher risk for violence and poorer outcomes than those who did not receive these services. This observation may explain that youth who received these services had higher rates of incarceration than those who did not. In addition, interventions like court advocacy and conflict/mediations are not typically primary or secondary prevention interventions but rather are tertiary interventions initiated in response to actions that were reasons for incarceration.

It is important to note that youth do not act independently, but rather interact with and influence one another on the streets. Thus, there may be important differences in outcomes or program impact by district that we were unable to capture given the relatively small numbers of youth in each district.

Given the nature of this retrospective study design and the challenges of tracking these youth, the process of data collection could not be blinded. Information about outcomes and program participation was obtained by SOWs, which may have introduced the potential for information bias. We attempted to minimize this potential bias in data collection by requiring that SOWs contact youth, their families, or their school when outcomes or level of participation was unknown. This study provides important and powerful insight; however, the most useful study design

would have been a prospective randomized control trial, a design what would have required substantial financial resources in addition to those for service provision.

Conclusions

This study had many strengths: it includes outcome data for 83% of youth in the SOWP; it includes a review of the impact of individual program components; and a summary of present and past year outcomes.

In reading this report, it is important to note that the NHFA and SOWP were attempting to meet the immediate needs of the youth referred to the program during the first year while they were still building the program and the tracking system. This study, along with the qualitative evaluation, provides insight into what elements of the initiative are effective and what may need to be improved.

Future research should seek to capture additional outcomes of interest to program administrators and stakeholders such as recidivism rates, violence reduction, and youth-family relationships and interactions. If possible, these evaluations should consider how to best define and follow a true control group, consisting of youth of similar risk to those in the SOWP but not participating in the program. In addition, research is needed to identify differences between youth who fully participate in the SOWP and those who opt out or only minimally participate. By understanding the characteristics of these youth groups, the SOWP intervention can be better targeted or adapted to meet the needs of youth, enhance participation and success in the program. Finally, there is a need for research to identify the aspects of the life skills program that makes this program component so successful at improving youth outcomes. Information acquired through this research could be used to further improve the program and perhaps even to adapt the key elements of this component to other areas of the program.

Recommendations

In light of these findings, we offer the following recommendations to NHFA administrators, SOWs, and other stakeholders in the hope that they may be used to further enhance and support the SOWP:

Recommendations for the SOW Program

- 1. Continue to offer a comprehensive, multi-dimensional approach to the reduction of youth gun violence that seeks to intervene and support youth in all aspects of their daily lives**

The results of this study demonstrate the success of the SOWP in improving the outcomes of high-risk New Haven youth. In particular, the life-skills class, activities with youth, and street contacts appeared to be highly beneficial in increasing school participation and employment while decreasing rates of incarceration. Given the benefit conferred by the multiple dimensions of the SOWP, it is important that the SOWP continues to offer all components in order to maximize contact with youth while supporting youth in all aspects of their daily lives.

2. Maximize the number of youth who participate in the life-skills program

Of all program components evaluated, the life-skills program demonstrated the greatest association with positive outcomes. This may be due to the acquisition of interpersonal or communication skills, shared perspectives during the classes or the feeling of being supported by peer and SOWs. Regardless, increased attention should be given to maximizing the number of youth who complete the life-skills program. In addition, future research should be aimed at identifying the elements of the life-skills class that contribute to its success.

3. Perform routine evaluations of the program in order to continue to identify areas that may require greater attention or improvement

Routine program evaluations in the form of outcomes assessments, quality improvements of each dimension of the program, and needs assessments will enhance the various components of the program and ensure that the program keeps up with the changing needs of its youth. In addition, evaluations can help program staff identify areas of weakness that require greater attention or resource allocation. In conducting these evaluations, program administrators should develop methods to measure additional outcomes of interest and consider working with other community organizations such as the juvenile justice system, and police department to develop these measures.

