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Cure Violence St. Louis Evaluation

Final Report

Washington University in St. Louis

INSTITUTE FOR PUBLIC HEALTH

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Institute for Public Health | Washington University in St. Louis

Contents

EXECUTIVE SUMMARY

Background and Objectives

The City of St. Louis Department of Health contracted with the Washington University in St. Louis Institute for Public Health to evaluate the Cure Violence (CV) program, a violence prevention initiative implemented in three neighborhoods in the City of St. Louis (Dutchtown, Wells-Goodfellow, and Walnut Park West) beginning in 2020.

The Cure Violence Model

The Cure Violence program is designed to reduce violence in communities using the following methods:

Identifying and interrupting potentially violent conflicts: Violence interrupters work in areas with high rates of aggravated assault and homicide by offering de-escalation and mediation services to keep interpersonal conflicts from turning violent. Interrupters connect with the community to identify ongoing conflicts and attempt to resolve them peacefully, sometimes following up with individuals for months to ensure that interpersonal conflicts in the neighborhoods do not escalate. Violence interrupters also work with victims of shootings and their friends and family to prevent retaliation and help cool down emotions.

Treating high risk people: CV staff form relationships and work to connect with and enroll those who are at the highest risk of violence victimization and perpetration. Once enrolled in the program, participants are offered case management and provided linkages to community resources, including employment services, mental health care, etc. Staff meet participants where they are at and attempt to steer them away from violence by discussing the consequences of violence and teaching participants' alternative approaches to conflict resolution.

Changing community norms: CV staff engage the entire community, including residents, local business leaders, faith leaders, service providers, and other stakeholders, with the ultimate goal of shifting communities toward antiviolence norms. Staff conduct community education and facilitate events, including vigils after homicides.

Evaluation Design

Based on the program methods outlined above and the overall aim of reducing violence, the evaluation answers three main questions:

1. How did social norms around community violence change in the intervention sites compared to other high-risk areas in the city?
2. How did the frequency and intensity of reported violence change in the intervention sites compared to other high-crime neighborhoods in the city?
3. How did CV staff and community stakeholders perceive the implementation of CV and its impacts on gun violence?

To assess these three broad outcomes, an evaluation plan was developed that compared outcomes in the Cure Violence sites to outcomes in six comparison areas across the city. The comparison areas were selected to have similar demographic profiles as the Cure Violence sites. The evaluation design included three distinct elements:

1. A **Community Survey** was designed to capture changes in community norms around violence in the intervention and comparison areas over the evaluation period.
2. **Crime Data** provided by the St. Louis Metropolitan Police Department (SLMPD) were analyzed to track changes in the frequency and spatial distribution of gun violence prior to and during program implementation in the CV sites and comparison sites. Gun violence includes gun homicides, gun robberies, and gun assaults.
3. **Interviews** were conducted with CV site supervisors, community outreach workers, violence interrupters, and community stakeholders to gain an in depth understanding of the nuances of the CV program implementation and to help identify programmatic strengths and barriers.

The evaluation was originally planned to take place over three years, from September 2021 to September 2024. Due to unexpected funding changes during the second year of the evaluation, the evaluation period was shortened to 22 months, spanning September 2021 to June 2023. Contract issues led to several last-minute changes in evaluation activities, as detailed in the full report.

Community Norms Survey

In total, there were 267 respondents to Wave 1 of the survey and 268 respondents to Wave 2 of the survey (overall response rate of 30%). The community survey documents the pervasive and traumatic impact of gun violence in St. Louis. Residents of these neighborhoods live in constant fear of crime and violence. They report feeling unsafe alone outside at night and around unfamiliar groups of people in their neighborhoods. Many residents report being afraid of falling victim to violence in their neighborhoods.

Despite the high levels of violence, the average community resident does not endorse violence as a solution to interpersonal conflicts. Residents generally reported that their neighborhoods were cohesive and that their neighbors would intervene should trouble arise. However, many community residents expressed unfavorable opinions of the SLMPD, especially regarding the perception of the obligation to obey and cooperate with officers. Similarly, the average

respondent felt that the police treat people of their racial/ethnic group unfairly. This was particularly true for Black respondents, who also reported more racial injustice in the criminal legal system. These opinions did not depend on direct contact with the criminal-legal system, as only seven percent of respondents reported being stopped by the police and less than one percent report being charged with a crime.

Overall, **there was no evidence that the CV intervention impacted community attitudes and norms toward violence or experiences with violence between the two survey waves**. It is important to note that it can take a considerable amount of time to see measurable changes in community norms, even when a program is working as intended. Given the narrow window of one year's time between Wave 1 and Wave 2 data collection, it is unsurprising that we do not observe changes in these outcomes.

Police Data

To estimate the impact of the CV program, we used an interrupted time series design to compare the trends in gun violence rates before and after the implementation of the CV program in the CV sites, while controlling for the trends in the comparison sites. On the whole, rates of gun violence dropped significantly in the three CV sites since the CV program began. However, gun violence was simultaneously declining in the comparison sites and across the city, which raises doubts about whether the CV program was the primary cause of the reductions. The results of our statistical analyses suggest that i**n Wells-Goodfellow, the rate of decline in gun violence was much larger than in the comparison sites. We estimate that the CV program prevented at least 12 incidents of gun violence incidents over 36 months, compared to what would have happened without the program**. This suggests that the program had a positive impact in Wells-Goodfellow. However, **there was no evidence of a significant CV impact in Dutchtown or in Walnut Park West**.

Interviews with Cure Violence Staff and Stakeholders

We conducted interviews with CV staff and community stakeholders to understand their perspectives on the CV program and its impact on violence prevention. Recruitment for interviews involved contacting CV sites to enroll staff, canvassing CV neighborhoods (including posting flyers, stopping into businesses, and talking to people on the street), conducting phone calls to locally listed businesses, and emailing respondents from the community survey. In total, 8 interviews were conducted with CV staff and 20 interviews were conducted with community stakeholders.

The interviews revealed that community stakeholders and CV staff members perceived changes in neighborhood violence, albeit in different directions Those who had less direct experience with violence tended to perceive violence as declining in their neighborhoods, while people of color tended to perceive violence as increasing. In relation to the main goals of CV, staff

believed that they addressed root causes of violence within their communities but were limited by staff capacity and resources.

Overall, **the qualitative data suggest that CV staff believe that their work achieved two of the three program goals: identifying and interrupting potentially violent conflicts and treating high risk people**. For example, because CV staff frequently identified themselves as high-risk participants in the program, many perceived that their employment through the program prevented them from potentially engaging in violence. Additionally, many suggested that their previous relationships with violence helped establish and maintain rapport with potential and current clients which reduced potential conflict. However, interviews with community members suggest that the program had mixed results in meeting the third goal of changing community norms. This may be due to two reasons that were expressed in the interviews: (1) CV staff suggested that the small number of staff limited their ability to build strong relationships with diverse community members and (2) The limited awareness or recognition of the program among most residents, except for those in Dutchtown as expressed by community members. Considering the perceived limited resources available for each site, the high levels of violence that all CV workers were exposed to, desire for increased marketing materials, and reported lack of community engagement, the qualitative findings suggest that CV had limited impact beyond supporting the desistance of CV staff from gun related violence.

Conclusions

On the whole, we find mixed evidence for the effectiveness of CV in St. Louis. On the one hand, our analyses reveal a significant decline in gun violence rates since the start of the program, but only in Wells Goodfellow were the observed declines greater than in comparison (nonintervention) sites. We observed no changes in community attitudes and norms toward violence or experiences of violence that can be attributed to the CV intervention. The interviews revealed that staff identified and interrupted violent conflicts and treated high-risk people by providing them with counseling, referrals, and social support. However, they also faced challenges such as limited staff capacity and lack of resources, which hindered their ability to reach more people and sustain their interventions.

SECTION 1 | INTRODUCTION AND OVERVIEW

This report documents activities and results of the evaluation of the Cure Violence Program in the City of St. Louis. This external evaluation is funded by the City of St. Louis and conducted by Washington University in St. Louis, Institute for Public Health. All evaluation activities took place between September 2021 and June 2023.

The Cure Violence Model

Cure Violence (CV) is a violence prevention program that approaches violence as a public health concern and attempts to disrupt its transmission within communities through disease control and behavioral change methods. The methods used to have an impact on the communities include:

1. Identifying and interrupting potentially violent conflicts: Violence interrupters work in areas identified by high rates of aggravated assault and homicide and attempt to prevent violence by offering de-escalation and mediation services to keep interpersonal conflicts from turning violent. Workers connect with the community in order to identify ongoing conflicts and attempt to resolve them peacefully, sometimes following up with individuals for months to ensure that interpersonal conflicts in the neighborhoods do not escalate. Violence interrupters also work with victims of shootings and friends and family of victims to prevent retaliation and help cool down emotions.

2. Treating high risk people CV staff form relationships with the entire community and work to connect with and enroll those who are at the highest risk of perpetrating violence. Once enrolled in the program, participants are offered case management and provided linkages to community resources, including employment services, mental health care, etc. Workers meet participants where they are at and attempt to steer them away from the use of violence by discussing the consequences of violence and teaching participants' alternative approaches to conflict resolution.

3. Changing community norms: CV staff engage the entire community, including residents, local business leaders, faith leaders, service providers, and other stakeholders, with the ultimate goal of shifting community norms toward antiviolence. Staff conduct community education and events, including vigils after homicides.

Cure Violence Global

The Cure Violence program model has been implemented in various cities worldwide beginning in 2000, when it was first launched in the West Garfield Park neighborhood in Chicago. Since then, the program has been adapted in 32 cities across the globe. Cure Violence Global is a 501(c)3 that provides guidance and support to partner organizations looking to implement the program in their city. Partners are responsible for securing the funds to implement the program,

and must follow three core components (listed above) and two implementing components outlined by Cure Violence Global. The two implementing components that partners must adhere to are: 1) continually analyzing data to ensure proper implementation and identify changes in violence, and 2) participating in training and technical assistance provided by Cure Violence Global to workers, program managers, and implementing agencies covering the necessary skills to implement the model correctly.

Cure Violence in St. Louis

The City of St. Louis implemented Cure Violence in three neighborhoods beginning in 2020: Dutchtown, Wells-Goodfellow/Hamilton Heights, and Walnut Park, which were chosen based on rates of violence. These three sites had some of the highest levels of homicide, aggravated assaults, and robberies in the three-year period preceding the implementation of Cure Violence St. Louis (2017-2019). The City of St. Louis Department of Health oversaw the launch and early implementation of Cure Violence. In 2022, program implementation oversight was transferred to the newly established Office of Violence Prevention, operating under the Department of Public Safety.

Evaluation Design and Implementation

Initially, the evaluation was designed to take place over the course of three years, from September 2021 to September 2024. The evaluation activities were designed to determine the following:

1. The extent to which social norms around community violence changed in the intervention sites relative to other high-risk areas in the city.

2. The extent to which there was a reduction in reported violence over the first three years of the CV implementation in specific catchment areas relative to other high-crime neighborhoods in the city.

3. Whether clients served by Cure Violence experienced changes in knowledge, skills, attitudes, and behavior around antiviolence.

To assess these three broad outcomes, the evaluation design included the following elements:

1. Community Norms Survey- This survey was designed to capture changes in community norms regarding violence in the intervention and comparison areas (outlined below), and includes many items that tap into community norms, such as: collective efficacy, stigma surrounding incarceration and criminal justice contact, perceptions of community violence, and community connectedness. The survey was intended to be administered in three waves over the course of three years to assess the extent to which community norms and perceptions of violence changed during the implementation of Cure Violence. We randomly selected 900 households across the three CV intervention sites and six

comparison sites (100 households per site) to take part in the survey. All participants (1 per household) were paid $25 to complete the survey.

2. St. Louis Metro Police Department Crime Data Analysis- Data provided by the St. Louis Metropolitan Police Department (SLMPD) on reported violence was used to track changes in the frequency and spatial distribution of criminal violence three years prior to implementation and during the entirety of the three-year evaluation. These data were used to assess whether there were differences in the change in violent activity in the CV intervention sites compared to other areas in the city.

3. Participant Survey- This survey was designed to measure changes in knowledge, skills, attitudes, and behaviors of participants receiving services through the Cure Violence program. The proposed instrument contained many of the same items as the community survey, along with questions about services received from CV, satisfaction with CV, and questions about respondents own self-reported violent conduct in the months leading up to and during their involvement in the program. The survey was designed to be administered at baseline (when a participant is first enrolled in the program), and then at six months and 12 months after initial contact. Participants would be enrolled on a rolling basis for the first two years of the evaluation, with a goal of administering the survey to 30 participants per site, for a total of 120 participants. All participants would be paid $25 to complete the survey. As described in greater detail below, this component of the evaluation was not completed.

4. Focus Groups and Interviews with Cure Violence Staff and Stakeholders- Focus groups and interviews were designed to be conducted among CV site supervisors, community outreach workers, violence interrupters, and community stakeholders to gain an in depth understanding of the nuances of the CV program implementation and to help identify programmatic strengths and barriers.

The rationale for the three-year timeline originally agreed upon by the City of St. Louis and the evaluation team was because community-level outcomes can often take multiple years (even many years) to be impacted by program activities. Therefore, a longer evaluation timeline is preferred to most accurately capture program impact. The first full year of the evaluation (September 2021-August 2022) operated within the parameters of this three-year timeline. Contract funding issues in year 2 required a pivot in project activities for the rest of the evaluation.

Changes to Evaluation Design from Year One

During year two of the evaluation, unforeseen changes to program funding caused a change in the time frame of the evaluation. As a result, the timeline was shortened from three years to 22 months (September 2021-June 2023). Additionally, there was a cumulative period of approximately two months during year two that evaluation activities were paused due to delays in the renewal of the evaluation contract by the City of St. Louis. Both the shortened timeline and the pause of evaluation activities resulted in amendments to the original study design.

Considering the new time constraints, the following changes were made to the evaluation design in spring of 2022 (these changes and their consequent limitations are described in greater detail later in this report):

1. Community Norms Survey- Originally designed to be administered three times over the course of three years, the shortened timeline only allowed for two waves of survey data to be collected. The time frame for data collection and critical recruitment efforts (e.g., canvassing) of the second wave of the survey were also disrupted by the pause in evaluation activities during year two.

2. SLMPD Crime Data Analysis- Analysis of changes in rates of violence is limited to the period of January 2017 to April 2023. The original design would have captured changes in violence rates From January 2017 up through July 2024.

3. Participant Survey- The revised timeline resulted in insufficient time necessary for proper survey administration and data collection. The survey instrument was still being finalized in collaboration with CV site staff when the project time frame was shortened. While developing the survey instrument with CV staff, we faced significant challenges with consensus building regarding survey items, which contributed to a delay in survey administration. This, in conjunction with the shortened timeline, ultimately led to the inability to include this component in the final evaluation design. As such, the evaluation does not capture the program's impact on clients' knowledge, attitudes, and beliefs. Details regarding participant survey development and its associated challenges can be found in Appendix A.

4. Focus Groups and Interviews with Cure Violence Staff and Stakeholders- The initial evaluation design included interviews with Cure Violence staff and focus groups with community stakeholders. While the staff interviews were conducted as originally intended, the community stakeholder focus groups were changed to interviews in the revised evaluation design. Recruitment for community focus groups began prior to any pauses in evaluation activities. When the evaluation was forced to pause due to contract delays, focus group recruitment halted. In light of the newly shortened time frame following this pause, we decided to move forward with interviews as an alternative to community focus groups. Because focus group recruitment requires significant time and coordination, opting for interviews—which are not contingent on shared availability among many participants—allowed for greater levels of participant recruitment considering the significant time constraints.

SECTION 2 | RESEARCH DESIGN

Cure Violence Sites

Cure Violence (CV) is a placed-based intervention in three geographic areas in St. Louis, hereafter referred to as "CV sites."[a] The CV sites are relatively small geographic areas characterized by high levels of violent crime. On average, each CV site encompasses approximately 0.82 square miles. They do not overlap with formal neighborhood boundaries, such as those established by the U.S. Census Bureau or those generally recognized within the City of St. Louis. To illustrate this point, Figure 1 overlays in purple the three CV sites -- Dutchtown, Wells Goodfellow, and Walnut Park West –- on a map of the commonly recognized St. Louis neighborhoods. As demonstrated here, the CV site "Walnut Park West" includes parts of the St. Louis neighborhoods Walnut Park West and Walnut Park East. The "Wells Goodfellow" site overlaps Wells Goodfellow and Hamilton Heights, and "Dutchtown" includes parts of Dutchtown, Gravois Park, and Mount Pleasant. These intervention sites were identified by the St. Louis Board of Alderman, in concert with Cure Violence International and the Health Department, as areas with high rates of gun violence.
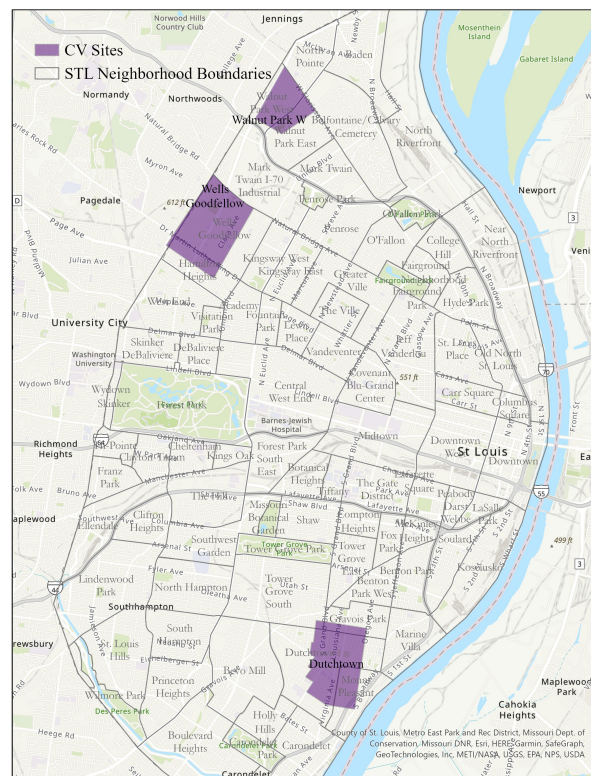

FIGURE 1. CURE VIOLENCE SITE BOUNDARIES

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[a] Note that these also sometimes referred to as "catchment areas."

Selection of Comparison Sites

The discrepancy between intervention site boundaries and formal neighborhood boundaries renders the identification of sites against which to compare the impact of the intervention difficult. Following prior research[1], we used an iterative process for selecting comparison sites appropriate in situations like ours where a randomized controlled trial was not feasible. We focused on five selection criteria, which included size, location, levels of gun violence, population demographics, and proximity to the intervention. In regard to size, we selected areas that, on average, were equivalent to the size of the intervention sites. We limited our selection to areas of the city that were at least one-half of a mile away from the city boundary and a similar distance from any of the intervention sites. Our rationale was twofold. Comparison sites on the boundary of St. Louis County might inadvertently capture dynamics occurring outside of the city.[b] Comparison sites too close to the intervention sites might be contaminated by spill-over from the CV intervention. Program spillover, or contamination, is well-documented in the scholarly literature. Interpersonal violence often displays a strong degree of spatial autocorrelation,[2] meaning that levels of violence in a focal area tend to be similar to levels of violence in contiguous areas. As a result, neighborhood interventions typically affect levels of
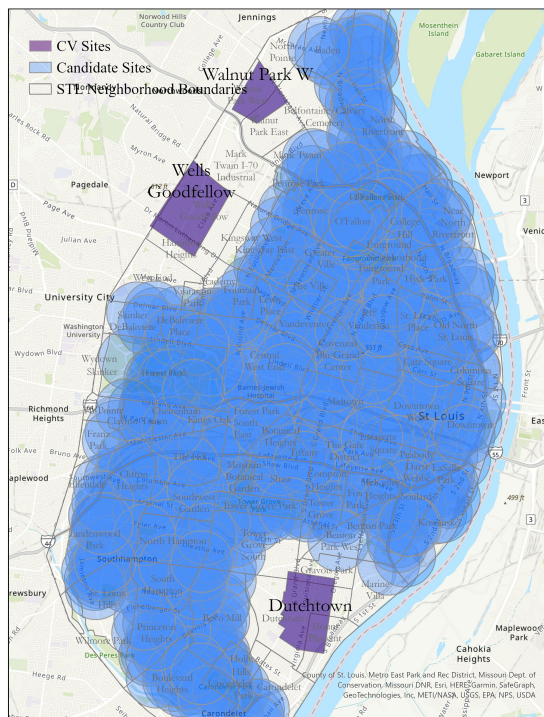
FIGURE 2. CANDIDATE COMPARISON SITES SHOWN AS OVERLAPPING BLUE CIRCLES WITH AREA=0.82 SQUARE MILES (RADIUS=0.51 MILES)

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[b] Importantly, the County is policed by over 80 separate municipal police forces. A related concern was that subsequent analyses of STLPD records would inadvertently miss acts of aggravated assault, robbery, and homicide that occurred just outside of city jurisdictions, thereby artificially deflating crime rates in the comparison sites.

violence in nearby neighborhoods. Such contamination is a key concern in the experimental literature[3] and formed an important consideration in our selection of comparison sites.

Figure 2 displays a series of hundreds of overlapping areas that were used as **candidate** comparison sites (blue areas) – they are the same size as the average CV site, were within the city boundary, and were at least 0.5 miles from the CV neighborhoods. To fulfill the remainder of our selection criteria, we estimated population characteristics in the CV sites and all candidate comparisons. As none of these boundaries coincide with U.S. Census boundaries (i.e., blocks, block groups, nor tracts), we relied on a spatial interpolation procedure to estimate population characteristics using data from the U.S. Census Bureau's American Community Survey. We use data aggregated to the census block group as these are the smallest areas for which income information are publicly accessible from the Census Bureau. These data were culled from the 2015 - 2019 American Community Survey 5-year estimates, the most recent data available at the time.

Estimating Population Demographics with Interpolation

The interpretation method involves (1) creating a crosswalk file, (2) gathering the demographic data, (3) computing weights, and (4) weighting the mean of the demographic characteristics in the CV and candidate sites. We first created a crosswalk shapefile that combined the spatial boundaries of the areas for which we needed to estimate population characteristics and the block groups. We used the Union tool in ArcGIS Pro 3.0.1 to create the crosswalk shapefile.

Next, we pulled the 2015-19 American Community Survey data from the National Historical Geographic Information Systems Project (NHGIS) hosted through the University of Michigan's Integrated Public Use Microdata Series (IPUMS).[4] Measures were created for population size, percent of the population that are males aged 15-24 (the group at highest risk for violence), racial/ethnic composition, percent of the population that lived at the same address for more than one year, percent of the population in poverty, percent of the population unemployed, percent of households that were owner occupied, and the number of housing units. These measures were selected because they reflect established correlates of neighborhood violence.[5,6]

To create the weights, we merged the block group data with the crossover file using a one-to-many join to apportion the data. The weighted mean was computed for each of the measures. At the time we initially selected comparison sites, we followed best practice and used the areal size of the crosswalk file to apportion the 2015-2019 American Community Survey estimates.[7] As a robustness check, we have since assessed alternative weighting methods using area-based and parcel-based interpolation. Area-based interpolation used the same process as initial selection, except we now use the most recent American Community Survey estimates available for 2016-2020, which more closely coincide with the evaluation period. To conduct parcel-based interpolation, we used 2020 St. Louis parcel data from the city and instead relied on the total number of housing units in each area to create the weights for apportionment. Both interpolation methods yielded similar population estimates to those reported here.

Final Comparison Sites

Using the estimated demographic characteristics and incident-based gun violence data provided by the St. Louis Metropolitan Police Department (SLMPD), we selected comparison sites that most closely matched the CV sites. The list of candidates was sorted by levels of gun violence (gun homicides, gun robberies, and gun assaults) and demographic characteristics. Areas that had fewer than 100 housing units were excluded so that sufficient households were available for the community survey (described in greater detail below).

We selected a total of six comparison sites from the list of candidates described above. They are shown in Figure 3. Three of the sites were selected because they most closely resembled the CV sites. During our planning conversations with the City Health Department, we were informed that the city was interested in expanding the CV intervention to three additional neighborhoods: Baden, Greater Ville, and Old North. The Greater Ville was already included as a comparison site. With the understanding (at that time) that CV expansion was an objective of the city, the inclusion of Baden and Old North offered the ability to perform a pre- and post-test surveys in these sites. One additional comparison site was selected as a contrast to the CV sites, to increase variation generally for statistical analyses and specifically for the community survey responses. This site is centered around the intersection of Gravois Avenue and Chippewa Street and referred to as "Hamptons" in this report.
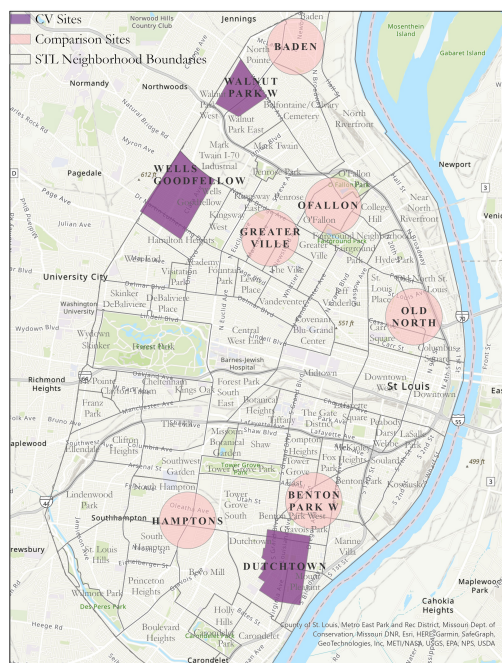
FIGURE 3. CV SITES AND FINAL COMPARISON SITES USED IN EVALUATION.

As with the intervention sites, our selection methods ensure that the boundaries of our comparison areas also overlap multiple commonly recognized St. Louis neighborhoods. In following the naming conventions used by the Cure Violence program, we adopted St. Louis neighborhood names to refer to these sites throughout the evaluation. The comparison sites and their locations are listed in Table 1.

Table 1. Locations of CV Sites and Comparison Sites in Relation to Recognized St. Louis Neighborhood Boundaries	
Evaluation Site Name	**Includes Parts of the Following St. Louis Neighborhoods**
CV Sites	
Dutchtown	Dutchtown, Gravois Park, Mount Pleasant
Wells Goodfellow	Wells Goodfellow, Hamilton Heights
Walnut Park W	Walnut Park West, Walnut Park East
Comparison Sites	
Baden	Baden, North Pointe, Calvary Cemetery
Benton Park West	Benton Park West, Gravois Park, Tower Grove East, Benton Park, Marina Villa
Greater Ville	Greater Ville, The Ville, Kingsway East, Penrose
O'Fallon	O'Fallon, Fairground Neighborhood, College Hill, Penrose
Old North	Old North St. Louis, St. Louis Place, Carr Square, Columbus Square, Near North Riverfront
Hamptons (contrast)	North Hampton, South Hampton, Tower Grove South, Bevo Mill

Prior to implementation, the sites used in this evaluation had an average of 10.5 incidents of gun violence each month between January 2017 and June 2020, and the monthly gun homicide rate was approximately 1 homicide per 1,000 residents. The average evaluation site had 887 residents, 5% of whom were males aged 15-24, 18% were white, 76% were Black, 2.9% were Hispanic, 10.3% were unemployed, and 28% were living in poverty. Among the 512 households located in the evaluation sites, roughly 41% were owner-occupied.

Table 2 provides summary statistics for sites used in the evaluation, as well as a citywide average for areas of similar size. As demonstrated here, the comparison sites, both including and excluding the Hamptons site, are much more similar to the CV sites across all indicators than the citywide average. Given the nonexperimental design of the intervention, the selected sites represent the best possible comparisons for drawing valid inferences about the impact of the Cure Violence program.

Table 2. Summary statistics for CV sites and comparison sites used in evaluation.				
Variable	**CV Sites** Average	**Comparison Sites** (excluding Hamptons) Average	**Comparisons + Hamptons** Average	**Non-CV Sites** (Citywide) Average
Monthly Gun Violence Count	13.3	10.2	9.1	3.9
Monthly Gun Homicide Rate	1.5	0.8	0.7	0.3
Population Size	851.0	1,036.6	1,010.3	1,176.5
% Young Males	4.2	6.1	6.0	5.5
% White	14.2	10.4	20.1	47.0
% Black	80.9	86.6	75.9	45.9
% Hispanic	3.0	2.0	2.5	3.2
% Unemployed	11.1	12.2	11.6	7.2
% Owner Occupied	40.8	37.1	38.2	42.9
% Below Poverty	31.9	26.9	25.9	20.6
# Housing Units	493.3	634.7	618.4	703.4

SECTION 3 | COMMUNITY NORMS SURVEY

One of the intermediate goals of the Cure Violence program is to change community norms and attitudes around violent conduct. Cure violence workers engage community leaders, residents, local business owners, faith leaders, service providers, and those at the highest risk of violent conduct by hosting events and distributing materials espousing messages of nonviolence and positive community norms.[8] These engagement activities include public messaging campaigns, post-shooting vigils and rallies, and building positive relationships with law enforcement and local leaders. As explained in the Cure Violence theory of change,[9] these efforts are intended to expose community members to antiviolence messages, which, in turn, will help communities gain self-efficacy to reduce violence. Over time, the community should grow increasingly motivated to reduce violence and become actively involved in antiviolence efforts. Ultimately, violence will become less normalized, leading to long-term, sustained reductions in shootings and homicides. Communities targeted by CV interventions should display less tolerance for violence, greater cohesion, less fear and perceived risk of victimization, and less perceived violence overtime than those without a CV intervention.

In order to assess the impact of CV on these community-level outcomes, our team designed a longitudinal evaluation that used a survey instrument to assess changes in attitudes and norms toward violence/anti-violence among a stratified random sample of residents living in the three intervention sites and six comparison sites. The initial evaluation design proposed to the City Health Department called for the collection of baseline community data *prior to* the implementation of the CV intervention and two subsequent waves of annual surveys. Due to contractual issues with the city, the evaluation was ultimately delayed a full 15 months after the intervention was implemented. The city subsequently cancelled the evaluation mid-way through the three-year contract, thereby limiting the longitudinal survey to just two waves. As a result, there is no baseline data on community norms in any of the intervention sites. *Therefore, the community survey is not able to assess changes in violence/anti-violence community norms and attitudes between pre- and post- CV implementation periods*. Instead, we are limited in our assessment to changes in norms and attitudes *within* intervention and comparison communities over a one-year evaluation period. If the CV model has affected short-term change in how community residents view violence, we might expect there to be greater increases, for instance, in anti-violence attitudes in the intervention sites relative to the comparison sites between the two survey periods. We acknowledge at the outset that it is unlikely we will observe any changes in community norms in such a narrow window of time, especially in the absence of baseline data. That being said, in the following sections we describe our sampling strategy, survey design and implementation, and summary results from the community survey.

Sampling Procedure

We used a stratified random sample to select households to participate in the community norms survey. The primary strata were the nine sites described above. Our sampling frame consisted

of all residential dwellings in each stratum that were recorded as occupied as of January 2021. We used a random number generator to randomly select households from the sampling frame. We initially targeted 85 households within each site (N = 765 overall). The survey literature suggests that mail-based community surveys like this usually yield a 10 to 15 percent response rate, although this is often lower in high-risk neighborhoods.[10,11,12] We therefore anticipated a low response rate. In an attempt to overcome this limitation, we oversampled 15 households in each site, leading to an overall target of 900 households (100 per site). This target was selected for practical reasons. First, we needed a large enough sample within each site to generate reliable estimates of community norms. Second, we anticipated issues with response rates, attrition, and neighborhood turnover. Third, given our use of incentives our sample size was limited by fiscal constraints. As described in greater detail below, we used a randomized procedure to replace units that were deemed vacant, those inadvertently sent to businesses, and those for whom multiple mailings were returned as 'Undeliverable' by the U.S. postal service. The sampling strategy, recruitment plan, survey content, and survey administration procedures were all approved by the Washington University Institutional Review Board (Protocol # 202108125).

Survey Administration

Surveys were administered electronically via Qualtrics. Households were given the option of completing paper surveys if they were uncomfortable completing the survey online. Following conventional practices, we requested that the household member over the age of 18 whose birthday was closest to June 15th complete the survey. To encourage participation, respondents were offered up to $25 in incentives, taking the form of electronic gift cards. Respondents were given $10 for simply clicking the link to the initial consent form, regardless of whether they consented or refused to complete the survey. Those who consented were given another $15 once the survey was completed. A copy of the W2 survey can be found in Appendix B.[d]

We began the Wave 1 survey rollout by posting flyers in public places in each of the nine sites. In total, flyers were posted at 20 locations across the city. The flyers provided information on the nature of the survey and alerted community members to check their mail for further instruction. In October 2021, households selected for the first wave of the community norms survey were contacted via U.S. postal service. We sent a postcard alerting households that they were selected for the study and to anticipate a subsequent mailing with detailed instructions on how to complete the survey. Two weeks later, households received a follow-up post card with a QR code, URL, and instructions on how to scan and access the Qualtrics platform. After the second mailer, the research team began outreach efforts. We started by hosting drop-in sites at eight public spaces between November 19th and December 16th. These sites were arranged to allow participants the option to go to a public location in their neighborhood to complete the survey on a Washington University-owned device. The eight drop-in sites spanned all nine neighborhoods,

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[d] The W1 survey instrument can be found at https://sites.wustl.edu/publichealth/files/2023/08/St-Louis-Neighborhood-Survey_Wave-1.pdf

and were made up of three public libraries, two community organizations, and the three Cure Violence sites themselves. During the same timeframe, our team hired seven community outreach workers to canvas the sites and encourage survey completion. Along with evaluation staff, these outreach workers went door-to-door to 836 houses between December 2021 and February 2022.

Our initial mailings and drop-in centers yielded very low response rates. We speculated that respondents were unable to discern our postcards from junk mail. In an effort to overcome this limitation, we developed a trifold mailer that we subsequently sent to respondents. The mailer contained much more detailed information on the nature of the study, the motivation for the project, and instructions on how to claim incentives. A copy of all outreach materials can be found in Appendix C. We followed up with a subsequent mailer several weeks later with the same instructions and a note stating that the survey (and, consequently, the ability to earn the incentive) would stop on March 28th, 2022. With the final mailing, we included a paper copy of the survey with a return envelope. Our entire survey administration protocol follows best practices reported in the scholarly literature.[13]

In total, the Wave 1 survey remained open for six months. Of the 900 original mailings 266 were deemed undeliverable by the U.S. Post Office. During our canvasing, we visited the addresses associated with these returned mailings. In multiple instances, it was clear that the addresses were vacant and/or non-existent. When this occurred, we randomly substituted a new address from our master list of addresses. In total, we repeated this substitution three times for each address. Of the 900 households that were sent the first mailing, 266 were deemed unoccupied. Of these 266 replacement households, an additional 74 were undeliverable and had to be substituted again from the master list. Finally, 8 of these 74 replacements were also deemed vacant and replaced a final time. Out of this final list of addresses, 78 mailings were returned due to vacancies but not replaced due to the delay of their return.[e]

FIGURE 4. REPLACEMENTS BY NEIGHBORHOOD

Batch 1   Batch 2   Batch 3

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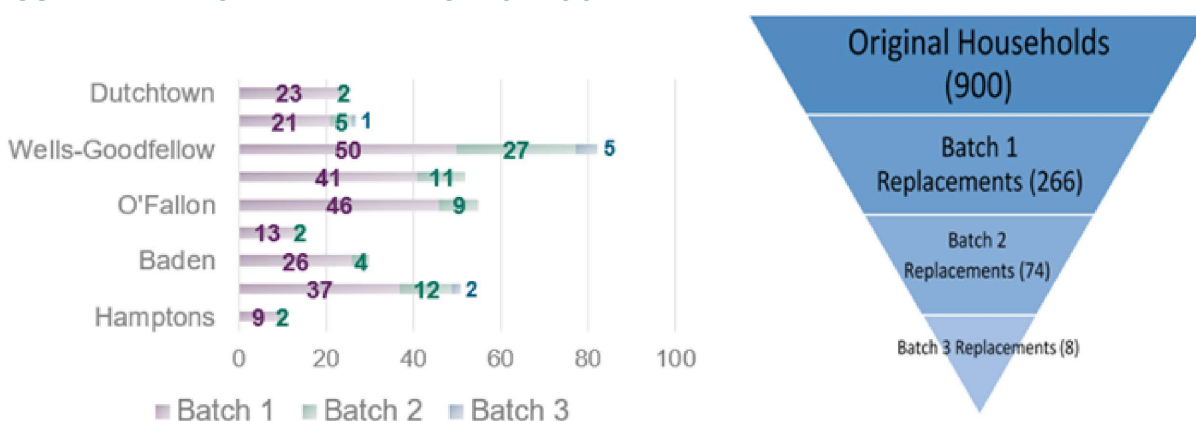
[e] While the volume of undeliverable mailings may seem high, it is important to remember that our sample sites are among the most socioeconomically deprived areas in St. Louis. They are characterized by high rates of residential mobility and a substantial number of vacant, blighted, and condemned homes.

Figure 4 outlines the replacement structure and the number of replacements by neighborhood. Newly selected households were provided with information on how to complete the survey. Through our various contact and outreach efforts, we received 267 survey responses to the Wave 1 survey, completed in full or part. This translates to an overall response rate of 30 percent. We received 50 refusals during canvassing. Response rates varied somewhat by neighborhood, shown in Table 3. The response rate is considerably higher than we anticipated.[10,11,12] It is especially strong given the high-crime and socioeconomically deprived nature of the neighborhoods included in the sample. Of the recruitment methods used, canvassing and formal letters (i.e., our trifold) yielded the highest number of responses, with canvassing bringing in 139 responses and formal letters bringing in 79. Postcards yielded 46 responses, while only 2 surveys were completed at drop-in sites. Overall, the sample consists of 91 respondents from Cure Violence sites and 176 respondents from comparison sites. Sixty percent of respondents completed the survey online; the remaining 40 percent completed the paper version.