Recommendations for other SOWP Stakeholders

1. Continue to fund and support all components and outreach initiatives of the Street Outreach Worker Program

Combined with the findings of the qualitative evaluation, the results of this study demonstrate the success of the SOWP in improving youth outcomes and reducing negative behaviors in youth. Youth who were actively engaged in the SOW program had significantly higher rates of school attendance and employment and were significantly less likely to have been incarcerated in the past year. Involvement in the program gives youth the tools and skill set to engage in safer, healthier behaviors, while providing them with support and opportunities they need to reenter society. Given the clear benefit of the SOW program, we recommend continued funding and support of this program.

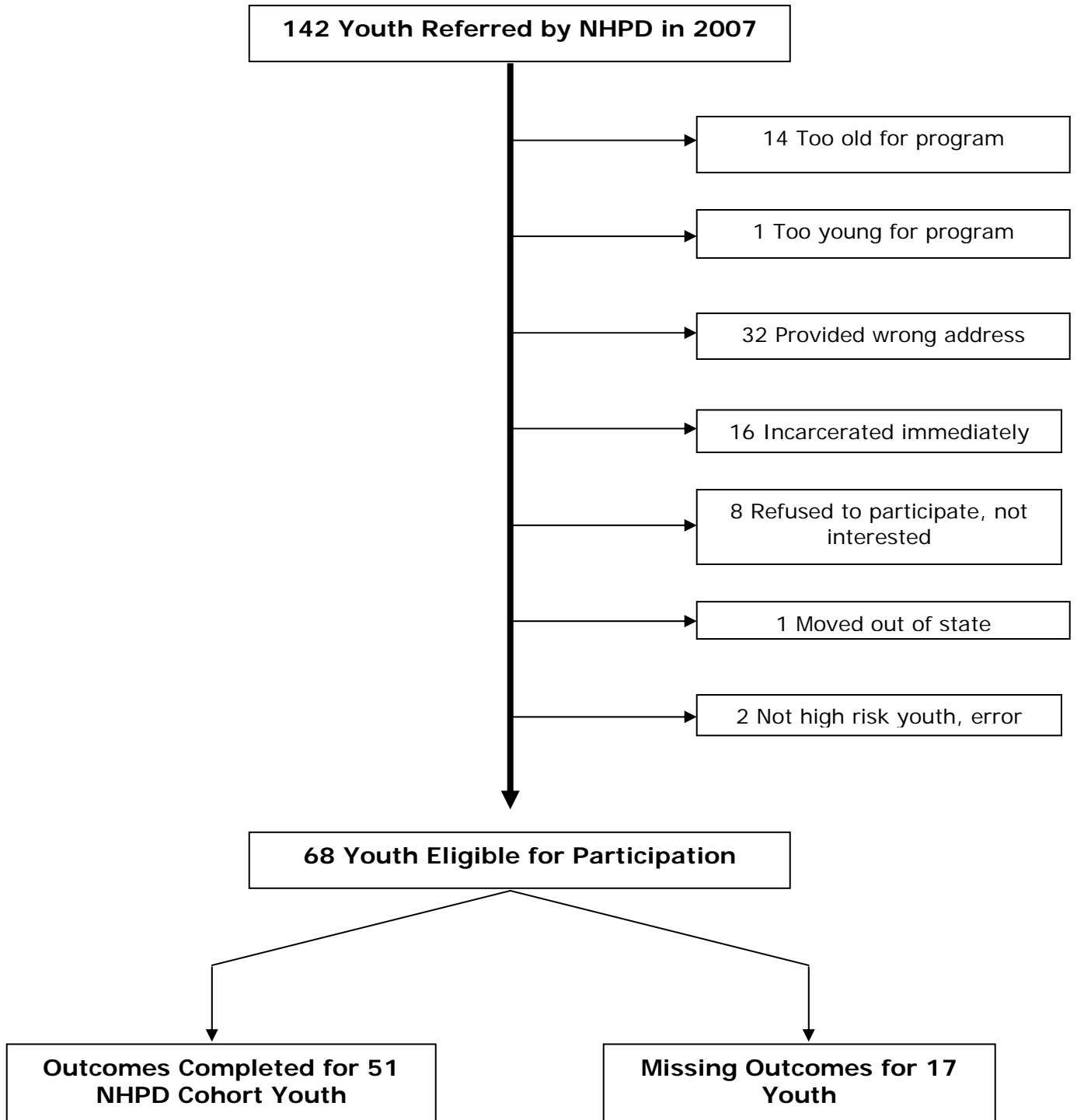
2. Continue to facilitate collaborations between SOWP and other community organizations and institutions such as the Police Department and the Board of Education

As noted in the previous qualitative report⁶, collaboration between the SOWP and other community organizations (e.g., the juvenile justice system, criminal court system, the police, schools, youth activity programs, employment agencies) is essential for the continued success of the SOWP. Although many of these collaborative relationships are already very strong, the need for continued enhancement of existing relationships and expansion to other community organizations should not be overlooked.

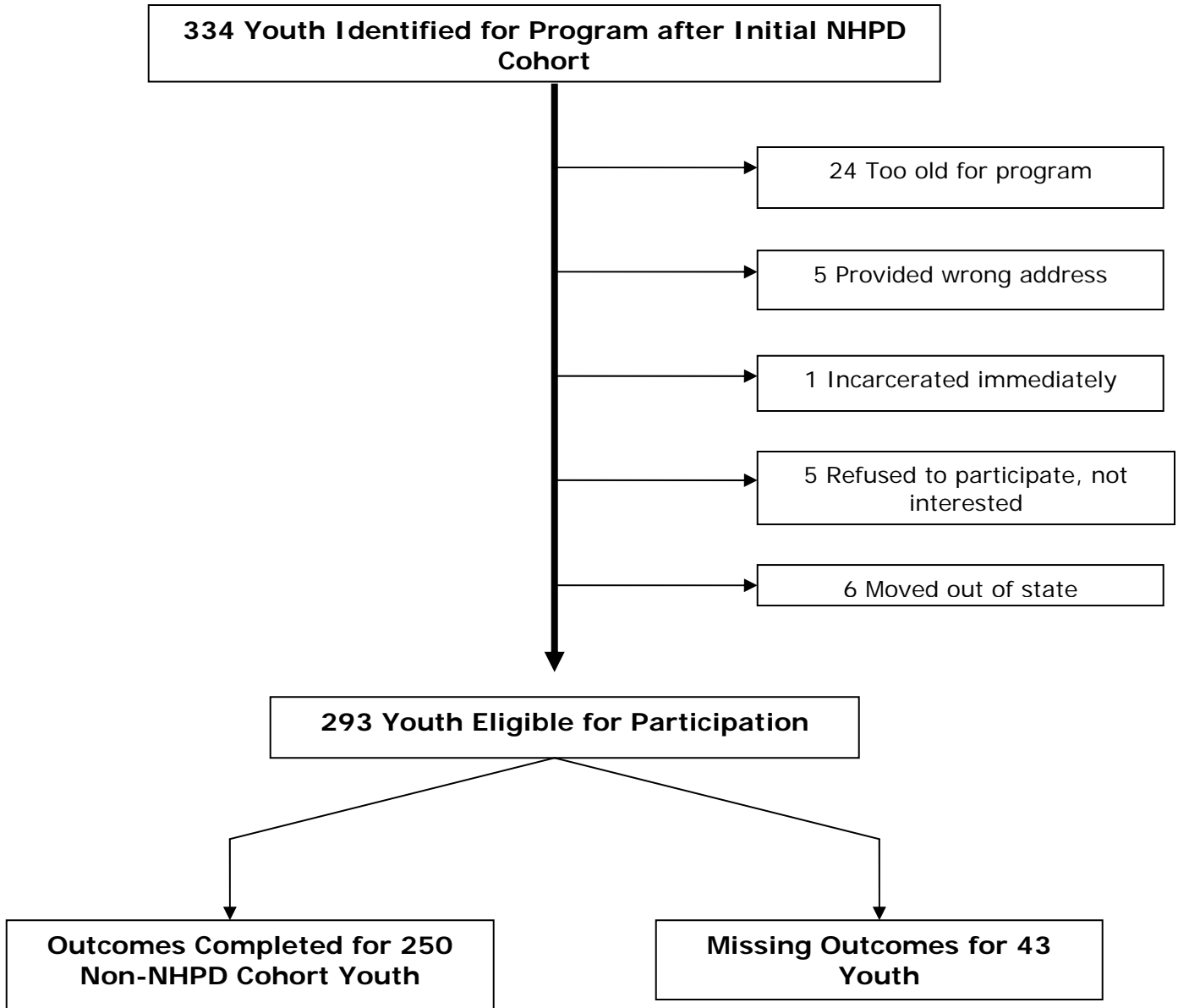
3. Provide additional support and funding for future research initiatives