Table 3. Response Rates by Site	
A – Dutchtown	31%
B – Walnut Park	33%
C – Wells-Goodfellow	26%
D – Greater Ville	23%
E – O'Fallon	24%
F – Benton Park	30%
G – Baden	28%
H – Old North	28%
J - Hampton	43%

The Wave 2 survey administration followed the same general process outlined above. In the fall of 2022, the same 900 households deemed occupied through the iterative process outlined above were first sent a postcard with instructions on how to take the survey online or request a paper copy. As with the previous survey, respondents were alerted to the purpose of the study and reminded that they could receive up to $25 in incentives for their participation. We sent a tri-fold mailing two weeks after sending the postcard and began door to door canvassing. Unfortunately, we were informed in mid-November that money budgeted by the city for the Cure Violence program, including the evaluation, had run out. We were forced to cease the majority of evaluation activities while decisions were being made about the future of funding for Cure

Violence. As a result, we had to pause survey collection and outreach. It wasn't until early-March that we were given the okay to resume evaluation activities. At that point, we re-opened the survey and one more mailing to households that included a paper copy of the survey and return postage. In total, 268 respondents completed the Wave 2 survey. This number would have undoubtedly been higher if not for the pause in evaluation activities.

Our overall sample consists of two unique groups of respondents. Given the high level of turnover in the intervention and comparison sites, we initially planned for a repeated cross-section design. By targeting the same households, we were optimistic that we could retain a smaller panel sample, meaning that we could survey a subset of the same individuals at both waves. This approach allows us to detect both aggregate changes in community norms through the repeated cross-section design as well as within-*individual* changes through the panel sample. In total, 168 households completed surveys at both waves. As households were the primary sampling unit, this reflects a 37 % attrition rate. Of these 168 households, 44 appear to be new individuals completing the survey. This is likely due to mobility between waves (e.g., original respondents moving out of their homes and new respondents moving in). We can confirm that six of these 44 new individuals were family members of the original respondent. Removing these 44 individuals from the panel sample results in an individual attrition rate of 53%. On the whole, the attrition rate is consistent with what we would expect given the hard to access nature of the sample.

Survey Content

The survey taps into several dimensions of community cohesion, norms around violent conduct, perceptions of and experiences with community violence, and perceptions of law enforcement and local government among other topics. These constructs each map onto key aspects of the CV theory of change (available in Appendix D).[9] We also collected sociodemographic information from respondents. In order to ensure the internal validity and reliability of the survey instruments, we developed the questionnaire after an in-depth review of the empirical literature and selected items and scales that have been validated and are well-known in the academic literature on community social processes. We also selected items that have been used in other evaluations of Cure Violence and community-based violence prevention programs like Cure Violence. The survey was reviewed by several experts in the areas of violence prevention, urban sociology, and juvenile justice and pretested on a sample of undergraduate criminal justice majors from two universities. The instrument was then reviewed by the Community Advisory Board of the Institute for Public Health's Center for Community Health Partnership and Research to ensure that question wording and content was appropriate for the communities in which it would be fielded. Some items were modified to ensure that the survey could be understood at a sixth-grade reading level, which is common practice in the survey implementation literature.

At the time we were drafting the survey, we did not have direct communication with Cure Violence staff. During the first several months of the evaluation, our relationship with the staff

was mediated by the City Health Department, which created some challenges to soliciting feedback on the survey from the Cure Violence team. In the interest of fulfilling our contract and remaining on schedule, we administered the first wave of the survey without receiving input on the instrument from either the health department or the Cure Violence site staff, despite multiple requests being made. This resulted in some concerns from the Cure Violence staff regarding their lack of involvement in the development of the survey instrument. We consulted with the health department about solutions to these concerns. We advised that we could close the survey and revisit the content, but this would come at the cost of further delaying the survey and discarding the completed surveys we had already begun to collect. In the end, the health department decided to keep the survey as it was and continue with data collection uninterrupted. Unfortunately, this strained our relationship with the site staff, which has proven to be a barrier in executing other evaluation activities throughout the course of the project.

In an attempt to alleviate concerns over survey content communicated from CV staff and to rebuild trust, we removed several scales and individual items from the Wave 2 survey deemed inappropriate and/or traumatizing. These included measures of Adverse Childhood Experiences, knowledge of drug markets and crime in respondents' neighborhoods, vignettes that asked participants to respond to hypothetical vignettes, and items with low reliability and validity from the first wave.

The measures used in the community survey instrument and their associated reliability and validity within our sample are described below. In the interest of parsimony, we report reliability indices as measured at the time of the Wave 1 survey. There were no notable departures in psychometric properties of scales and indices between Wave 1 and Wave 2.

Community Cohesion

We assessed community cohesion through two measures: *Collective Efficacy* and *Neighborhood Connectedness.* As the questions used to measure these concepts are inherently linked to respondents' perceived neighborhood boundaries, we prompted respondents to think about their neighborhoods as the general area encompassing several blocks in each direction from where they live. Our motivation here was to anchor responses within our bespoke communities as best as possible. The Collective Efficacy scale is drawn from the landmark 1997 study published by Sampson, Raudenbush and Earls.[14] Collective efficacy is one of the strongest correlates of urban violence and victimization, as well as a host of other social behaviors.[6,15,16,17] The collective efficacy scale has two dimensions, *willingness to intervene* and *capacity for informal social control.* These items combine Likert-type responses to a variety of items about respondents' perceptions of their neighborhoods. *Willingness to intervene* was measured by asking respondents how likely or unlikely their neighbors would be to intervene if they saw children skipping school, spray painting graffiti, disrespecting adults, a fight in front of their home, and the local fire station being threatened with budget cuts. *Capacity for Informal Social Control* was measured by how strongly respondents agreed with the following statements: People around here are willing to help their neighbors, this is a close-knit neighborhood, people in this neighborhood can be trusted, people in this neighborhood get

along with each other, people in this neighborhood share the same values. Both concepts tie directly to the concept of efficacy for violence prevention espoused in the logic model. In both cases, the scales are constructed by averaging across items such that higher composite scores indicate greater willingness to intervene and greater capacity for informal social control, respectively. Each scale loads on a single factor and demonstrates strong internal reliability (α = .83 for both scales).

Neighborhood Connectedness measures how strongly respondents agree with a series of statements about their attachment to their neighborhoods, their sense of belonging, and the capacity of the community to collectively solve. These items are adapted from Frost and Meyer.[18] As with the measures of collective efficacy, these items all load on a single factor and demonstrate strong internal reliability (α = .83). The measure of neighborhood connectedness was constructed by averaging across these nine items, with higher values indicating a stronger perceived level of neighborhood connectedness. This scale provides an alternative, but closely related measure of a community's ability to come together.

Norms and Attitudes around Violence

We used four related scales to tap into community norms and attitudes about violence and criminal behavior more generally: *Code of the Streets, Legal Cynicism, Rationalizations toward Violence, and Stigma of System Involvement.* Each of the constructs have garnered significant attention in the criminological literature and provide a comprehensive view of how much community residents tolerate or endorse violence.

Code of the Streets refers to a cultural orientation in which violence is encouraged, and oftentimes deemed a necessary solution to interpersonal conflicts.[19] We borrowed from the widely used survey measure developed by Stewart and Simmons.[20,21] The scale consists of nine items asking respondents how strongly they agree with a series of statements such as: "When someone disrespects use, it is important to use physical force or aggression to teach them not to disrespect you" and "People will take advantage of you if you don't show them how tough you are." The nine items demonstrate strong internal reliability (α = .81). We constructed the scale by averaging across these items such that higher values indicate greater adherence to the street code.

Legal Cynicism refers to a general "cultural frame through which the law and agents of its enforcement are viewed as illegitimate, unresponsive, and ill equipped to ensure public safety."[22,23] In the absence of legal recourse, residents may turn to extralegal means of conflict resolution, such as violence to solve interpersonal disputes. Our measure of legal cynicism averages across five items assessing how much respondents agree with statements like "laws are made to be broken." The scale demonstrates less-than-acceptable internal reliability (α = 0.64). As a result, we present subsequent analyses with both the five-item averaged scales as well as by single items.

Rationalizations toward Violence is a four-item scale adapted from the longitudinal evaluations of the National Gang Education and Training initiative (G.R.E.A.T.)[24,25] and used in several

recent longitudinal evaluations of violence prevention programs in the greater St. Louis Region (UMSL CSSI; Project Restore).[26] Respondents were asked how strongly they agreed with statements like "it's okay to beat somebody up if they hit you first" and "it's okay to beat someone up if they talk about you behind your back." The items demonstrate sufficient internal reliability (α = 0.73) and load on a single factor. The final measure is constructed by averaging across items such that higher values indicate more permissive attitudes toward the use of violence.

Stigma of System Involvement is measured though several items intended to gauge how respondents feel about justice involvement. As the CV intervention unfolds, we might expect contact with the police, courts, and jails and prisons to become denormalized in the intervention sites. We originally included ten items intended to capture how respondents normalized system contact in their communities. Through data reduction procedures, we generated a four-item scale with strong internal reliability. The items in the scale include "going to prison gives you more respect from people in the neighborhood", "going to prison is honorable because it means you didn't snitch", "If I went to prison, I would get more respect", and "I would rather go to prison than have my friends think less of me". The scale was constructed by averaging across these items such that higher values indicate more perceived stigma of system involvement (α = 0.79).

Perceptions of and Experiences with Community Violence

If the CV intervention is successful in changing attitudes and norms around violence, the immediate effects on gun violence might not be observed immediately in official crime statistics. However, if norms around violence are shifting, we should observe tangible changes on how respondents view violence in their neighborhoods, their perceived safety, and the steps they take to insulate themselves from victimization. To gauge these more intermediary outcomes, we included several measures that tap into how respondents view violence in their communities and the decisions they make to avoid risky situations.

We began by asking respondents about their experiences with community violence in the recent past. Items include questions about how often respondents report that they heard gunshots in the past 30 days, how common it is for people to belong to gangs in the neighborhood (1 = uncommon; 5 = common), how common it is for people to carry guns in the neighborhood, and whether respondents had ever witnessed anyone threatened with a gun in their neighborhoods. We followed-up by asking seven questions about social disorder. These include questions probing respondents on the impact of speeding cars, package theft, street racing, poorly kept buildings, groups causing trouble, gunshots, and gangs are in the neighborhood. We next asked respondents whether they had witnessed or personally experienced several types of violent victimization, ranging from simple assault, to robbery, to homicide. For personal victimization experiences, we followed-up with a series of questions asking whether the respondent reported the event to the police and if not, why. We probed respondents about their knowledge of criminal markets in their neighborhoods by asking whether they had been offered stolen goods or drugs and how confident they were that they could purchase drugs in their neighborhood if they so desired. Finally, we asked respondents to rank the level of violence in their

neighborhoods relative to the rest of the city. As all of these items reflect recent experiences, and not latent psychometric constructs, we report outcomes for each item independently rather than generating summary scales.

In order to assess how neighborhood crime affects the day-to-day experiences of respondents, we asked them to report how much they *fear crime* in their neighborhoods, how they perceive their *risk of victimization* in the areas near their homes, how *safe* they feel in their neighborhoods, and whether they *avoid* activities out of fear of being victimized. Both the Fear and Risk scales are adapted from Ferraro[27] and ask respondents how much they fear and the likelihood of being the victim of 12 different crimes including having their homes burglarized, being assaulted, and being murdered. Both the fear and risk scales demonstrate strong internal reliability (α = 0.94; 0.92, respectively). *Safety* measures how safe respondents feel alone in their homes at night, outside in the neighborhoods at night, and walking alone toward a group of people they do not know in the neighborhood. Finally, avoidance behaviors include items gauging how often respondents avoid doing things like walking alone, going to parks, and going to the store out of fear of being attacked (α = 0.91).

We employed the CDC-Kaiser Permanente Adverse Childhood Experiences (ACEs) Scale[28] to measure respondents' experiences with physical abuse, verbal abuse, sexual abuse, physical neglect, emotional neglect, and family functioning prior to their 18th birthday. ACEs have been related to a host of negative outcomes, such as physically harming others in response to perceived insults,[29,30] violence against intimates, friends, and strangers,[31] the inhibition of altruistic attitudes and beliefs,[32] and the misinterpretation of innocuous events as hostile,[33] all of which are directly related to community norms surrounding violence. Following standard procedure, we asked respondents a series of yes/no questions about things that might have happened in their homes as children (e.g., witnessing domestic violence, not having enough to eat, experiencing sexual assault). Each 'yes' answer is scored as one. An ACE score is then generated by summing across items. For instance, someone who witnessed their parent push or hit another adult in the household and who also lived in a home with a problematic drinker would have an ACE score of 2. The higher the ACE score, the more trauma experienced by the respondent. This measure was not included in W2 of the survey due to concerns expressed by CV staff about the sensitivity of the questions.

Perceptions of Law Enforcement and Local Government

We assessed perceptions of law enforcement through a multi-pronged approach adapted from Reisig and colleagues[34] and recently adapted by the St. Louis Violence Prevention Community Outreach Committee to survey St. Louis residents on their perceptions of the SLMPD. Perceptions of law enforcement is captured through two main measures – Procedural Justice and Legitimacy – and their associated subscales. *Procedural Justice* captures the dimensions of *quality of treatment, decision making,* and *distributive fairness.* Each subscale is measured through Likert-type responses asking respondents how much they agree with a series of statements about law enforcement. Quality of treatment consists of five items capturing how respectful respondents feel police are toward citizens (α = .94). Quality of decision making

includes five items asking whether police make decisions based on facts, whether they admit mistakes, and whether they explain decisions to people they deal with (α = 0.83). Distributive fairness includes five items capturing whether respondents thought that police enforced the laws consistently irrespective of the race or wealth of citizens (α = 0.81). Following Resig and colleagues, we treat these subscale as stand-alone concepts and also combine them to create a composite measure of *procedural justice*. The composite scale also demonstrates strong internal reliability (α= 0.94).

Legitimacy is operationalized as an additive index consisting of three subscales: *Obligation to Obey the Law*, *Trust in Police*, and *Obligation to Cooperate*. Obligation to obey is measured through two items in which respondents are asked how willing they would be to accept officer decisions with which they disagreed (α = 0.69). Trust in police is measured through four items asking respondents whether they trust the police to make decisions that are 'right' for the community (α = 0.80). Obligation to cooperate is measured through three items asking respondents whether they will contact the police if they see a crime and whether they would aid the police in searching for a suspect (α = 0.86). As with the measure of *Procedural Justice*, we treat these subscale as stand-alone concepts and also combine them to create a composite measure of *Legitimacy* (α = 0.84).

We assessed perceptions of local government by asking respondents how much respondents *trust* the city and state Governments. We similarly assessed civic engagement by asking respondents whether they had voted in recent elections, whether they willingly volunteered in the communities, and their views on the importance of voting, volunteering, and serving on juries. We also asked respondents whether they were familiar with a variety of violence prevention efforts happening in the city, including Cure Violence. Finally, as opinions about the police can be sullied by individual experiences with law enforcement and the criminal legal system, we included several questions asking respondents about their recent experiences with law enforcement and their histories of justice involvement.

Racial Justice

The Cure Violence roll-out in St. Louis coincided not only with the COVID-19 pandemic, but also with the death of George Floyd and the ensuing racial reckoning in the United States. St. Louis is no stranger to issues of racial bias and officer-involved shootings of young, Black men. Given the salience of race, policing, and surging community violence from 2020 into 2021, we felt it prudent to ask community members about issues of racial injustice, especially around law enforcement. Specifically, we asked respondents whether people from their racial group were more likely to be stopped and treated unfairly by police (alpha = .90). We also asked respondents whether they thought that Black or white people were more likely to be stopped, ticketed, sent to jail, and receive the death penalty (alpha = .79). These items were drawn from Henderson et al.[35] and Hagan and colleagues.[36] Items are scored such that higher values reflect greater degrees of racial *unfairness* and *injustice*.

Community Survey Results

Descriptive Highlights from Wave 1

Wave 1 survey results offer a glimpse into respondents' perceptions and experiences of violence. A full accounting of the bivariate means, proportions, and standard deviations for the entire Wave 1 sample can be found in tables 4 through 8. Rather than provide a line-by-line description here, we instead highlight what we see as the most striking findings. First and foremost, the descriptive statistics overwhelmingly highlight the ubiquity of gun violence in the highest risk areas of St. Louis. A very high percentage (91%) of respondents reported hearing gunshots in their neighborhood in the past 30 days, which corresponds with recent research conducted in high-violence areas of St. Louis.[37] A high percentage (70%) of respondents reported that their neighborhood is as violent as or more violent than other neighborhoods in St. Louis. A similar percentage report people carrying guns to be commonplace in their neighborhoods. A third of the respondents reporting having witnessed a shooting first-hand in their neighborhood and a full quarter have personally witnessed a homicide in the past 12 months.

The modal American has an Adverse Childhood Experience score of 1.[38] The average respondent in our sample has an ACE score of 13. The higher the score, the more likely the respondent is to suffer from mental illness, physical illness, and substance abuse. The levels of trauma experienced by respondents in these neighborhoods is staggering. Violence permeates respondents' everyday lives, with the average respondent reporting that they feel unsafe being outside alone at night and around groups of people in their neighborhood that they do not know. The average respondent is afraid of falling victim to crime in their neighborhood.

Despite the high levels of violence, the average respondent does not endorse the "code of the streets," hold cynical attitudes about the justice system, or rationalize the use of violence. The overwhelming majority of respondents find justice involvement to be stigmatizing, rather than a badge of honor. Respondents generally report their neighborhoods to be cohesive and their neighbors willing to intervene should trouble arise. Perhaps not surprising given the high degree of publicity around American policing, the average respondent holds unfavorable opinions of the St. Louis Metropolitan Police Department. This is especially true of the measures of obligation to obey and cooperate. The average respondent reports that the police treat people of their racial/ethnic group unfairly. This is especially true of Black respondents relative to white respondents (3.96 vs. 2.00, respectively; t = 14.23, p <.0001). The same is true for perceptions of racial injustice within the criminal legal system, with Black respondents overwhelmingly reporting perceived biases in how Black Americans are treated by law enforcement and court actors. These opinions seem to operate independently of direct police contact, as only seven percent of respondents report being stopped by the police and fewer than one percent report being charged with a crime.

Table 4. Summary of Community Cohesion Items

Items	Mean	Standard deviation	Number of respondents	α (Chronbach's alpha)
Community Cohesion				
Community Connectedness	3.57	0.70	264	0.83
Community Efficacy — Cohesion	3.15	0.97	263	0.83
Collective Efficacy — Information Social Control	3.01	0.42	263	0.83

Notes: *N refers to number of respondents that completed all of the constituent scale items.*

α = Cronbach's alpha, a measure of the internal reliability of a scale.

Alphas over .70 are generally considered indicative of strong internal reliability.

Items measured on a 5 point scale, with a higher score indicating higher levels of community cohesion.

Table 5. Summary of Norms and Attitudes around Violence

Items	Mean	Standard deviation	Number of respondents	α (Chronbach's alpha)
Code of the Streets	2.27	0.77	261	0.77
Legal Cynicism	2.47	0.72	263	0.64
Rationalization of Violence	2.58	0.84	254	0.73
Stigma of System Involvement	4.25	0.69	251	0.79

Notes: *N refers to number of respondents that completed all of the constituent scale items.*

α = Cronbach's alpha, a measure of the internal reliability of a scale.

Values over .70 are generally considered indicative of strong internal reliability.

Items measured on a 5-point scale, with a higher score indicating higher levels of each construct.

Table 6. Summary of Perceptions/Experiences with Violence

Items	Mean	Standard deviation	Number of respondents	α (Chronbach's alpha)
Heard Gunshots[I]	3.13	1.04	265	----
Gangs Common[I]	3.02	1.21	259	----
Gun carrying Common[I]	2.00	1.06	262	----
How much of a Problem are…[II]				
Cars Speeding	2.49	0.68	262	----
Run-down buildings	2.33	0.75	264	----
Group causing trouble	1.72	0.76	261	----
Gunshots	2.45	0.72	263	----
Gangs	1.73	0.76	255	----
Mail / Package Theft	1.86	0.76	260	----
Street Racing	1.88	0.81	259	----
Witnessed…[III]				
Chased	0.21	0.41	252	----
Assaulted	0.23	0.43	251	----
Sexual Assault	0.06	0.23	252	----
Attacked with a weapon	0.16	0.37	253	----
Shot at	0.31	0.46	251	----
Murder	0.25	0.44	252	----

Experienced…[III]				
Chased	0.04	0.19	261	----
Assaulted	0.05	0.21	260	----
Sexual Assault	0.02	0.14	259	----
Attacked with a weapon	0.01	0.08	261	----
Shot at	0.02	0.14	261	----
How unsafe do you feel…[IV]				
At home at night	1.75	0.93	253	----
Outside in your neighborhood at night	3.18	1.15	253	----
Walking toward a group you don't know	3.46	1.04	253	----
Perceived Risk of Crime[IV]	3.07	1.09	246	0.92
Fear of Crime[IV]	3.32	0.83	243	0.94
Neighborhood Avoidance[IV]	2.90	1.25	254	0.88
ACES[V]	13.33	4.19	249	----

Notes: *N refers to number of respondents that completed all of the constituent scale items.*

α = Cronbach's alpha, a measure of the internal reliability of a scale.

Values over .70 are generally considered indicative of strong internal reliability.

[I] *Items measured on a 5-point scale, with higher scores indicating higher commonality.*

[II] *Items measured on a 3-point scale, with higher scores indicating higher levels of social disorder.*

[III] *Items measured on a binary scale, with higher scores indicating higher levels of violence witnessed or experienced.*

[IV] *Items measured on a 5-point scale, with higher scores indicating higher levels of each perception of/experience with violence.*

[V] *ACE scores are generated by summing across items. A higher score indicates higher levels of trauma experienced before age 18.*

Table 7. Summary of Perceptions of Law Enforcement				
Items	Mean	Standard deviation	Number of respondents	α (Chronbach's alpha)
Procedural Justice[I]	2.78	0.60	253	0.94
Quality of Treatment	2.77	0.94	254	0.94
Decision Making	2.70	0.64	256	0.83
Distributive Fairness	2.86	0.52	253	0.81
Legitimacy[I]	2.88	0.62	249	0.84
Obligation to Obey	2.55	0.93	251	0.69
Trust	3.00	0.68	252	0.80
Obligation to Cooperate	2.32	0.96	249	0.86
Trust City Gov't	2.90	0.99	267	----
Trust State Govt'	2.76	1.12	268	----
Justice Contact past 12 months[II]				
Stopped by police	0.07	0.25	254	----
Arrested	0.03	0.16	253	----
Charged with a Crime	0.01	0.09	253	----
Convicted of a Crime	<0.01	0.06	253	----

Notes: *N refers to number of respondents that completed all of the constituent scale items.*

α = Cronbach's alpha, a measure of the internal reliability of a scale.

Values over .70 are generally considered indicative of strong internal reliability.

[I] *Items measured on a 5-point scale, with higher scores indicating higher levels of each perception of law enforcement.*

[II] *Items measured on a binary scale, with higher scores indicating higher levels of contact with police/the justice system.*

Table 8. Summary of Racial Fairness and Justice				
Items	Mean	Standard deviation	Number of respondents	α (Chronbach's alpha)
Racial Unfairness	3.29	1.31	246	0.91
Racial Injustice	3.49	0.83	246	0.79

Notes: *N refers to number of respondents that completed all of the Constituent scale items.*

α = Cronbach's alpha, a measure of the Internal reliability of a scale.

Values over .70 are generally considered indicative of strong internal reliability.

Items measured on a 5-point scale, with higher scores indicating higher levels of perceived racial unfairness and injustice.

Differences in CV and Control Neighborhoods

Wave 1 survey data were used to determine the comparability of CV sites and selected comparison sites on the constructs described earlier in this section.

In terms of demographics, the average respondent is slightly older in CV neighborhoods than comparison neighborhoods (50 vs. 46, respectively). There are proportionately more Black respondents in the CV sites than the comparison sites, a result that holds with and without the inclusion of the Hamptons. Gender is roughly equivalent across sites. Respondents in CV sites are slightly less likely to have a college degree than in comparison sites, a result driven largely by the higher levels of education among residents of the Hamptons site. There are no other notable differences in the demographic backgrounds of respondents between the intervention and comparison sites.

Bivariate differences in each of the assorted measures are presented in Tables 9-13. We present results both including and excluding the Hamptons site, as we expect to observe differences in community norms and attitudes between this comparably "low risk" site relative to the intervention and comparison sites. The column marked "Comp Adj" (Comparison Adjusted) reflects the comparison sites removing the Hamptons site. We assess differences in means using t-tests for our scale items and differences in proportions using Z-tests for our binary outcomes. For ease of interpretation, statistically significant differences are shaded in the tables. P-values are displayed with asterisks (* <.05; **p<.01; ***p<.001), representing convention levels of statistical significance.

Table 9. Differences in Community Cohesion Items between CV and non-CV sites

	CV Sites	Comp. Sites		Comp Adj
Community Connectedness	3.46	3.62	*	3.61
Collective Efficacy – Cohesion	2.97	3.04		3.05
Collective Efficacy – Information Social Control	3.17	3.15		3.20

Notes: *Means presented. Differences assessed via independent samples t-tests*

*** p < .001; **p <.01; *p <.05

Items measured on a 5-point scale, with a higher score indicating higher levels of community cohesion.

Turning to community cohesion, we find that average levels of community connectedness are slightly lower in the three intervention sites relative to the comparison areas (Δ = .18; t = 2.28; p <.05). This difference remains statistically significant with and without the inclusion of the Hamptons site. There are no appreciable differences in the dimensions of collective efficacy between the intervention and comparison sites, suggesting that sites are comparable on these domains.

Table 10 presents differences in attitudes and norms around violence. Average adherence to the code of the streets, levels of legal cynicism, rationalizations of violence, and stigma of system involvement are roughly equivalent across intervention and comparison sites.

Table 10. Differences in Norms and Attitudes around Violence between CV and non-CV sites

	CV Sites	Comp. Sites	Comp. Adj
Code of the Streets	2.32	2.25	2.34
Legal Cynicism	2.56	2.43	2.51
Rationalization of Violence	2.67	2.52	2.60
Stigma of System Involvement	4.20	4.27	4.18

Notes: *Means presented. Differences assessed via independent samples t-tests*

*** p < .001; **p <.01; *p <.05

Items measured on a 5-point scale, with a higher score indicating higher levels of each construct.

Table 11 presents bivariate differences in respondents' perceptions of violence and experiences with victimization in their neighborhoods across sites. In general, respondents in the CV sites report much greater experience with hearing gunshots, a greater presence of gang activity, elevated levels of gun carrying, and greater degrees of social disorder (run-down buildings, groups causing trouble, gunshots) than respondents in the comparison sites. They also report feeling considerably more unsafe at home at night, in their neighborhoods at night, and around groups of people they don't know relative to respondents in the comparison sites. Their average perceived risk of victimization is higher, and as result, their avoidance behaviors higher than respondents in the comparison neighborhoods. Many of these differences are rendered nonsignificant with the exclusion of the Hamptons site, suggesting that much of the differences in perceived neighborhood disorder and risk of victimization are being driven by their relatively low levels in the Hamptons site. Respondents in the CV sites were are more likely to witness people being chased through their neighborhoods and experience physical assault first-hand relative to those in the comparison sites. Respondents in the CV sites also report greater experiences with being personally shot at themselves relative to those in the control sites. There were no other significant differences in vicarious and first-hand victimization experiences between respondents in CV and comparison sites.

Table 11. Differences in Perceptions of and Experiences with Violence between CV and non-CV sites

	CV Sites	Comp. Sites		Comp Adj.	
Heard Gunshots[I]	3.38	3.01	**	3.34	
Gangs Common[I]	3.21	2.86	*	3.08	
Gun carrying Common[I]	4.13	3.84	***	4.30	
***How much of a Problem are…*[II]**					
Cars Speeding	2.50	2.58		2.48	
Run-down buildings	2.52	2.23	***	2.44	
Group causing trouble	1.91	1.62	***	1.71	*
Gunshots	2.63	2.34	***	2.57	
Gangs	1.89	1.64	***	1.76	

Mail / Package Theft	1.91	1.83		1.84	
Street Racing	1.96	1.85		1.99	
***Witnessed…*[III]**					
Chased	.28	.18	*	.20	*
Assaulted	.28	.21		.25	
Sexual Assault	.07	.05		.05	
Attacked with a weapon	.16	.16		.19	
Shot at	.37	.28		.33	
Murder	.30	.23		.28	
***Experienced…*[III]**					
Chased	.02	.04		.06	
Assaulted	.09	.03	*	.03	*
Sexual Assault	.03	.01		.02	
Attacked with a weapon	.01	.01		.01	
Shot at	.05	.01	*	.01	*
***How unsafe do you feel…*[IV]**					
At home at night	1.94	1.65	*	1.77	
Outside in your neighborhood at night	3.38	3.07	*	3.20	
Walking toward a group you don't know	3.64	3.37	*	3.47	
Perceived Risk of Crime[IV]	2.84	2.60	*	2.73	

Fear of Crime[IV]	2.87	2.96		2.84
Neighborhood Avoidance[IV]	3.16	2.79	*	2.99
ACES[V]	12.64	13.68		13.80

Notes: *Means presented. Differences assessed via independent samples t-tests*

*** p < .001; **p <.01; *p <.05

[I] *Items measured on a 5-point scale, with higher scores indicating higher commonality.*

[II] *Items measured on a 3-point scale, with higher scores indicating higher levels of social disorder.*

[III] *Items measured on a binary scale, with higher scores indicating higher levels of violence witnessed or experienced.*

[IV] *Items measured on a 5-point scale, with higher scores indicating higher levels of each perception of/experience with violence.*

[V] *ACE scores are generated by summing across items. A higher score indicates higher levels of trauma experienced before age 18.*

Table 12 presents the differences in perceptions of law enforcement. CV and comparison sites are equivalent on all dimensions of procedural justice and legitimacy except obligation to obey, which was slightly higher among respondents in the CV sites. Interestingly, we observe no difference in respondent awareness of the CV program between respondents in the CV sites relative to the comparison sites. Given the degree of outreach provided throughout neighborhoods in the three CV sites, we would expect to observe much higher awareness of the program in these areas, especially as the survey was conducted more than 12 months after intervention activities began. We surmise that these negligible differences may be attributed to the high visibility of the program city-wide, which suggests program spillover/treatment contamination to non-CV areas of the city.[f] And indeed, respondents across sites were much more likely to report having heard of Cure Violence than any other active violence prevention program operating in the city.

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[f] The threat of program spillover/contamination demonstrates documented challenges with drawing valid conclusions about the effectiveness of interventions in nonexperimental settings.

Table 12. Differences in Perceptions of Law Enforcement between CV and non-CV sites

Items	CV Sites	Comp. Sites		Comp Sites Adj.	
Procedural Justice	**2.84**	**2.74**		**2.77**	
Quality of Treatment	2.84	2.73		2.74	
Decision Making	2.76	2.66		2.67	
Distributive Fairness	2.91	2.84		2.88	
Legitimacy	**3.13**	**3.12**		**3.13**	
Obligation to Obey	2.74	2.50	*	2.44	*
Trust	2.95	3.02		3.02	
Obligation to Cooperate	3.61	3.71		3.69	
Trust City Gov't	2.70	2.81		2.74	
Trust State Govt'	2.90	2.90		2.97	
Awareness of Cure Violence	0.39	0.34		0.35	
Justice Contact past 12 months[1]					
Stopped by police	0.11	0.05		0.05	
Arrested	0.03	0.02		0.02	
Charged with a Crime	0.01	0.01		0.01	
Convicted of a Crime	0.01	0.00		0.00	

Notes: *Means presented. Differences assessed via independent samples t-tests*

1 – differences estimated using differences in proportion tests.

*** $p < .001$; **$p < .01$; *$p < .05$

Table 13 presents the bivariate differences in the measures capturing perceived racial equity. We find that respondents in the CV neighborhoods report significantly higher perceptions of Black Americans being mistreated by the criminal-legal system. This holds with and without the inclusion of the Hamptons site.

These results provide mixed evidence of the comparability of the CV sites and our comparison sites. In general, respondents in the CV and comparison sites are generally equivalent on the measures of community cohesion, norms and attitudes around violent conduct, and their perceptions of law enforcement. Perhaps not surprisingly given the high rates of violence in the CV sites, respondents tend to report higher levels of personal and vicarious victimization experiences than those in the control sites. On the whole, respondents in the intervention and control sites are comparable on the overwhelming majority of domains on which we collected data at Wave 1.

Table 13. Differences in Racial Fairness and Injustice between CV and non-CV sites

	CV Sites	Comp. Sites		Comp. Adj	
Racial Unfairness	3.86	2.99	***	3.46	**
Racial Injustice	3.82	3.33	***	3.31	***

Notes: *Means presented. Differences assessed via independent samples t-tests*

*** $p < .001$; **$p < .01$; *$p < .05$

Demographic Composition of Wave 1 and Wave 2 Samples

We now turn our attention to the demographic composition of the repeated cross-section sample at Waves 1 and 2 and the panel sample at Wave 1 (Table 14). We are especially interested in any differences between samples, as these could reveal evidence of differential attrition or bias introduced into the samples over time. As demonstrated in Table 14, the composition of the Wave 1 sample and Wave 2 repeated cross-section sample are nearly identical on all dimensions. The one notable exception is that slightly more respondents report being in the lowest income bracket ($0-$9,999) at Wave 2 than at Wave 1. This overwhelmingly indicates that the cross-sections are comparable at both waves, suggesting that any observed changes in community norms around and experiences with violence between W1 and W2 cannot be attributed to compositional differences in the cross-sections.

Table 14. Demographics of W1, W2, and Panel Sample

Demographics

	W1 Full	W1 Panel	W2 Full
Gender			
Female	69.6 %	75.0 %	71.7 %
Male	29.3 %	23.7 %	27.2 %
Other	1.2 %	1.3 %	1.1 %
Age			
18-24	4.0 %	3.89 %	3.5 %
25-34	22.4 %	19.9 %	17.8 %
35-44	22.4 %	23.7 %	22.9 %
45-54	12.4 %	14.7 %	17.1 %
55-64	16.8 %	18.0 %	17.1 %
65+	22.0 %	19.9 %	21.3 %
Race*			
Black or African American	61.4 %	60.1 %	62.3 %
White	28.1 %	32.3 %	32.5 %
Asian or Asian American	3.0 %	3.2 %	4.2 %
Other	3.7 %	5.7 %	7.1 %
Income			
$0-$9,999	18.7 %	14.4 %	26.6 %
$10,000-$19,999	17.2 %	19.2 %	11.5 %
$20,000-$29,999	14.7 %	17.1 %	13.1 %

$30,000-$39,999	16.0 %	19.2 %	13.9 %
$40,000-$49,999	8.6 %	8.2 %	11.5 %
$50,000-$59,999	7.3 %	4.1 %	4.8 %
$60,000-$69,999	3.0 %	4.1 %	6.0 %
$70,000-$79,999	3.0 %	4.8 %	2.8 %
$80,000-$89,999	1.7 %	1.4 %	2.8 %
$90,000-$99,999	2.6 %	3.4 %	2.0 %
$100,000 or more	6.9 %	4.1 %	5.2 %
Employment status			
Employed full time	40.8 %	40.8 %	40.7 %
Employed part time	14.4 %	15.9 %	11.8 %
Retired	18.8 %	5.1 %	20.9 %
Disabled	13.2 %	2.6 %	14.5 %
Student	2.4 %	21.0 %	0.8 %
Unemployed looking for work	7.2 %	1.9 %	8.8 %
Unemployed not looking for work	3.2 %	12.7 %	2.7 %
Education			
Less than high school degree	7.6 %	4.5 %	8.7 %
High school degree or equivalent	27.7 %	30.1 %	30.9 %
Some college but no degree	23.6 %	26.7 %	20.4 %
Associate degree	8.8 %	7.7 %	10.9 %
Bachelor degree	17.2 %	14.1 %	13.6 %
Graduate degree	15.6 %	17.3 %	15.5 %

Political affiliation			
Democrat	67.9 %	64.2 %	64.7 %
Republican	6.8 %	6.8 %	7.1 %
Independent	25.3 %	29.1 %	28.2 %
Housing			
Rent home/apartment	58.7 %	56.1 %	59.0 %
Own home/apartment	34.5 %	37.6 %	35.0 %
Staying with family	5.6 %	5.1 %	4.5 %
Relationship status			
Single (never married)	49.4 %	51.3 %	49.8 %
Married, or in a domestic partnership	18.7 %	20.9 %	20.9 %
Divorced	12.8 %	11.4 %	14.5 %
Not married, but living with partner	7.6 %	5.7 %	3.4 %
Widowed	6.8 %	6.7 %	7.6 %
Separated	4.8 %	3.8 %	3.8 %
* Respondents may select multiple categories of race			

As described above, the panel sample consists of a subset of respondents who responded to the survey at both time points. This sample can be used to examine individual-level changes in attitudes towards and experiences with violence between survey waves. Comparing the first and second columns in Table 14 allows us to determine how closely the subset of panel respondents reflects the full pool of respondents surveyed at Wave 1. Several notable differences emerge between the full and panel sample. On average, respondents in the panel sample are more likely to be female, have high school degrees or some college, and tend toward the lower end of the income distribution. There are no statistically significant differences in any of the other characteristics. This indicates that there is some degree of differential attrition between waves, meaning that participants in the panel sample may not reflect a representative sample of all respondents at Wave 1. Our findings should be interpreted with this in mind.

Across samples, the average respondent is in their late-40s. The majority of respondents identify as Black or African American, a large proportion identify as female, and the majority report household incomes below $40,000 per year. The majority of respondents are employed full or part-time, although unemployment rates range from 10% - 15% across samples, far higher than the unemployment rate in the region. The majority of respondents lean democrat. The modal respondent is single and most own their homes.

Changes in Community Attitudes and Norms, Repeated Cross-Section Sample

To assess changes in community norms over time, we conducted a series of bivariate tests of *differences* in each of the previously described domains to examine whether and how attitudes, norms, and experiences with violence have changed in the intervention and control areas between Wave 1 and Wave 2. Since we are most interested in the changes associated with the Cure Violence intervention, we begin by examining differences in our various indicators *within* CV sites. We next examine change in variables within the control sites, both including and excluding the Hamptons site, as we expect to observe differences in community norms and attitudes between this comparably "low risk" site relative to the intervention and comparison sites. In situations in which we discover a statistically significant difference in *any* indicator in the Cure Violence sites, we next examine whether the level of change was statistically different in the CV sites relative to the intervention sites. We rely on standard bivariate tests of differences in means and proportions and assess statistical significance through t-tests, z-tests, and χ^2 tests. For ease of interpretation, statistically significant differences are shaded in the tables. P-values are displayed with asterisks (* <.05; **p<.01; ***p<.001), representing conventional levels of statistical significance. We conduct these analyses separately for the repeated cross-sections and panel samples. All of these results are presented in Tables 15-37 at the end of this section.