As described above, repeat evaluations and needs assessments will be necessary to ensure the continued success and improvement of the SOWP and to advance our understanding of effective approaches to reducing youth gun violence. To facilitate this research, funding must be set aside. This study was funded by the RWJCSP; however, future evaluations will require a commitment to funding and continued enhancement of the SOWP.

Appendix A: Diagram of Eligibility: NHPD Cohort



Appendix B: Diagram of Eligibility: Community Referral Cohort



Appendix C: Outcomes Collection Form

Youth's name: _____
Age: _____ Gender (M/F): _____

OUTCOMES:

Overall outcome (check only one)

Where is he/she now:

- School/GED
- Employed in traditional market → if yes, length of time: _____
- Incarcerated
- Unemployed
- Other: _____

Outcomes in past year (can check multiple)

In the past 12 months, has the youth been:

- School/GED
- Employed in traditional market → if yes, length of time: _____
- Incarcerated
- Other: _____

VIOLENCE/COURT INVOLVEMENT:

Involvement with court/violence/pregnancy (can check multiple)

Since joining the program, has he/she:

- Spent time in prison
- Been involved in a shooting
- Spent time in court for a violent crime → if yes, # of court cases: _____
- Spent time in court for a nonviolent crime → if yes, # of court cases: _____
- Currently have an open court case
- Been pregnant, or made someone else pregnant _____

INVOLVEMENT WITH SOW PROGRAM:

Engagement/Interaction with SOWs (can check multiple):

- Program engagement (life-skills, classes, etc)
→ if yes: how active was the youth?
 - Signed up, dropped out immediately
 - Participated in program
- Activities engagement (field trips, movie nights, etc)
- Street contacts (interacted with SOWs on the street)
→ if yes: NUMBER of contacts:
 - 1-5
 - 6-10
 - 11-15
 - 15+
- Street interventions (including mediation and conflict/resolution)
- Court advocacy

Does youth meet Engagement criteria? → yes no

Appendix D: Tables

Table 1. Characteristics of sample by cohort

Variable	Entire Sample (N=301) N (%)*	NHPD Cohort (N=51) N (%)*	Community Referral Cohort (N=250) N (%)*
Gender			
Male	216 (71.2)	48 (94.1)	168 (67.2)
Female	85 (28.2)	3 (5.9)	82 (32.8)
Age at referral			
14-18	181 (63.3)	28 (62.2)	153 (63.5)
19-24	105 (36.7)	17 (37.8)	88 (36.5)
Missing	15	6	9
Race			
White	3 (1.0)	0 (0)	3 (1.2)
Black	236 (81.1)	43 (91.5)	193 (79.1)
Hispanic	49 (16.8)	4 (8.5)	45 (18.4)
Multi-racial	4 (1.0)	0 (0)	3 (1.2)
Missing	10	4	6
Family size			
1 (self)	1 (0.4)	0 (0)	1 (0.4)
2	32 (11.6)	2 (4.7)	30 (12.8)
3-5	192 (69.3)	30 (69.8)	162 (69.2)
6-8	48 (17.3)	10 (23.3)	38 (16.2)
9-11	4 (1.4)	1 (2.3)	3 (1.3)
Missing	24	8	16
District			
Hill South	21 (8.0)	3 (6.8)	18 (8.2)
Hill North	52 (19.7)	4 (9.1)	48 (21.8)
Westville/Beaver Hill	8 (3.0)	0 (0)	8 (3.6)
Fair Haven	72 (27.3)	15 (34.1)	57 (25.9)
Dixwell	42 (15.9)	10 (22.7)	32 (14.6)
Dwight/Kensington	38 (14.4)	7 (15.9)	31 (14.1)
Newhallville	31 (11.7)	5 (11.4)	26 (11.8)