In the interest of parsimony, we highlight the key findings from these analyses rather than walk through each table individually. The primary take-away is that there has been very little change in attitudes and norms around violent conduct in either sample in the one-year period separating the Wave 1 and Wave 2 surveys. Respondents in CV sites are no less likely to endorse the code of the streets, rationalize violence, or hold cynical attitudes about the criminal legal system at W2 than at W1. The

> *On the whole, we detect no differences in community attitudes and norms that we can reasonably attribute to the CV intervention.*

same holds true for the panel sample: There are no discernable within individual changes in any of these dimensions over time. Similarly, there are no notable differences in perceptions of community cohesion and collective efficacy, nor in respondents' attitudes and beliefs about law enforcement. **On the whole, we detect no differences in community attitudes and norms that we can reasonably attribute to the CV intervention.**

That being said, a few key differences emerged with experiences with violence among the subset of respondents in the panel sample. Respondents in both the CV sites and the control sites reported gun carrying in their neighborhoods to be slightly less common at W2 than at W1.

Similarly, panel respondents in both the CV and control sites reported their perceived risk and fear of victimization to be higher at Wave 2 than at Wave 1. In neither case did we detect statistically significant differences in the change in these indicators between CV site and the matched controls. That is, **there are no notable differences in experiences with violence that we can attribute to the CV intervention.** Instead, respondents in the panel sample, on the whole, report greater fear and higher perceived risk of victimization over time.

We find it important to end our discussion of the community survey results by reiterating a comment we made at the outset. Due to the delayed roll-out of the Cure Violence program and the associated delays and pauses in the evaluation activities, the community survey was not implemented as intended. Regrettably, we were not able to begin measuring community norms until a full 15 months after Cure Violence started operating, which removed the possibility of collecting baseline data. If Cure Violence had any short-term impact on norms and attitudes during this period, we would be unable to detect it without baseline data. A related concern is that any measurable change in community norms would take a considerably longer time to manifest. The relatively narrow window that elapsed between the two surveys undermines the ability to detect such eventual and sustained change, even if norms were beginning to shift within communities at the time of evaluation end. Had there been continued program funding and the evaluation executed as intended, then additional survey waves would be well situated to determine whether the program met the goal of changing norms toward violence. As St. Louis continues to invest in public safety and community-based violence prevention programs, it would be advised for city leaders to work closely with evaluators from the outset to develop research strategies that would clearly demonstrate whether programs are meeting their benchmarks. Without such collaborative planning, it will remain difficult (if not impossible) to determine with any certainty whether violence prevention efforts are making our city safer.

> *There are no notable differences in experiences with violence that we can attribute to the CV intervention.*

Table 15. Differences in Community Cohesion Items between W1 &W2 in CV sites, Repeated Cross-Section Sample

	W1	W2
Community Connectedness	3.46	3.46
Collective Efficacy – Cohesion	2.98	3.02
Collective Efficacy – Information Social Control	3.14	3.30

Notes: Means presented. Differences assessed via independent samples t-tests

*** p < .001; **p <.01; *p <.05

Items measured on a 5-point scale, with a higher score indicating higher levels of community cohesion.

Table 16. Differences in Community Cohesion Items between W1 &W2 in Comparison sites, Repeated Cross-Section Sample

	W1	W2
Community Connectedness	3.65	3.64
Collective Efficacy – Cohesion	3.04	3.05
Collective Efficacy – Information Social Control	3.18	3.13

Notes: Means presented. Differences assessed via independent samples t-tests

*** p < .001; **p <.01; *p <.05

Items measured on a 5-point scale, with a higher score indicating higher levels of community cohesion.

Table 17. Differences in Community Cohesion Items between W1 &W2 in Comparison Sites Excluding Hamptons, Repeated Cross-Section Sample

	W1	W2
Community Connectedness	3.64	3.67
Collective Efficacy – Cohesion	3.05	3.03

Collective Efficacy – Information Social Control	3.20	3.14

Table 18. Within Individual Differences in Community Cohesion Items between W1 &W2 in CV sites, Panel Sample

	W1	W2
Community Connectedness	3.44	3.38
Collective Efficacy – Cohesion	2.98	3.05
Collective Efficacy – Information Social Control	3.06	3.20

Notes: Means presented. Differences assessed via independent samples t-tests

*** p < .001; **p <.01; *p <.05

Items measured on a 5-point scale, with a higher score indicating higher levels of community cohesion.

Table 19. Within Individual Differences in Community Cohesion Items between W1 &W2 in Comparison sites, Panel Sample

	W1	W2
Community Connectedness	3.68	3.68
Collective Efficacy – Cohesion	3.06	3.08
Collective Efficacy – Information Social Control	3.12	3.17

Notes: Means presented. Differences assessed via independent samples t-tests

*** p < .001; **p <.01; *p <.05

Items measured on a 5-point scale, with a higher score indicating higher levels of community cohesion.

Table 20. Within Individual Differences in Community Cohesion Items between W1 &W2 in Comparison Sites Excluding Hamptons Panel Sample

	W1	W2
Community Connectedness	3.62	3.73
Collective Efficacy – Cohesion	3.05	3.06
Collective Efficacy – Information Social Control	3.12	3.13

Notes: Means presented. Differences assessed via independent samples t-tests

*** p < .001; **p <.01; *p <.05

Items measured on a 5-point scale, with a higher score indicating higher levels of community cohesion.

Table 21. Norms and Attitudes around Violence W1 & W2 in CV sites, Repeated Cross-Section Sample

	W1	W2
Code of the Streets	2.36	2.37
Legal Cynicism	2.59	2.65
Rationalization of Violence	2.70	2.67
Stigma of System Involvement	4.19	4.09

Notes: Means presented. Differences assessed via independent samples t-tests

*** p < .001; **p <.01; *p <.05

Items measured on a 5-point scale, with a higher score indicating higher levels of each construct.

Table 22. Norms and Attitudes around Violence W1 & W2 in Comparison sites, Repeated Cross-Section Sample

	W1	W2
Code of the Streets	2.21	2.28
Legal Cynicism	2.38	2.47
Rationalization of Violence	2.48	2.55
Stigma of System Involvement	4.29	4.31

Notes: Means presented. Differences assessed via independent samples t-tests

*** p < .001; **p <.01; *p <.05

Items measured on a 5-point scale, with a higher score indicating higher levels of each construct

Table 23. Norms and Attitudes around Violence W1 & W2 in Comparison Sites, Excluding Hamptons, Repeated Cross-Section Sample

	W1	W2
Code of the Streets	2.30	2.36
Legal Cynicism	2.47	2.65
Rationalization of Violence	2.66	2.66
Stigma of System Involvement	4.19	4.09

Notes: Means presented. Differences assessed via independent samples t-tests

*** p < .001; **p <.01; *p <.05

Items measured on a 5-point scale, with a higher score indicating higher levels of each construct

Table 24. Within Individual Differences in Norms and Attitudes around Violence between W1 &W2 in CV sites, Panel Sample

	W1	W2
Code of the Streets	2.31	2.30
Legal Cynicism	2.60	2.73
Rationalization of Violence	2.63	2.66
Stigma of System Involvement	4.28	4.22

Notes: Means presented. Differences assessed via independent samples t-tests

*** p < .001; **p <.01; *p <.05

Items measured on a 5-point scale, with a higher score indicating higher levels of each construct

Table 25. Within Individual Differences in Norms and Attitudes around Violence between W1 &W2 in Comparison sites, Panel Sample

	W1	W2
Code of the Streets	2.25	2.29
Legal Cynicism	2.36	2.38
Rationalization of Violence	2.50	2.55
Stigma of System Involvement	4.26	4.33

Notes: Means presented. Differences assessed via independent samples t-tests

*** p < .001; **p <.01; *p <.05

Items measured on a 5-point scale, with a higher score indicating higher levels of each construct

Table 26. Within Individual Differences in Norms and Attitudes around Violence between W1 &W2 in Comparison Sites Excluding Hamptons Panel Sample

	W1	W2
Code of the Streets	2.30	2.31
Legal Cynicism	2.42	2.46
Rationalization of Violence	2.55	2.61
Stigma of System Involvement	4.18	4.22

Notes: Means presented. Differences assessed via independent samples t-tests

*** p < .001; **p <.01; *p <.05

Items measured on a 5-point scale, with a higher score indicating higher levels of each construct

Table 27. Perceptions of Law Enforcement W1 & W2 in CV Sites, Repeated Cross-Section Sample

Items	W1	W2
Community Cohesion		
Procedural Justice[I]	**2.84**	**2.87**
Quality of Treatment	2.82	2.92
Decision Making	2.75	2.79
Distributive Fairness	2.93	2.89
Legitimacy[I]	**3.11**	**3.13**
Obligation to Obey	2.65	2.50
Trust	2.96	3.04
Obligation to Cooperate	3.65	3.66
Trust City Gov't	2.75	2.88

Trust State Govt'	2.93	2.79
Awareness of Cure Violence[II]	0.36	0.30
Justice Contact past 12 months[II, III]		
Stopped by police	0.09	0.07
Arrested	0.03	0.03
Charged with a Crime	0.01	0.00
Convicted of a Crime	0.01	0.02

Notes: Means and stand deviations presented. Differences assessed via independent samples t-tests

1 – differences estimated using differences in proportion tests.

*** p < .001; **p <.01; *p <.05

[I] *Items measured on a 5-point scale, with higher scores indicating higher levels of each perception of law enforcement.*

[II] *Items measured on a binary scale, with higher scores indicating higher levels of contact with police/the justice system.*

[III] *For these items, differences were estimated using differences in proportion tests.*

Table 28. Perceptions of Law Enforcement W1 & W2 in Comparison Sites, Excluding Hamptons, Repeated Cross-Section Sample		
Items	W1	W2
Procedural Justice[I]	**2.76**	**2.77**
Quality of Treatment	2.74	2.79
Decision Making	2.67	2.71
Distributive Fairness	2.85	2.81
Legitimacy[I]	**3.14**	**3.09**
Obligation to Obey	2.64	2.56
Trust	3.05	2.97

Obligation to Cooperate	3.69	3.62
Trust City Gov't	2.79	2.99
Trust State Govt'	2.95	2.67*
Awareness of Cure Violence[II]	0.38	0.27
Justice Contact past 12 months[II, III]		
Stopped by police	0.05	0.08
Arrested	0.02	0.02
Charged with a Crime	0.01	0.02
Convicted of a Crime	0.00	0.02

Notes: Means and stand deviations presented. Differences assessed via independent samples t-tests

*** p < .001; **p <.01; *p <.05

[I] *Items measured on a 5-point scale, with higher scores indicating higher levels of each perception of law enforcement.*

[II] *Items measured on a binary scale, with higher scores indicating higher levels of contact with police/the justice system.*

[III] *For these items, differences were estimated using differences in proportion tests.*

Table 29. Perceptions of Law Enforcement W1 & W2 in CV Sites, Panel Sample		
	W1	W2
Procedural Justice[I]	**2.81**	**2.94**
Quality of Treatment	2.81	2.96
Decision Making	2.73	2.85
Distributive Fairness	2.86	2.99
Legitimacy[I]	**3.14**	**3.15**
Obligation to Obey	2.72	2.44т

Trust	2.94	3.07
Obligation to Cooperate	3.68	3.72
Trust City Gov't	2.88	2.89
Trust State Govt'	2.71	2.86
Awareness of Cure Violence[II]	0.38	0.30
Justice Contact past 12 months[II, III]		
Stopped by police	0.13	0.09
Arrested	0.04	0.00
Charged with a Crime	0.01	0.00
Convicted of a Crime	0.02	0.02

Notes: Means and stand deviations presented. Differences assessed via independent samples t-tests

*** p < .001; **p <.01; *p <.05

[I] *Items measured on a 5-point scale, with higher scores indicating higher levels of each perception of law enforcement.*

[II] *Items measured on a binary scale, with higher scores indicating higher levels of contact with police/the justice system.*

[III] *For these items, differences were estimated using differences in proportion tests.*

Table 30. Perceptions of Law Enforcement W1 & W2 in Comparison Sites, Panel Sample		
Items	WI	W2
Procedural Justice[I]	**2.79**	**2.76**
Quality of Treatment	2.77	2.79
Decision Making	2.71	2.65
Distributive Fairness	2.87	2.84
Legitimacy[I]		

Obligation to Obey	2.42	2.61
Trust	3.05	2.99
Obligation to Cooperate	3.64	3.65
Trust City Gov't	2.83	2.87
Trust State Govt'	2.25	2.57
Awareness of Cure Violence[II]	0.36	0.25
Justice Contact past 12 months[II, III]		
Stopped by police	0.04	0.06
Arrested	0.04	0.03
Charged with a Crime	0.01	0.02
Convicted of a Crime	0.00	0.03

Notes: Means and stand deviations presented. Differences assessed via independent samples t-tests

*** p < .001; **p <.01; *p <.05

[I] *Items measured on a 5-point scale, with higher scores indicating higher levels of each perception of law enforcement.*

[II] *Items measured on a binary scale, with higher scores indicating higher levels of contact with police/the justice system.*

[III] *For these items, differences were estimated using differences in proportion tests.*

Table 31. Perceptions of Law Enforcement W1 & W2 in Comparison Sites, Excluding Hamptons, Panel Sample		
Items	W1	W2
Procedural Justice[I]	**2.80**	**2.78**
Quality of Treatment	2.77	2.84
Decision Making	2.71	2.69
Distributive Fairness	2.90	2.88

Legitimacy[I]	**3.10**	**3.14**
Obligation to Obey	2.49	2.63
Trust	3.03	2.97
Obligation to Cooperate	3.63	3.69
Trust City Gov't		
Trust State Govt'		
Awareness of Cure Violence[II]	0.40	0.28
Justice Contact past 12 months[II, III]		
Stopped by police	0.04	0.05
Arrested	0.03	0.04
Charged with a Crime	0.01	0.02
Convicted of a Crime	0.00	0.04

Notes: Means and stand deviations presented. Differences assessed via independent samples t-tests

*** $p < .001$; **$p < .01$; *$p < .05$

[I] *Items measured on a 5-point scale, with higher scores indicating higher levels of each perception of law enforcement.*

[II] *Items measured on a binary scale, with higher scores indicating higher levels of contact with police/the justice system.*

[III] *For these items, differences were estimated using differences in proportion tests.*

Table 32. Perceptions of and Experiences with Violence W1 & W2 in CV Sites, Repeated Cross-Section Sample

	W1	W2
Heard Gunshots[I]	3.41	3.20
Gangs Common[I]	3.24	3.08
Gun carrying Common[I]	4.13	3.96

How much of a Problem are…[II]		
Cars Speeding	2.50	2.55
Run-down buildings	2.52	2.45
Group causing trouble	1.91	1.83
Gunshots	2.63	2.53
Gangs	1.89	1.78
Mail / Package Theft	1.91	1.93
Street Racing	1.96	2.07
Witnessed…[III]		
Chased	.28	.19
Assaulted	.28	.21
Sexual Assault	.07	.09
Attacked with a weapon	.16	.14
Shot at	.37	.28
Murder	.30	.30
Experienced…[III]		
Chased	.02	.05
Assaulted	.09	.07
Sexual Assault	.03	.02
Attacked with a weapon	.01	.05
Shot at	.05	.06
How unsafe do you feel…[IV]		
At home at night	1.94	1.90

Outside in your neighborhood at night	3.38	3.18
Walking toward a group you don't know	3.64	3.47
Perceived Risk of Crime [IV]	2.84	2.81
Fear of Crime [IV]	2.87	2.58
Neighborhood Avoidance [IV]	3.16	3.13

Notes: Means and stand deviations presented. Differences assessed via independent samples t-tests

*** p < .001; **p <.01; *p <.05

[I] *Items measured on a 5-point scale, with higher scores indicating higher commonality.*

[II] *Items measured on a 3-point scale, with higher scores indicating higher levels of social disorder.*

[III] *Items measured on a binary scale, with higher scores indicating higher levels of violence witnessed or experienced.*

[IV] *Items measured on a 5-point scale, with higher scores indicating higher levels of each perception of/experience with violence.*

Table 33. Perceptions of and Experiences with Violence W1 & W2 in Comparison Sites, Repeated Cross-Section Sample

	W1	W2
Heard Gunshots[I]	3.01	3.12
Gangs Common[I]	2.86	2.99
Gun carrying Common[I]	3.84	3.75
How much of a Problem are…[II]		
Cars Speeding	2.58	2.52
Run-down buildings	2.23	2.29
Group causing trouble	1.62	1.65
Gunshots	2.34	2.47

Gangs	1.64	1.60
Mail / Package Theft	1.83	1.96
Street Racing	1.85	2.01
Witnessed… III		
Chased	.18	.16
Assaulted	.21	.18
Sexual Assault	.05	.04
Attacked with a weapon	.16	.11
Shot at	.28	.24
Murder	.23	.21
Experienced… III		
Chased	.04	.03
Assaulted	.03	.05
Sexual Assault	.01	.03
Attacked with a weapon	.01	.03
Shot at	.01	.02
How unsafe do you feel… IV		
At home at night	1.65	1.79
Outside in your neighborhood at night	3.07	3.15
Walking toward a group you don't know	3.37	3.38
Perceived Risk of Crime IV	2.60	2.70
Fear of Crime IV	2.96	2.83

Neighborhood Avoidance [IV]	2.79	2.80

Notes: Means and stand deviations presented. Differences assessed via independent samples t-tests

*** p < .001; **p <.01; *p <.05

[I] *Items measured on a 5-point scale, with higher scores indicating higher commonality.*

[II] *Items measured on a 3-point scale, with higher scores indicating higher levels of social disorder.*

[III] *Items measured on a binary scale, with higher scores indicating higher levels of violence witnessed or experienced.*

[IV] *Items measured on a 5-point scale, with higher scores indicating higher levels of each perception of/experience with violence.*

Table 34. Perceptions of and Experiences with Violence W1 & W2 in Comparison Sites Excluding Hamptons, Repeated Cross-Section Sample

	W1	W2
Heard Gunshots[I]	3.34	3.30
Gangs Common[I]	3.08	3.15
Gun carrying Common[I]	4.30	3.85*
How much of a Problem are…[II]		
Cars Speeding	2.48	2.57
Run-down buildings	2.44	2.42
Group causing trouble	1.71	1.69
Gunshots	2.57	2.55
Gangs	1.76	1.65
Mail / Package Theft	1.84	1.99
Street Racing	1.96	2.08

Witnessed…[III]		
Chased	.20	.16
Assaulted	.25	.18
Sexual Assault	.05	.04
Attacked with a weapon	.19	.11
Shot at	.33	.25
Murder	.28	.24
Experienced…[III]		
Chased	.06	.03
Assaulted	.03	.06
Sexual Assault	.02	.04
Attacked with a weapon	.01	.04
Shot at	.01	.03
How unsafe do you feel…[IV]		
At home at night	1.77	1.87
Outside in your neighborhood at night	3.20	3.23
Walking toward a group you don't know	3.47	3.38
Perceived Risk of Crime [IV]	2.73	2.66
Fear of Crime [IV]	2.84	2.83
Neighborhood Avoidance [IV]	2.99	2.88

Notes: Means and stand deviations presented. Differences assessed via independent samples t-tests

*** $p < .001$; **$p < .01$; *$p < .05$

Items measured on a 5-point scale, with higher scores indicating higher commonality.

Items measured on a 3-point scale, with higher scores indicating higher levels of social disorder.

Items measured on a binary scale, with higher scores indicating higher levels of violence witnessed or experienced.

Items measured on a 5-point scale, with higher scores indicating higher levels of each perception of/experience with violence.

Table 35. Perceptions of and Experiences with Violence W1 & W2 in CV Sites, Panel Sample		
	W1	W2
Heard Gunshots[I]	3.38	3.25
Gangs Common[I]	2.95	2.95
Gun carrying Common[I]	4.29	3.91*
***How much of a Problem are…*[II]**		
Cars Speeding	2.57	2.53
Run-down buildings	2.51	2.36
Group causing trouble	1.85	1.72
Gunshots	2.60	2.50
Gangs	1.78	1.67
Mail / Package Theft	1.89	1.84
Street Racing	1.92	2.05
***Witnessed…*[III]**		
Chased	0.29	0.13
Assaulted	0.28	0.17
Sexual Assault	0.07	0.09

Attacked with a weapon	0.16	0.09
Shot at	0.40	0.30
Murder	0.25	0.26
Experienced…[III]		
Chased	0.02	0.02
Assaulted	0.07	0.07
Sexual Assault	0.02	0.02
Attacked with a weapon	0.02	0.05
Shot at	0.05	0.04
How unsafe do you feel…[IV]		
At home at night	1.81	1.81
Outside in your neighborhood at night	3.45	3.24
Walking toward a group you don't know	3.72	3.42
Perceived Risk of Crime [IV]	2.73	3.28***
Fear of Crime [IV]	2.96	3.41**
Neighborhood Avoidance [IV]	3.20	3.11

Notes: Means and stand deviations presented. Differences assessed via independent samples t-tests

*** p < .001; **p <.01; *p <.05

[I] *Items measured on a 5-point scale, with higher scores indicating higher commonality.*

[II] *Items measured on a 3-point scale, with higher scores indicating higher levels of social disorder.*

[III] *Items measured on a binary scale, with higher scores indicating higher levels of violence witnessed or experienced.*

[IV] *Items measured on a 5-point scale, with higher scores indicating higher levels of each perception of/experience with violence.*

Table 36. Perceptions of and Experiences with Violence W1 & W2 in Comparison Sites, Panel Sample		
	W1	W2
Heard Gunshots[I]	3.11	3.12
Gangs Common[I]	2.94	3.05
Gun carrying Common[I]	4.08	3.93
How much of a Problem are…[II]		
Cars Speeding	2.55	2.51
Run-down buildings	2.31	2.30
Group causing trouble	1.70	1.63
Gunshots	2.45	2.48
Gangs	1.70	1.63
Mail / Package Theft	1.93	1.96
Street Racing	1.92	2.07
Witnessed…[III]		
Chased	0.16	0.16
Assaulted	0.20	0.22
Sexual Assault	0.04	0.06
Attacked with a weapon	0.15	0.11
Shot at	0.30	0.29
Murder	0.21	0.23

Experienced...[III]

Chased	0.07	0.06
Assaulted	0.03	0.07
Sexual Assault	0.02	0.03
Attacked with a weapon	0.00	0.04
Shot at	0.01	0.04

How unsafe do you feel...[IV]

At home at night	1.66	1.77
Outside in your neighborhood at night	3.20	3.21
Walking toward a group you don't know	3.49	3.36
Perceived Risk of Crime [IV]	2.63	3.26***
Fear of Crime [IV]	2.87	3.29*
Neighborhood Avoidance [IV]	2.91	2.84

Notes: Means and stand deviations presented. Differences assessed via independent samples t-tests

*** p < .001; **p <.01; *p <.05

[I] *Items measured on a 5-point scale, with higher scores indicating higher commonality.*

[II] *Items measured on a 3-point scale, with higher scores indicating higher levels of social disorder.*

[III] *Items measured on a binary scale, with higher scores indicating higher levels of violence witnessed or experienced.*

[IV] *Items measured on a 5-point scale, with higher scores indicating higher levels of each perception of/experience with violence.*

Table 37. Perceptions of and Experiences with Violence W1 & W2 in Comparison Sites Excluding Hamptons, Panel Sample

	W1	W2
Heard Gunshots[I]	3.44	3.88
Gangs Common[I]	3.12	3.25
Gun carrying Common[I]	4.20	3.89
How much of a Problem are…[II]		
Cars Speeding	2.63	2.55
Run-down buildings	2.47	2.46
Group causing trouble	1.77	1.67
Gunshots	2.63	2.58
Gangs	1.78	1.68
Mail / Package Theft	1.93	1.98
Street Racing	2.04	2.11
Witnessed…[III]		
Chased	0.18	0.15
Assaulted	0.24	0.22
Sexual Assault	0.03	0.06
Attacked with a weapon	0.15	0.13
Shot at	0.33	0.31
Murder	0.24	0.25
Experienced…[III]		
Chased	0.09	0.05

Assaulted	0.04	0.08
Sexual Assault	0.02	0.04
Attacked with a weapon	0.00	0.05
Shot at	0.01	0.05
How unsafe do you feel…[IV]		
At home at night	1.77	1.89
Outside in your neighborhood at night	3.32	3.33
Walking toward a group you don't know	3.57	3.36
Perceived Risk of Crime [IV]	2.74	3.14*
Fear of Crime [IV]	2.79	3.28**
Neighborhood Avoidance [IV]	3.07	2.95

Notes: Means and stand deviations presented. Differences assessed via independent samples t-tests

*** p < .001; **p <.01; *p <.05

[I] *Items measured on a 5-point scale, with higher scores indicating higher commonality.*

[II] *Items measured on a 3-point scale, with higher scores indicating higher levels of social disorder.*

[III] *Items measured on a binary scale, with higher scores indicating higher levels of violence witnessed or experienced.*

[IV] *Items measured on a 5-point scale, with higher scores indicating higher levels of each perception of/experience with violence.*

SECTION 4 | LONGITUDINAL TRENDS IN GUN VIOLENCE

The following section describes longitudinal trends in gun violence in the intervention and comparison sites pre- and post- implementation of the Cure Violence program. Unlike the community survey, the statistical analysis of current and historic police data allows us to assess changes in violence and therefore speak to the impact of Cure Violence on rates of violence from incident data collected by the St. Louis Metropolitan Police Department.

Approach to Comparisons

As described in Section 1, comparison sites were not chosen to be direct controls for any of the intervention sites (in other words, they are not one-to-one matches). Indeed, the CV sites were chosen because they contained the highest levels of violence in St. Louis at the time. Consequently, our evaluation relies on statistical modeling approaches commonly used in the scholarly evaluation literature for observational study designs (rather than randomized control experiments). This approach involves comparing each CV site **individually** with the comparison sites **collectively**. For example, we compare violence trends in Dutchtown to the average trend across comparison sites. But for heuristic purposes and at the request of the city, we also make comparisons between Dutchtown and the Benton Park W site, given that this site is also located in South City. We make comparisons between Wells Goodfellow and all comparison sites, as well as Wells Goodfellow and the Greater Ville site, Wells Goodfellow and the O'Fallon site, and Wells Goodfellow and all sites located in North City. Please note, however, that more limited comparisons (such as 1-to-1 comparisons) are less likely to yield statistically significant impacts even if they exist, because of having smaller sample sizes (i.e., statistical power); this problem is known as a type II error. Regardless, the results presented below are generally consistent across comparison approaches.

Impact Evaluation

To estimate the impact of the Cure Violence program in the CV sites, we analyzed trends in monthly gun violence incident rates using an interrupted time series design. This difference-in-differences approach is commonly used to estimate the impact of an intervention when the outcome variable is ordered as a time series (monthly rate) and several months in the time series are available in both the pre-intervention and post-intervention periods. The method is termed interrupted time series analysis because the intervention is expected to interrupt the level or trend after it is introduced in the treatment sites.[39] In our evaluation design, we estimate treatment impact of the Cure Violence program in the CV sites as compared to changes in the level or trend in gun violence in the comparison sites. We also model the impact of the COVID-19 pandemic (starting in March 2020), given its known impact on violence in St. Louis and other cities.[40]

The technical specification of our model involves the following baseline statistical equation:[41]

$$Y_t = \beta_0 + \beta_1 T + \beta_2 X_{1t} + \beta_3 T X_{1t} + \beta_4 Z + \beta_5 Z T_t + \beta_6 Z X_{1t} + \beta_7 Z X_{1t} T_{1t} + \beta_8 X_{2t} + \beta_9 T X_{2t} \quad (1)$$
$$+ \beta_{10} Z X_{2t} + \beta_{11} Z X_{2t} T_{2t} + u_t$$

Where Y_t is the monthly gun violence rate measured at time t, T is time since the start of the study period (2017), X_t is a dummy variable indicating the intervention where a value of '0' indicates the preintervention period (prior to CV start) and a value of '1' indicates the postintervention period, $T X_t$ is an interaction term, Z denotes treatment (value=1) and control groups (value=0), and u_t is an error term (;).[42,43,44][45] Using this specification, β_0 is the starting level of the outcome, β_1 is the slope in the trend before the COVID-19 pandemic, β_2 is the immediate change in the gun violence rate following the start of the pandemic, β_3 is the difference between the preintervention and post-pandemic slopes, β_4 is the difference between the CV and comparison site(s) in the intercept, β_5 is the difference between CV and comparison site(s) in the preintervention gun violence trend, β_6 is the difference between the CV and comparison site(s) in the gun violence rate immediately following the start of the pandemic, β_7 is the difference between the CV and comparison site(s) in the post-pandemic gun violence trends, β_8 is the immediate change in gun violence following the start of CV, β_9 is the difference between the preintervention and post-CV slopes, β_{10} is the difference between the CV and comparison site(s) in the gun violence rate immediately following the start of CV, and β_{11} is the difference between CV and comparison site(s) in the post-CV gun violence trends compared to post-pandemic trends.

The logic of this statistical modeling approach is shown graphically in Figure 5A. In this **hypothetical** example, the trend in the gun violence rate for the CV site (solid black line) increases substantially following the start of the COVID-19 pandemic and declines after the start of Cure Violence. The gun violence trend follows a similar general pattern, albeit at a lower level, in the comparison sites. If Cure Violence is having the intended impact of preventing gun violence, then the post-CV downward trend should be steeper in the CV sites than in the comparison sites. But further, the difference from pre-intervention to post-intervention should be greater in the CV sites than in the comparison site(s) if the program has had its intended impact. For this, we compute a linear combination of model parameters $\beta_5 + \beta_7 + \beta_{11}$ to compare the pre-intervention to post-intervention trend differences between the CV and comparison sites. [g] This computed value represents the crux of our analysis, as it helps to adjust our estimates of program impact for the large increase in gun violence that occurred during the early months of

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[g] We also include monthly dummy variables in the model to control for seasonality in gun violence (e.g., higher levels of violence in summer months). Using the **itsa** command in Stata 17.0,[44] our models produce Newey-West[45] standard errors for the β coefficients, which assume the error structure is heteroscedastic and autocorrelated.

the pandemic. [h] This is graphically illustrated in Figure 5B, which shows that we are most interested in how the trends in gun violence changed pre-intervention to post-intervention between the treated and control sites.
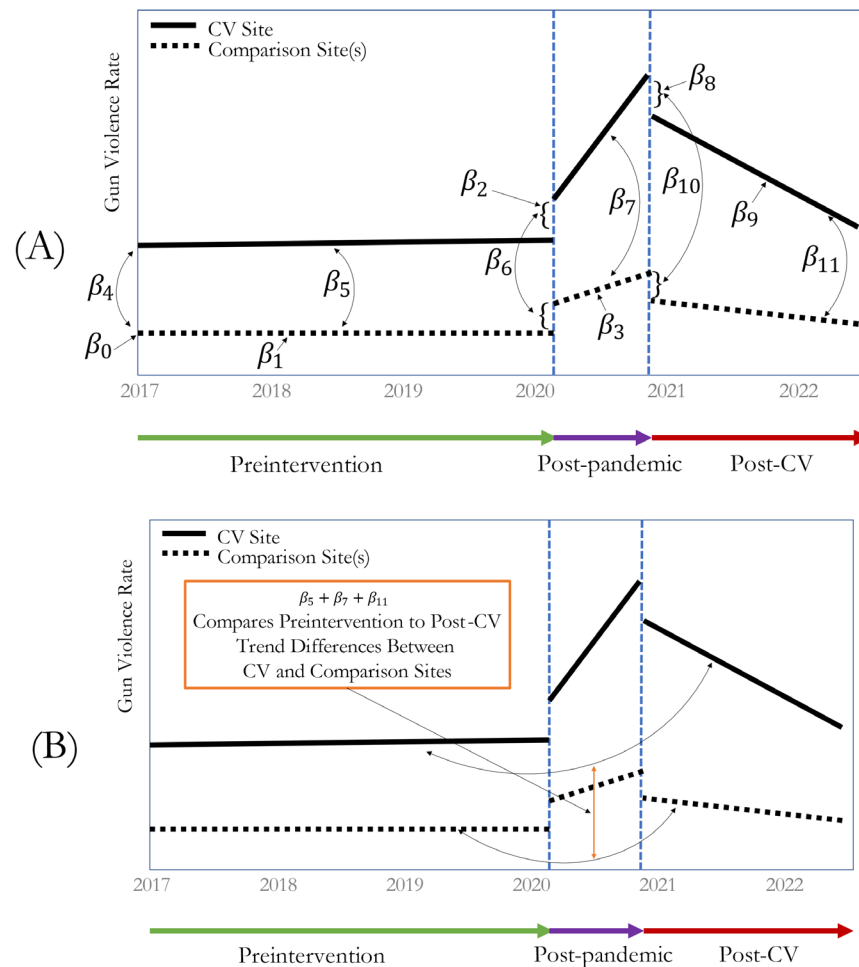

Figure 5. Statistical Modeling Approach for Estimating Impact of Cure Violence in CV Sites. Hypothetical trends, not real data.

Note also that the β_4 and β_5 coefficients estimated in our models help to assess baseline equivalency of the CV and comparison site(s) by quantifying the difference in their pre-intervention levels of violence (β_4) and their pre-intervention trends/slopes in violence (β_5). Statistically significant differences in gun violence levels and trends between the CV and comparison sites can threaten the validity of inferences about the impact of the program because the "treatment" and "control" sites are not equivalent at baseline.[43] In the example shown in Figure 5, the levels of gun violence are higher in the CV site than in the comparison

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[h] Here we use the **posttrend** option for the **itsa** command, which computes the linear combination of model parameters $\beta_5 + \beta_7 + \beta_{11}$. This value is different from the β_{11} coefficient which is the difference between CV and comparison sites in the post-CV trend when compared to the post-pandemic trend.[41]

site(s) while the pre-intervention trends appear equivalent, providing some support for the assumption of baseline equivalency between treated and control sites.

To further clarify the approach, Figure 6 shows a series of hypothetical trend comparisons to demonstrate possible outcomes. For simplicity, we focus attention to the post-CV trends and assume that preintervention trends in the CV and comparison sites are parallel. In the leftmost panel, the post-CV trends are decreasing at the same rate. This suggests that although the start of Cure Violence coincided with a decrease in gun violence in the CV site, gun violence was also decreasing at the same rate in the comparison sites, suggesting that the association between the implementation of Cure Violence and gun violence declines may not be due to the Cure Violence program. In the middle panel of Figure 6, violence is declining slightly in the CV site and declining faster in the comparison sites. This suggests that the start of Cure Violence is not associated with the intended gun violence decline and may have even slowed the downward trend in violence experienced in the comparison sites. The rightmost panel shows the intended impact of Cure Violence, whereby the declining slope in gun violence is greater in the CV site than in the comparison sites.
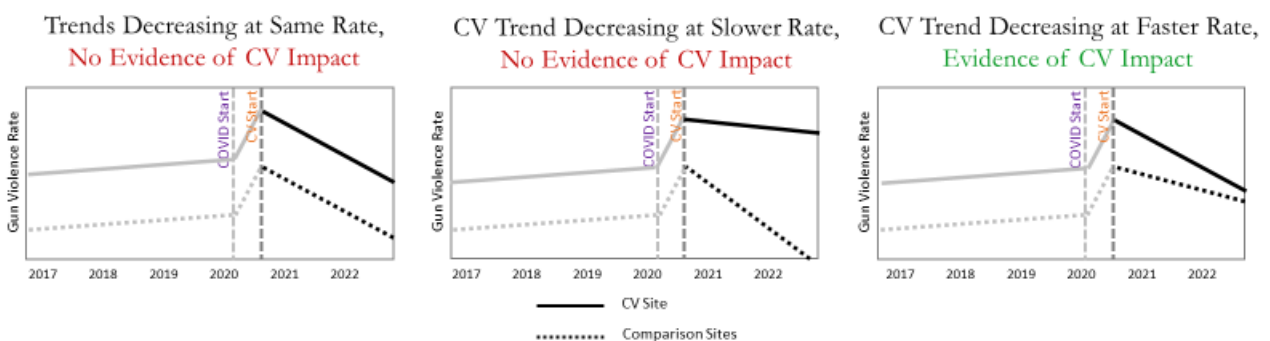
Figure 6. Hypothetical Trend Comparisons. Not real data.

Results

Our main statistical models estimate the difference in trends in gun violence incident rates between the CV sites and comparison sites, excluding the contrast site, Hamptons. Note that the Cure Violence program began at different times at each site: June 2020 in Wells Goodfellow, November 2020 in Dutchtown, and January 2021 in Walnut Park West. Thus, the post-CV period is different for each of these main models.

The results indicate that rates of gun violence have significantly decreased across the three CV sites since the start of the CV program. However, gun violence has also significantly decreased in the comparison sites and citywide. This raises concerns that these reductions are not uniquely associated with implementation of the CV program, but rather a result of general changes occurring across the city. Our primary results are presented below for each site. These results estimate the difference in gun violence trends between each CV site and the main

comparison sites after the start of program implementation at each respective site.[i] If the decrease in gun violence in the CV site was significantly greater than the decrease in the average comparison site in the post-CV period, it suggests promising evidence for a prevention impact of the CV program.

Wells Goodfellow

Figure 7 shows that the monthly rate of gun violence decreased at a significantly faster rate in Wells Goodfellow than in the main comparison sites (trend difference=–0.357; p=.004). The observed difference in the rate of change suggests that there were at least 27 fewer incidents of gun violence in Wells Goodfellow than expected. **At least 12 of these prevented incidents can be attributed to the CV program** over the 36-month post-intervention period (=0.357*36 post-CV months).