Missing	37	7	30
BASELINE INTAKE DATA			
Referral source			
Outreach	163 (61.7)	21 (46.7)	142 (64.8)
Parent	52 (19.7)	8 (17.8)	44 (20.1)
Other family	23 (8.7)	0 (0)	23 (10.5)
NHPD/School	26 (9.9)	16 (35.6)	10 (4.6)
Missing	37	6	30
Attended school at intake	124 (60.8)	13 (40.6)	111 (64.5)
Missing	97	19	78
Client goals at baseline**			
Job/Employment	175 (77.4)	27 (84.4)	148 (76.3)
Education	51 (22.6)	4 (12.5)	47 (24.2)
Program involvement	13 (5.8)	0 (0)	13 (6.7)
Redirection, staying out of trouble	29 (12.8)	6 (18.8)	23 (11.9)
Recreational activities	10 (4.4)	0 (0)	10 (5.2)
Counseling/mentorship	18 (8.0)	2 (6.3)	16 (8.3)
Missing	75	19	56
Family income level			
None/Very low	139 (48.9)	19 (41.3)	120 (50.4)
Low	104 (36.6)	21 (45.7)	83 (34.9)
Moderate/High	41 (14.4)	6 (13.0)	35 (14.7)
Missing	17	5	12
Gender of head of household			
Self	2 (0.8)	0 (0)	2 (0.9)
Male	35 (13.3)	4 (9.1)	31 (14.1)
Female	217 (82.2)	40 (90.9)	177 (80.5)
Both	10 (3.8)	0 (0)	10 (4.6)
Missing	37	7	30

*Percents are column percents.

**Note that percentages do not sum to 100 as youth were allowed to state more than one goal.

Table 2. Program involvement of sample by cohort

Variable	Entire Sample (N=301) N(%)*	NHPD Cohort (N=51) N (%)*	Community Referral Cohort (N=250) N (%)*
Life skills/classes involvement	141 (46.8)	21 (41.2)	120 (48.0)
Activities	186 (61.8)	35 (68.6)	151 (60.4)
Street contacts			
0-5	42 (14.0)	4 (7.8)	38 (15.2)
6-10	50 (16.6)	5 (9.8)	45 (18.0)
11-15	30 (10.0)	10 (19.6)	20 (8.0)
15+	179 (59.5)	32 (62.8)	147 (58.8)
Emergency interventions/mediations	247 (82.1)	46 (90.2)	201 (80.4)
Court advocacy	141 (46.8)	33 (64.7)	108 (43.2)
Meets Program Engagement Criteria	187 (62.1)	32 (62.8)	155 (62.0)

*Percents are column percents.