The rate of gun violence in Wells Goodfellow was twice as high as the average comparison site prior to the start of CV, but levels of gun violence have since declined to levels similar to the average comparison site.
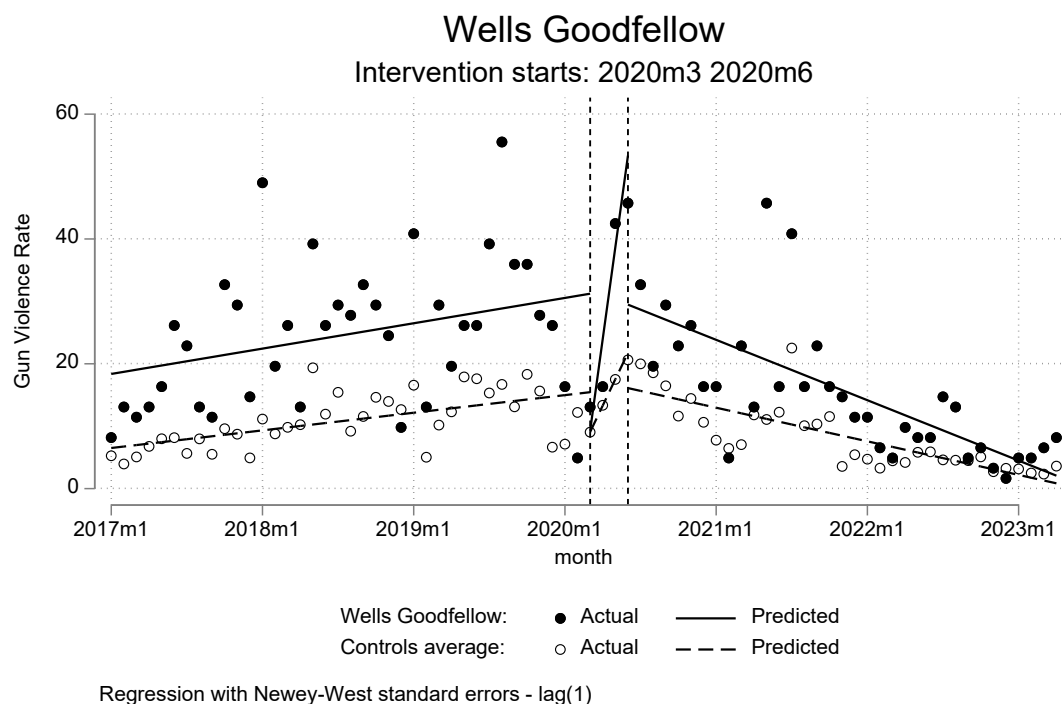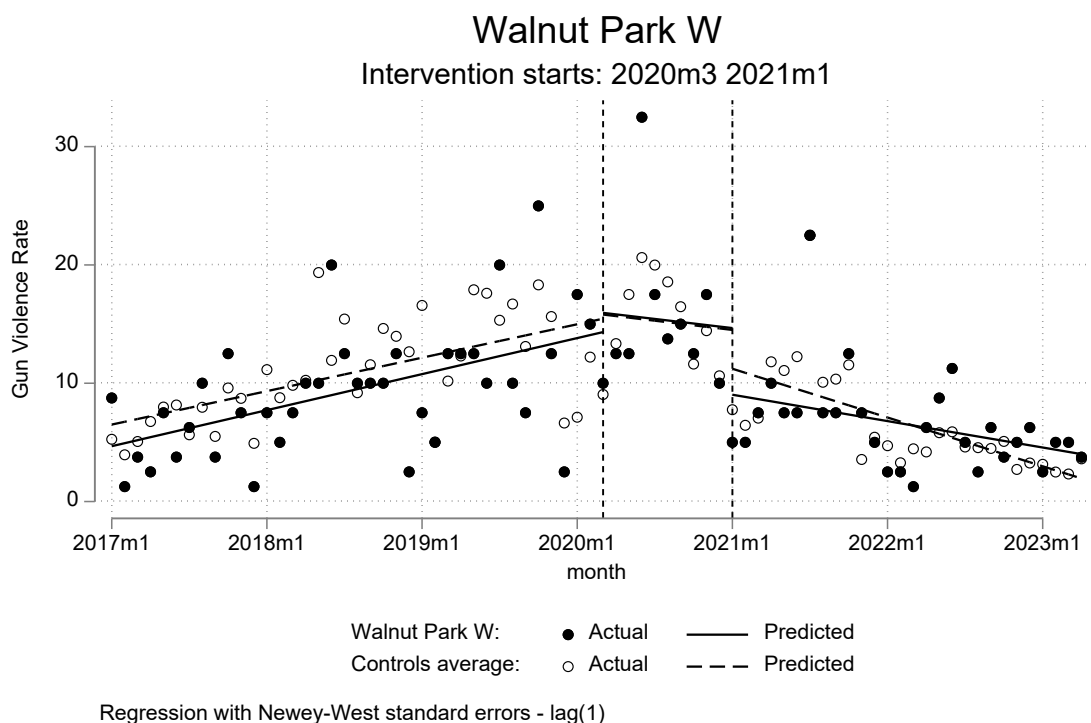

Figure 7. Estimated trends in the gun violence rate for Wells Goodfellow and comparison sites (excluding Hamptons) through April 2023. For simplicity of presentation, this figure does not reflect seasonality controls.

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[i] The Cure Violence program started at different times in the CV sites: June 2020 in Wells Goodfellow, November 2020 in Dutchtown, and January 2021 in Walnut Park West. Therefore, the length of the post-CV period for each CV site depends on its start date.

Dutchtown

Figure 8 shows decreasing rates of gun violence in Dutchtown that have nearly converged, on average, with levels of gun violence in the comparison sites since the start of the CV program. While certainly promising, these changes fail to reach conventional levels of statistical significance (trend difference=–0.263; p=.079). **We therefore do not find evidence of a statistically significant treatment effect in Dutchtown associated with the implementation of the CV program.**
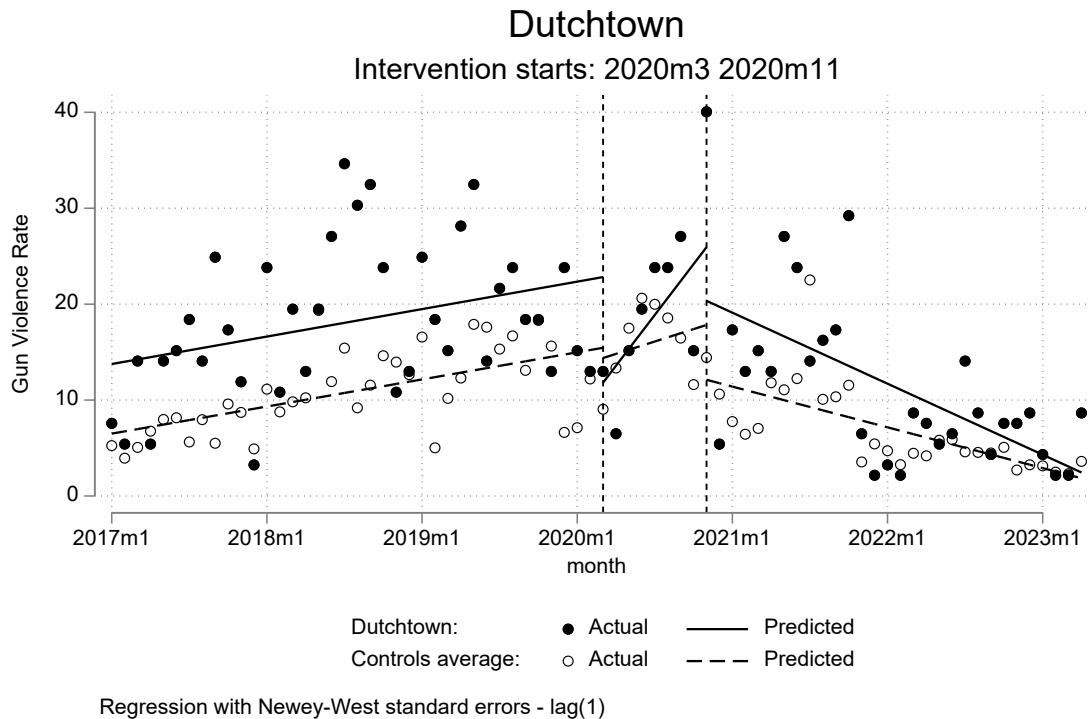
Figure 8. Estimated trends in the gun violence rate for Dutchtown and comparison sites (excluding Hamptons) through April 2023. For simplicity of presentation, this figure does not reflect seasonality controls.

Walnut Park W

Finally, we find no evidence of a statistically significant treatment effect in the Walnut Park W site (trend difference= +.157; p=.128). As shown in Figure 9, rates of gun violence decreased at a slower rate in Walnut Park W than the main comparison sites, on average. **Thus**, **there is no evidence for a statistically significant impact in Walnut Park W associated with implementation of the CV program.**

Walnut Park W

Intervention starts: 2020m3 2021m1

Regression with Newey-West standard errors - lag(1)

Figure 9. Estimated trends in the gun violence rate for Walnut Park W and comparison sites (excluding Hamptons) through April 2023. For simplicity of presentation, this figure does not reflect seasonality controls.

In addition to the models presented above, we conducted supplemental analyses to ensure our models were not an artifact of the specific comparisons being made. Results from the main models and alternative models are shown in Table 38. Overall, we consistently find promising evidence for a significant prevention impact of the CV program in the Wells Goodfellow site. We find qualified but encouraging evidence for a prevention impact in Dutchtown. Finally, we consistently find no evidence of a prevention impact for the CV program in the Walnut Park site.

Table 38. Summary of Model Results for Alternative Comparisons.

CV Site	Comparison	Post-CV Slope Difference	Estimated # of Incidents Prevented	Evidence for CV Impact?
Wells Goodfellow vs…	Comparison sites (not Hamptons) †	-.357*	-10	Promising
	All comparison sites †	-.410*	-12	Promising
	Citywide average †	-.637*	-18	Promising

	North city comparison sites †	-.325*	-9	Promising
	Greater Ville only †	-.383*	-11	Promising
	O'Fallon only †			
Dutchtown vs…	Comparison sites (not Hamptons) †	-.263†	-9.4	Encouraging
	All comparison sites †	-.312*	-11.2	Promising
	Citywide average †	-.486*	-17.5	Promising
	Benton Park West only †	-.351†	-12.6	Encouraging
Walnut Park West vs…	Comparison sites (not Hamptons) ††	+.157	0.0	Null
	All comparison sites ††	+.109	0.0	Null
	Citywide average †	-.059	0.0	Null
	North city comparison sites only †	+.171	0.0	Null
	Baden only †	+.051	0.0	Null
	O'Fallon only †	+.428	0.0	Null
	Greater Ville only †	+.015	0.0	Null

Notes: * indicates $p < 0.05$; † indicates $p < 0.10$.

† indicates only preintervention trend equivalency between CV and comparison site(s) ($p > .05$).

†† indicates both preintervention trend and level equivalency between CV and comparison site(s) ($p > .05$).

Limitations

The above conclusions require several qualifications. First, the findings rest on the quality and completeness of the incident data provided by the St. Louis Metropolitan Police Department (SLMPD). It is well documented in the scholarly literature that police data do not always accurately reflect actual levels of crime, producing a phenomenon known as the "dark figure of crime." A recent study in St. Louis, for example, showed that the incidence of shootings measured using an acoustic gunshot detection system (ShotSpotter) was much greater than the reporting of shootings as measured by 911 calls and SLMPD officially recorded crime incidents.[46] Given that the acoustic gunshot detection zones in St. Louis do not coincide with the boundaries of the CV sites or comparison sites, it is impossible to determine the extent to which the underreporting and recording of gun violence may be affecting the results of this evaluation, if at all.

Secondly, the evaluation is observational by design, which is often regarded as inferior to "gold standard" approaches such as randomized controlled trials. The evaluation team did not have control over which places or participants received the Cure Violence "treatment" and therefore cannot ensure comparability of the treatment and control groups. Indeed, we found evidence that Cure Violence was implemented in areas experiencing the highest rates of violence in the city. While this was done intentionally, and for good reason, it leaves no ideal control sites with baseline equivalency. Although the evaluation team took extensive care in selecting the most comparable places with low risk of treatment contamination, the inability to experimentally design program implementation is an important qualification on the findings. In other words, we cannot rule out other explanations for the observed association between the start of the Cure Violence program and declines in gun violence.

Third, these results do not necessarily speak to the value of the Cure Violence program, which may not yield significant impacts on gun violence rates in the short term. The theory of change for the Cure Violence program (shown in Appendix D) includes many intermediate indicators of success that must occur before impacts on community violence can be realized, such as the de-normalization of violence in the community and community member skills/knowledge about nonviolent approaches to conflict, among many others.9 These intermediate outcomes cannot be assessed using police data. Furthermore, our analysis of changes in these intermediate outcomes (measured using the community survey) showed no significant changes in community norms toward and experiences of violence. Following the theory of change, without these changes in intermediate outcomes, we should not expect to see significant changes in rates of gun violence.

SECTION 5 | CURE VIOLENCE STAFF AND COMMUNITY STAKEHOLDER INTERVIEWS

Overview

To better understand the strengths and barriers to program implementation and the nuances of community norms and attitudes toward violence in the CV catchment areas, we conducted interviews with staff and community members across the three treatment sites. The qualitative component serves as both an independent assessment of the CV program and a complement to the quantitative analysis.

Methods

Context

To conduct the qualitative analysis, several steps were taken. Although the proposed qualitative evaluation was designed with the goal of conducting interviews with CV staff and holding focus groups with community members in each neighborhood, delays in the evaluation's timeline required a quick pivot. As such, separate interview guides were developed to interview CV staff, community members, and business owners or employees.

Recruitment and Interview Guide Development

Upon receiving approval from the Washington University Institutional Review Board, participants were recruited using a multi-pronged approach comprised of:

a. Contacting each CV site and setting up site visits with the goal of interviewing as many staff as possible.

b. Canvassing CV neighborhoods a total of 10 times, which included posting flyers (flyer found in Appendix E, stopping into businesses, and talking to people on the street about the project and interviews.

c. Identifying and outreaching to neighborhood businesses via internet searches.

d. Emailing respondents from the community survey.

In total, 49 businesses were contacted including religious institutions and 29 residents. For a more detailed summary of recruitment efforts, see Appendix F.

Semi-structured interview guides were informed by the qualitative researchers' experiences with working with vulnerable populations and familiarity with literature on spatial dynamics and inner-city violence. Similarly, feedback from visits with CV sites and overarching research goals of the

evaluation shaped the topics and patterning of questions. All interview questions were designed to be open-ended and to better capture the impact of CV on their neighborhoods, two separate interview guides were developed for CV staff, neighborhood residents, and business owners or employees (See Appendix G). The interview guide that was administered to staff, included questions focused on the participant's relationship with the program, their successes and challenges with implementing the program, and their perception of how CV impacts their community. The community interview guide that was administered to residents and business employees from the three CV neighborhoods included questions about participants' perceptions of violence and successes and challenges to violence prevention in their communities.

To maintain participant confidentiality, no description is included in our sample demographics of the participant's CV staff title or any other information that identifies a participant as a resident versus business owner or employee. Additionally, all participants were randomly assigned a pseudonym. In line with leading qualitative methods, all interviews were conducted in locations where participants felt comfortable. For example, one of the researchers conducted an interview in a participant's car. Generally, interviews lasted 30 to 45 minutes, with a few that extended past one hour. All interviews were audio recorded and transcribed using Landmark, a HIPAA compliant transcription company. Additionally, verbal consent prior to the start of the interview was captured via audio recording.

Analysis

The resulting data were analyzed using deductive thematic analysis, an approach that examines themes discussed in existing theory and knowledge.[47] An initial codebook was developed to capture the predetermined themes that structured the interview guides described above. To analyze the data, all transcripts were uploaded and coded in Dedoose, a qualitative analysis software. In earlier stages of the analysis, basic tabulations were created with demographic and thematic information. Subsequently, the qualitative researchers applied the developed codes to all transcripts and met to discuss new codes that had emerged or added to the codebook. Various adjustments to the coding schemas were made, to reflect new codes, and the final codebook was then applied to all of the transcribed data. Patterns and differences, such as the personal impact of CV on staff members or the levels of structural violence that community members encountered, across codes were identified between each interview and are described in the findings section. In doing so, all identifying information such as age and ethnic subgroup information have been masked from the findings.

Findings

Demographics

The qualitative aspect of the evaluation uses data from semi-structured interviews with 8 people who have worked as CV staff members and lived or worked in CV serviced neighborhoods. Beginning in the fall of 2022 and conducted through the spring of 2023, all of the interviewees

were located within St. Louis, MO. Our final sample consisted of 8 businesses (with no religious institutions) and 12 residents. Participants' ages ranged from 24 years old to 65+ and the average age was 53 years old. In regards to gender, 59 percent were male and 41 percent were female. The majority (55 percent) of the sample identified as Black or a person of color and 45 percent as white or no response. The demographics of the qualitative samples can be found in Table 39 and Table 40 below:

Table 39. Cure Violence Staff Demographics (n = 8)	
	n (%)
Gender	
Male	8 (100)
Female	0
Age Ranges	
24-33	2 (25)
34-43	2 (25)
44+	3 (38)
Did not report	1 (12)
Race/Ethnicity	
Black/African American	4 (50)
Person of Color	3 (38)
Did not report	1 (12)
Role at Cure Violence	
Site Supervisor/Director	3 (38)
Other staff	5 (62)

Table 40. Community Member Demographics (n = 21)	
	n (%)
Gender	
Male	9 (43)
Female	12 (57)
Age Ranges	
24-33	2 (10)
34-43	5 (23)
44-53	4 (19)
54-63	4 (19)
64+	4 (19)
Did not report	2 (10)
Race/Ethnicity	
Black/African American	9 (43)
White	11 (52)
Did not report	1 (5)
Neighborhood Distribution	
Dutchtown	9 (43)
Walnut Park	6 (28)
Wells Goodfellow	6 (28)

Neighborhood Descriptions

◆ DUTCHTOWN

The majority of participants considered Dutchtown to be a "diverse" and "beautiful" neighborhood. As Cameron, a Black male explained, "Dutchtown is a melting pot…[it is] just a gumbo. It's full of a lot of different colors." Considering what contributed to the diversity of Dutchtown, several participants discussed the mixture of different racial/ethnic and religious backgrounds, variations in socio-economic status, and distinctive businesses. For example, Angel loved that she had "access to several different grocery stores and different restaurants"

within walking distance. Casey, a white male similarly, appreciated the "distinct commercial corridors" in the neighborhood that offered residents and visitors "a lot of unique experiences."

Although Dutchtown had many positives associated with it, participants also described how the "transient" and "chaotic" nature of the neighborhood could make it "dangerous" and unpredictable. Neighborhood decay, manifesting in vacant lots, homes, and general properties were, as Casey explained, "frustrating." Some, like Charli, a white female, blamed the constant move-ins and move-outs that left the neighborhood "downtrodden" and "always trashed." Others, such as Ehren, a Black male, suggested that the diversity within Dutchtown led to "fluctuation[s]" in crime because of racial/ethnic tensions. Yet most, like Cameron, a male, believed that crime in Dutchtown was just something to be navigated.