Table 3. Summary of outcomes for sample by cohort

Variable	Entire Sample (N=301) N (%)*	NHPD Cohort (N=51) N (%)*	Community Referral Cohort (N=250) N (%)*
Primary outcome			
School	157 (52.2)	25 (49.0)	132 (52.8)
Employment	22 (7.3)	1 (2.0)	21 (8.4)
Incarceration	56 (18.6)	17 (33.3)	39 (15.6)
Unemployment	56 (18.6)	3 (5.9)	53 (21.2)
Death	3 (1.0)	2 (3.9)	1 (0.4)
Other	7 (2.3)	3 (5.9)	4 (1.6)
Outcomes in past year**			
School	192 (63.8)	31 (60.8)	161 (64.4)
Employment	118 (39.2)	20 (39.2)	98 (39.2)
Incarceration	97 (32.2)	25 (49.0)	72 (28.8)
Other	13 (4.3)	1 (4)	9 (3.6)
Violence/Court Involvement			
Spent time in prison	120 (39.9)	30 (58.8)	90 (36.0)
Victim of shooting	40 (13.3)	18 (35.3)	22 (8.8)
Spent time in court for violent crime	87 (28.9) 155 (51.5)	24 (47.1) 36 (70.6)	63 (25.2) 119 (47.6)
Spent time in court for nonviolent crime	93 (30.9) 43 (14.3)	20 (39.2) 10 (19.6)	73 (29.2) 33 (13.2)
Currently has an open court case			
Been pregnant			

*Percents are column percents.

**Note that percentages do not sum to 100 as youth could have more than one outcome in past year

Table 4. Participant characteristics and program involvement by primary outcome

Variable	Primary Outcome						p-value
	School	Employment	Incarceration	Unemployment	Death	Other	
Demographic							
Age							<0.001
14-18	114 (63.0)	4 (2.2)	33 (18.2)	25 (13.8)	2 (1.1)	3 (1.7)	
19-24	233 (31.4)	17 (16.2)	21 (20.0)	31 (29.5)	1 (1.0)	2 (1.9)	
Gender							0.005
Male	106 (49.1)	17 (7.9)	51 (15.7)	34 (15.7)	3 (1.4)	5 (2.3)	
Female	51 (60.0)	5 (5.9)	5 (5.9)	22 (25.9)	0 (0)	2 (2.4)	
District							0.534
Hill South	11 (52.4)	1 (4.8)	6 (28.6)	3 (14.3)	0 (0)	0 (0)	
Hill North	30 (57.7)	3 (5.8)	6 (11.5)	12 (23.1)	0 (0)	1 (1.9)	
Westville	3 (37.5)	1 (12.5)	1 (12.5)	3 (37.5)	0 (0)	0 (0)	
Fair Haven	37 (51.4)	8 (11.1)	11 (15.3)	14 (19.4)	1 (1.4)	1 (1.4)	
Dixwell	29 (69.1)	1 (2.4)	6 (14.3)	6 (14.3)	0 (0)	0 (0)	
Dwight	16 (42.1)	3 (7.9)	9 (23.7)	8 (21.1)	0 (0)	2 (5.3)	
Newhallville	12 (38.7)	2 (6.5)	10 (32.3)	4 (12.9)	1 (3.2)	2 (6.5)	
Income level							0.329
None/very low	64 (46.0)	12 (8.6)	28 (20.1)	32 (23.0)	1 (0.7)	2 (1.4)	
Low	57 (54.8)	5 (4.8)	17 (16.4)	21 (20.2)	1 (1.0)	3 (2.9)	
Moderate	25 (61.0)	2 (4.9)	11 (26.8)	2 (4.9)	0 (0)	1 (2.4)	
Referral source							0.018
Outreach	74 (45.4)	17 (10.4)	30 (18.4)	38 (23.3)	1 (0.6)	3 (1.8)	
Parent	35 (67.3)	2 (3.9)	9 (17.3)	4 (7.7)	1 (1.9)	1 (1.9)	
Other family	15 (65.2)	0 (0)	2 (8.7)	6 (26.1)	0 (0)	0 (0)	
NHPD/School	13 (50.0)	0 (0)	8 (30.8)	2 (7.7)	1 (3.9)	2 (7.7)	
Attended school at baseline							<0.001
Yes	92 (74.2)	4 (3.2)	17 (13.7)	9 (7.3)	1 (0.8)	1 (0.8)	
No	16 (20.0)	10 (12.5)	21 (26.3)	29 (36.3)	0 (0)	4 (5.0)	
Client goals – Employment							0.068
Yes	81 (46.3)	14 (8.0)	29 (16.6)	43 (24.6)	2 (1.1)	6 (3.4)	
No	35 (68.6)	3 (5.9)	7 (13.8)	5 (9.8)	1 (2.0)	0 (0)	

No								
Client goals – Education								0.120
Yes	25 (49.0)	8 (15.7)	7 (13.7)	11 (21.6)	0 (0)	0 (0)		
No	91 (52.0)	9 (5.1)	29 (16.6)	37 (21.1)	3 (1.7)	6 (3.4)		
Client goals –								0.176
Redirection	17 (58.6)	1 (3.5)	8 (27.6)	2 (6.9)	0 (0)	1 (3.5)		
Yes	99 (50.4)	16 (8.1)	28 (14.2)	46 (23.4)	3 (1.5)	5 (2.5)		
No								
Program Participation								
Program involvement –								<0.001
Life skills								
Yes	100 (70.9)	14 (9.9)	12 (8.5)	14 (9.9)	0 (0)	1 (0.7)		
No	57 (35.6)	8 (5.0)	44 (27.5)	42 (26.3)	3 (1.9)	6 (3.8)		
Program involvement –								<0.001
Activities								
Yes	123 (66.1)	11 (5.9)	33 (17.7)	16 (8.6)	0 (0)	3 (1.6)		
No	34 (29.6)	11 (9.6)	23 (20.0)	40 (34.8)	3 (2.6)	4 (3.5)		
Program involvement								0.001
Street contacts								
0-5	17 (40.5)	4 (9.5)	4 (9.5)	16 (38.1)	0 (0)	1 (2.4)		
6-10	23 (46.0)	3 (6.0)	5 (10.0)	16 (32.0)	0 (0)	3 (6.0)		
11-15	13 (43.3)	3 (10.0)	8 (26.7)	3 (10.0)	1 (3.3)	2 (6.7)		
15+	104 (58.1)	12 (6.7)	39 (21.8)	21 (11.7)	2 (1.1)	1 (0.6)		
Program involvement –								0.066
Emergency contacts								
Yes	127 (51.4)	19 (7.7)	52 (21.1)	42 (17.0)	3 (1.2)	4 (1.6)		
No	30 (55.6)	3 (5.6)	4 (7.4)	14 (25.9)	0 (0)	3 (5.6)		
Program involvement –								0.003
Court advocacy								
Yes	68 (48.3)	9 (6.4)	40 (28.4)	20 (14.2)	1 (0.7)	3 (2.1)		
No	89 (55.6)	13 (8.1)	16 (10.0)	36 (22.5)	2 (1.3)	4 (2.5)		
Program involvement –								<0.001
Meets program criteria								
Yes	136 (69.4)	18 (9.2)	19 (9.7)	18 (9.2)	0 (0)	5 (2.6)		
No	21 (20.0)	4 (3.8)	37 (35.2)	38 (36.2)	3 (2.9)	2 (1.9)		

Table 5. Participant characteristics and program participation by past year outcomes

Variable	N (%)	School	p-value	N (%)	Employed	p-value	N (%)	Incarcerated	p-value
Demographic									
Age			<0.001		0.950			0.397	
14-18	140 (77.4)			70 (38.7)			55 (30.4)		
19-24	41 (39.1)			41 (39.1)			37 (35.2)		
Gender			0.124		0.044			<0.001	
Male	132 (61.1)			77 (35.7)			87 (40.3)		
Female	60 (70.6)			41 (48.2)			10 (11.8)		
District			0.282		0.032			0.247	
Hill South	12 (57.1)			5 (23.8)			8 (38.1)		
Hill North	37 (71.2)			16 (30.8)			13 (25.0)		
Westville	4 (50.0)			3 (37.5)			5 (62.5)		
Fair Haven	45 (62.5)			38 (52.8)			21 (29.2)		
Dixwell	31 (73.8)			20 (47.6)			12 (28.6)		
Dwight	23 (60.5)			12 (31.6)			13 (34.2)		
Newhallville	15 (48.4)			8 (25.8)			14 (45.2)		
Income level			0.009		0.358			0.751	
None/very low	79 (56.8)			48 (34.5)			50 (36.0)		
Low	67 (64.4)			44 (42.3)			33 (31.7)		
Moderate	34 (82.9)			18 (43.9)			13 (31.7)		
Referral source			0.001		0.690			0.004	
Outreach	92 (56.4)			58 (35.6)			51 (31.3)		
Parent	44 (84.6)			23 (44.2)			14 (26.9)		
Other family	17 (73.9)			9 (39.1)			4 (17.4)		
NHPD/School	14 (53.9)			11 (42.3)			15 (61.5)		
Attended school at baseline			<0.001		0.017			0.008	
Yes	105 (84.7)			58 (46.8)			32 (25.8)		
No	27 (33.8)			24 (30.0)			35 (43.8)		
Client goals – Employment			0.069		0.453			0.316	
Yes	106 (60.6)			72 (41.1)			49 (28.0)		
No	38 (74.5)			18 (35.3)			18 (35.3)		

No						
Client goals – Education		0.409		0.127		0.697
Yes	30 (58.8)		25 (49.0)		14 (27.5)	
No	114 (65.1)		65 (37.1)		53 (30.3)	
Client goals –		0.297		0.300		0.005
Redirection						
Yes	21 (72.4)		9 (31.0)		15 (51.7)	
Yes	123 (62.4)		81 (41.1)		52 (26.4)	
No						
Program Participation						
Program involvement –		<0.001		<0.001		<0.001
Life skills						
Yes	110 (78.0)		79 (56.0)		22 (15.6)	
No	82 (51.3)		39 (24.4)		75 (46.9)	
Program involvement –		<0.001		<0.001		0.317
Activities						
Yes	142 (76.3)		88 (47.3)		56 (30.1)	
No	50 (43.5)		30 (26.1)		41 (35.7)	
Program involvement		0.006		0.001		0.660
Street contacts						
0-5	19 (45.2)		10 (23.8)		12 (28.6)	
6-10	27 (54.0)		10 (20.0)		18 (36.0)	
11-15	19 (63.3)		14 (46.7)		12 (40.0)	
15+	127 (71.0)		84 (46.9)		55 (30.7)	
Program involvement –		0.652		0.112		0.007
Emergency contacts						
Yes	159 (64.4)		102 (41.3)		88 (35.6)	
No	33 (61.1)		16 (29.6)		9 (16.7)	
Program involvement –		0.821		0.948		<0.001
Court advocacy						
Yes	89 (63.1)		55 (39.0)		65 (46.1)	
No	103 (64.4)		63 (39.4)		32 (20.0)	
Program involvement –		<0.001		<0.001		<0.001
Meets program criteria						
Yes	155 (79.1)		103 (52.6)		38 (19.4)	
No	37 (35.2)		15 (14.3)		59 (56.2)	

Table 6. Program outcomes by SOW program involvement

Variable	Meets Engagement Criteria	Does NOT meet engagement criteria	p-value
Primary outcome			<0.001
School	136 (69.4)	21 (20.0)	
Employment	18 (9.2)	4 (3.8)	
Incarceration	19 (9.7)	37 (35.2)	
Unemployment	18 (9.2)	38 (36.2)	
Death	0 (0)	3 (2.9)	
Other	5 (2.6)	2 (1.9)	
Outcomes in past year			
School	155 (79.1)	37 (35.2)	<0.001
Employment	103 (52.6)	15 (14.3)	<0.001
Incarceration	38 (19.4)	59 (56.2)	<0.001
Violence/Court Involvement			
Spent time in prison	54 (27.6)	66 (62.9)	<0.001
Victim of shooting	13 (6.6)	27 (25.7)	<0.001
Spent time in court for VIOLENT crime	43 (21.9)	44 (41.9)	<0.001
Spent time in court for NONVIOLENT crime	77 (39.3)	78 (74.3)	<0.001

Appendix E: References

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