> *Dutchtown is a beautiful neighborhood. In the daytime, it looks like one of the places that you would come down here and shop and walk around, but nightfall…you can get robbed or shot or anything like that, just like in any projects across the United States. I would say just proximity. Knowing where you're at, knowing who you're dealing with, what places to be and where not to be. There is a rule and an order of how to do things in Dutchtown to be safe.*

During the day, Dutchtown is "a beautiful neighborhood" that offers visitors and residents opportunities to "shop and walk around." "Nightfall," however, presented serious concerns such as robbery and being "shot." To mitigate this dichotomy, Cameron explained that people had to constantly be aware of "who [they're] dealing with [and] what places to be and where not to be." In this regard, many, like Cameron, considered Dutchtown to be like "any [other] project across the United States" because of the implicit and explicit "rule and an order" that accompanied navigating neighborhoods.

Some participants described these tensions in terms of residential decay and changes—as Angel put simply, "the times are changing. It's not as safe as it used to be." A few, like Angel, pointed to gentrification that caused the "sales of houses or the rent" to increase "exponentially." Robyn, a white man, suggested gentrification, coupled with the lack of amenities, also contributed to the decay:

> *When I first got here, it was really rockin' and rollin', and the all of the sudden, it went downhill. Now, they're tryin' again…I'm disappointed…You're not in a good neighborhood no more when they tear down McDonald's and Hardee's is gone, as they say. There's not a fast food goin'. People take advantage of it.*

While the neighborhood used to be "really rockin' and rollin'," Angel believed that Dutchtown was headed "downhill." The closure of McDonalds, Hardees, and other fast-food chains were considered signals of a lack of investment in the area in addition to allowing some people to "take advantage" of the transient atmosphere.

Wells Goodfellow was often described as a middle-class neighborhood composed of mostly people of color. Some, like Parker, a Black man, believed that while "the neighborhood is coming up" it was still "underdeveloped." Considering the neighborhood layout, participants discussed a mix of abandoned or vacant homes juxtaposed with others that had been well maintained by longtime residents. As Reese, a Black woman described, "There's some houses that are kept up well, and then there's others people have moved away or they abandon the house, and they just fell into disrepair." Some linked residential decay to a perceived increase in crime, lack of new businesses, and negative narratives surrounding Wells Goodfellow. Thinking about the various barriers that the neighborhood faced, Ira and Finn, a white couple stated:

> *Anyway, if I was opening a business, I would be hard pressed to do it in this neighborhood because we don't—we get all the bad rap on the—on newspapers and social media and the news. I think we got to get the crime element down and the idea that you're in a war zone when you're down here.*

According to Ira and Finn, starting a business in Wells Goodfellow may leave some "hard pressed." Reflecting on the violent images and narratives on news and social media, they describe the neighborhood as "a war zone" because of the "crime element" that structures the area.

Others defined these changes in terms of specific issues, such as an exodus of businesses and influx of drugs. Considering the origin of these concerns, Blake, a Black man, said:

> *Our neighborhood just—it went all the way down. We had fresh vegetable/fruit stands. We had a fish market. We had the Chrysler dealership, Woolworths. We had everything in our neighborhood—Greenleaf's Market. We had all the mom-and-pop stores. On the corner of my block, we had this restaurant called Mom's. They had to pack in all the video games, pinball machines, pool table. We would go down there. She would cook those big, fat, juicy cheeseburgers for $1.25…Yeah. An order of fries and a Coke or whatever—and a soda for $1.25. That was back in the day.*

While Wells Goodfellow used to have a variety of amenities such as food, family-owned, and commercial businesses, Blake situated the neighborhood's decline within the disappearance of those establishments. Also evident in Blake's account is a perceived loss of community. Whereas "back in the day" people would visit *Mom's*, play games, and gather over food, the loss of communal spaces and environmental resources has caused the neighborhood to go "all the way down."

Although several participants were worried about the changes in the neighborhood's infrastructure and amenities, a few mentioned positive relationships with neighbors and to the community more broadly. For example, Ira and Finn explained that while the neighborhood may get a "bad rap," there is "a definite community here." Further describing the neighborhood efforts and activities that rebuild or sustain community, Reese, a Black woman, said:

Well, since I've been over here a pretty long time, I pretty much know most of my neighbors. We all get along well, and never had any issues with them. We have our little garden. We come together, and we have a little garden. We used to have vegetables, but the younger people don't really wanna be in the garden. There's a few flowers. Some people are growing a few flowers. Mostly, we use it like a meeting space. We'll have small meetings or like a small social event where we have ice cream and food and stuff.

For Reese, knowing "most" of her neighbors and getting "along well" resulted in the creation of a "little garden." While the young people do not interact with the garden, several of the long-term residents, like Reese, use it to "come together" and create a "meeting space." In this regard, while Wells Goodfellow lacked important resources, some, like Reese, reimagined the neighborhood and constructed opportunities to build-out community.

◆ WALNUT PARK

Participant's descriptions of Walnut Park overlapped with those of Dutchtown and Wells Goodfellow. Similarly, Walnut Park was defined in relation to a "transient" population coupled with a mix of well-maintained and blighted homes, challenges with sustaining steady businesses, and issues with drugs and violence. For example, Reno, a Black man, believed that the neighborhood was "broken" because of all the "abandoned buildings" and missing "big businesses" that could provide employment. Similarly, Rio, a Black woman, was concerned about her son's barber's difficulties in attracting new customers because of the negative perceptions of "the community and environment." Yet, overall, the lack of resources in Walnut Park was identified as being a cause for crime and violence. As Reno further explained:

No gyms open for them have to have out of school activities. No chess houses, or some chess clubs where they probably teach their brain, teach them and get their brain sharper. There's no commercial business or Walmart or nothing around here. When they come out of school the only thing they have the street, and the things they make up to do, to give theyself something to do, and this is usually violence, or fighting.

According to Reno's statement, the apparent lack of "commercial business[es]" and after school activities has contributed to the violence that occurs in Walnut Park. Chess clubs and Walmart, for example, could be a way for young people to "get their brain sharper" or give them something to occupy their time. Instead, "the only thing they have is the street" which, as Reno suggests, often leads to "violence" and "fighting."

While the neighborhood infrastructure certainly shaped how participants described Walnut Park, several also commented on specific concerns that impacted their experiences. Presley, a Black female, was irritated by the "rundown houses" and garbage strewn in the streets. Further contemplating on negative aspects of her environment, Ani, a white woman stated:

I've never lived in a neighborhood so bad like this. It's just crazy. You would have to live there to understand. Just driving on the streets in this little neighborhood, they're dealing d-r-u-g-s. It's just right in front of you, and you just have to stop and wait for them to do this. It was like a whole block.

As a newer resident, Ani was taken aback by how "bad" and "crazy" it was to live in Walnut Park. While drug dealing is stereotyped to occur in dimly lit alleys, Ani routinely witnessed it while "driving on the streets," even having to wait until transactions finished before proceeding.

However, several participants from Walnut Park described the resilience of the neighborhood, particularly in relation to its residents. Lennox explained that since a large population of residents were "born, raised, and have raised families," a lot of them are actively seeking opportunities for "changes." Similarly, Rio discussed how some families adopt strategies to maintain their residence:

I live with my mother, my grandmother, that kind of situation. There's a lot of that still existing in this community, and it's a beautiful thing to have the blended families, all the families under one household. People do that because of economics and just convenience and what have you.

Living with his mother and grandmother, Rio's experience was shaped by having multiple generations within one household. Although the increase in cost of living has displaced many residents, "blended families" living within one household could help preserve access to homeownership. In this regard, while several participants held positive and negative views of Walnut Park, many of them actively cultivated tools to navigate and claim their neighborhood. As Ross, a Black man, said, "I identify from being from Walnut Park, 'cause like I said, even though we have bad stigmas or whatever, bad reputation, I'm still proud of my neighborhood."

Cure Violence Staff

◆ TYPES OF VIOLENCE

CV staff described multiple forms of violence across the three program sites. Lennox explained that the majority of their encounters are with "young people being shot. We meet a lot of assaults, domestic, carjackings." Further considering what violence looked like, he continues:

We had a couple of in-the-street situations where a young lady was walking—a couple walking down the street or whatever, and I guess people driving down the street shooting at each other, and a bullet hit one of the young girls, 15 years old. We had somebody stole somebody's car, and they ended up over here in our community. The person riding around the force of course seen 'em and shot one of the individuals in the car and stuff like that.

As illustrated, Lennox describes two "in-the-street" instances in which CV staff were deployed to mediate. In one, a couple of young ladies were caught in the crossfire of a drive-by shoot out. In another, a stolen car resulted in the public shooting of the perpetrator. In both cases, CV staff had to deal with complex forms of violence and victimization.

Within some of the neighborhoods, CV staff attributed violence to drug use and tensions within and between gangs. For example, Robbie, a Black man, believed that "opioid addiction" was one of the primary drivers that "spikes up violence" in catchment areas. Others, like Rio, attributed violence to the kinds of participants they had who were often "people involved in gangs." Describing how these dynamics generally played out, Cameron said:

> *So, it's not just the random situation when you got gangs. You're like, "Oh, well. You all are part of this life. You all doing whatever, whatever." It's not like that. It's like they get into it with people, drug territory, and then they go shoot up a birthday party 'cause the one guy is there. That kind of stuff, that's happened a lot. It's happened way more times than I like to make mention of.*

Contrary to popularized notions of gang related-violence as disorganized, Cameron makes it clear that gang behavior is not a "random situation." Rather, when there are personal or territorial disputes, some gangs will "go shoot up a birthday party" to attack their target. In this regard, many of the CV staff navigated calculated, deliberate, and almost unpredictable levels of violence.

Violence was also experienced both directly and indirectly by several staff members. When asked about what levels of violence they personally encountered, Karrie, a Black man, replied bluntly: "Straight up. My coworkers have been shot at, all type of shit, straight up." Also illustrating how personal violence can manifest while working, Robbie explained:

> *They ran into the car. I'm on the passenger side, and they ran down the hill to the passenger side with these AKs and Glocks all in the car on me, 'cause they didn't know who I was.*

Although Robbie was sent to that area to deescalate a potentially violent situation, he himself was threatened because he was unknown in that neighborhood. Though Robbie's encounter is certainly violent and intimidating, others described further forms of gun-related violence. A few participants, like Ehren mentioned instances where they were shot at:

> *As they're lookin' that way, they come out of a cut behind us, really close to us, and they just start shootin' at us. We turn around. It's two dudes with assault rifles just standin' side-by-side just shootin' at us. Might have let off 40 shots that day. My friend, in particular, got hit in the leg, I think, that day. He was right on the side of me. I was actually tellin' my friends my wrist still hurts from that day 'cause I fell on my wrist. I might have a broken wrist. That was months ago. I was on the job. Actually, I was workin'.*

Although Ehren and his partner were out providing referrals to other community resources, "two dudes with assault rifles" met them with "40 shots." In their escape, Ehren received a permanent wrist injury and his friend was "hit in the leg." As such, Ehren's account illustrates the various dangers that can occur while working as a CV staff member.

Another form of violence that was described by the CV staff was structural violence. Structural violence occurs when social institutions, policies, and societal norms harm certain groups by depriving them access to important resources[48,49]. Examples of structural violence include racism, ageism, and genderism. Notably, structural violence has been observed as positively impacting violent behavior, including homicide and war.[49] This association between direct and structural violence was described by Blake in the form of corrupt policing practices.

> *When the drugs came in that tore our neighborhood apart…The police knew this. A lot of times the police would watch them bring the stuff in and actually they were gettin' a cut. Yeah…We would sit in the barber shop. You could see when they pull up on the lot across the street right out the window of the barber shop. You could see the police actually givin' street people duffel bags. Then the jobs went. When they started cuttin' the stores and everybody started closin' they businesses started goin' down. The gangs took over. That's where your violence came in at. See, when you got a lack of education, impoverished neighborhood, unemployment, that gave birth to crime. We been jacked up ever since.*

In some ways the CV staff viewed their roles as protectors of individuals in the neighborhood, not just from community violence but also from structural violence. This was often described in the form of police brutality. Tracy noted that the work CV does serves a buffer against the negative impact policing has in his neighborhood:

> *Growing up in the hood, you get put in a lot of stressful situations, so over time you just learn to cope with things. It ain't easy to walk up to somebody with a gun, not whatsoever, but if you don't do it, the police gonna do it and possibly kill 'em and take 'em to jail instead of trying to actually fix the situation.*

However, in other instances, the CV staff were trapped within the deeply entrenched systems of structural violence. One staff member noted that he was "fearful of the police" because they wouldn't care about his commitment and role in reducing violence in the neighborhood. He shared:

> *'Cause from my understandin', I've had team members that say the police don't like us because—and they've told him this. The police have came up to him and like, "We know you got certain information." The police would. The police are the types who run up on you and let—and harass you…I have been told that the police have harassed people when they can and might harass you about being a Cure Violence worker.*

◆ DAY-TO-DAY WORK

The day-to-day work of CV staff consisted of a myriad of tasks and responsibilities. Often the day began with daily check-ins and flowed into meetings with the City of St Louis and CV Global, monitoring specific neighborhoods, intervening in violence, and making referrals to community resources. Detailing these processes, Ehren said:

> *Just openin' my computer straight up and checkin' through emails and puttin' referrals and stuff like that. I typically come in, do a little computer work for about three or four hours maybe—maybe three hours. In that time, though, I will step outside, and I walk around the area, or I walk to a hotspot…That's what we would call monitoring the catchment. I walk around for a little while, come back to the office, do paperwork, probably head back out with one of the other team members.*

Accordingly, a significant portion of a CV staff member's day fluctuated between doing paperwork and "monitoring the catchment." Furthermore, because violence can be unpredictable, some of the daily activities revolve around simply preparing to disrupt violence.

Other staff shared similar day-to-day work experiences involving meetings and service coordination in the neighborhood and with participants. Robbie stated that he was "constantly in contact" with his participants. Cameron explained that his day often began with meetings followed by a team check-in and outreach with neighborhood participants and residents. Fleshing this routine out further, he said:

> *A whole lot of meetings. A whole lot of meetings throughout the daytime. Then around 3:00, I finish—that's around the time that the team finishes up with their briefing for the day. If we don't have any current mediations going on, then the first thing that we do is follow up with the participants in our program and make sure that they have what they need to stay on task for their goals or see if they have anything else that they would like to do, that they wanna do, like that. Then after that, then we would basically go into the field into the catchment, and we would ride around.*

Evident in this description, CV staff members move from activity to activity throughout the course of a day. After team meetings or briefings are finished, staff members typically reach out to participants to "make sure they have what they need" to reach their "goals." Subsequently, staff "go into the field" and "ride around" to mitigate any potential issues.

◆ STAFF TOOLS AND STRATEGIES

Across all CV staff interviews, several strategies were developed and utilized for successful violence interruption. Since all staff had prior relationships with violence and violence-related activities, personal reputation factored into how they interacted with their neighborhoods. Second, racial and ethnic identity in addition to the ability to develop a strong rapport with current and potential participants was an invaluable asset. Third, hosting events and developing

relationships with neighboring businesses or organizations helped deepen connections to their neighborhoods. Fourth, while most staff believed that the police were an important resource, sharing information with the police was strictly prohibited.

Many of the staff described how important their identity and lived experiences were for doing CV work. Several discussed a personal understanding of the code of the streets, such as knowing what group controlled specific territories, helped them negotiate their surroundings. As Reno stated, "Your ears, your eyes gotta be the streets." When asked how his identity impacted how he approached his work, Karrie explained that it made his job "10 times easier" because people already knew who he was. Further detailing the importance of personal reputation, Cameron said:

> *If you a mover and a shaker, basically your name means something, not just that you are well known, but it means something. My name was carrying a whole lot of weight already before I was doing this job. The fact that I was already that person, when I changed, my respect level stayed exactly the same, but I'm doing something different. Beforehand, there was a fear type of respect that people had for me. Now, there is a love type of respect. I still got the same level of respect except it's being received differently.*

As described, Cameron recognized how his reputation on the street, which preceded him becoming a staff member, "stayed exactly the same" when he joined CV. Although having your name "well known" indicates some level of a reputation, Cameron suggests that it is more important that a "name means something." In this regard, because his name already held "a whole lot of weight," working with CV shifted his reputation from one based on "fear" to one based on "love."

At individual levels, building rapport with identified high risk members of the community was also an important tool utilized by CV staff. Reno, for example, believed that it "takes time" to connect with someone and "nurture someone's mental health" which could potentially help "cur[e] their violence." In this regard, strong rapport was considered a crucial process that even trumped job titles and roles. Further contextualizing this sentiment, Lennox described how this strategy informed his work:

> *Relationship is important because one of the things that we work at is not trying to exert your role over who got the better rapport. If you are an outreach worker, and you got the better rapport with this community or these group over here, we would rather for you to take the lead role with this group over here [rather than calling management]. Trying to exert your position over the rapport is, I think, a hindrance to progress.*

Regardless of official titles and positions, all cure violence staff worked together to develop relationships with community members. For example, if an outreach worker had "better rapport" with a specific community or "group," then they would "take the lead role" rather than

shoehorning a supervisor or manager into that interaction. In this regard, sticking to specific roles or expectations was perceived as a "hindrance" to successfully building rapport.

Similarly, racial and ethnic aspects of identity also played an important role in building rapport and approaches to violence intervention. Generally, because CV catchment areas were located within predominantly Black neighborhoods, many of the Black staff expressed a sense of shared kinship. Considering the importance of his racial identity, Ehren said:

> *I haven't found no white boys that can do it [violence intervention]. I know some Mexican friends that could do this job. Honestly, I'm relatable... I look like the people I'm tryin' to help. Because we are the people that need help honestly...It's just really the familiarity and the rapport if anything. It is definitely bein' Black. In the streets, it's all about the look. You what I'm sayin'? …Bein' Black definitely helps.*

According to Ehren, racial identity or "the look" is central to developing "familiarity" with "the streets." Although he doubted the ability of "white boys" or some Mexican people to do CV work, being Black was an invaluable asset. For example, Ehren's racial identity made him more "relatable" because he "look[s] like" or shares the same racial background as the people he's interacting with. In this regard, while building rapport can be created through positive interactions or reputations, it can be solidified through shared racial backgrounds.

Another strategy utilized was working in partnership with other neighborhood businesses and organizations. To build trust and relationships with other community groups, CV staff developed networks to facilitate referrals to social services. Tracy explained that because community members often interact with businesses and organizations, building rapport with them is a "number one" priority. To deepen these relationships, CV staff ensured that they were easily accessible day or night. Several residents and businesses in the neighborhood had the phone numbers of staff and did not hesitate to reach out when experiencing or concerned about violence. Detailing the importance of this tool, Cameron described:

> *Yeah, so the businesses, all the business owners in the neighborhood have my phone number. My personal, not my work phone. They have my personal phone number. The [business] owners up there, they got guns behind the register like every other business owner does, but they would call us before they would pull a gun out on someone because they don't wanna escalate the situation. They wanna de-escalate it.*

Although some business owners had "guns behind the register," the relationships that CV staff had cultivated with them mediated how guns were used. Rather than giving owners his work phone, Cameron, similar to other staff, gave out his personal phone number in case he needed to be reached. In this regard, while the presence of CV staff did not erase the desire to carry a weapon, having someone on call encouraged owners to "de-escalate" situations through CV staff.

Aside from other organizations, the CV staff also actively planned and implemented activities for the neighborhood, events that strengthened community cohesion while also providing

information and resources for health and wellbeing. In doing so, staff spent a lot of time cultivating these relationships and building connections. For example, during one of the interviews at a CV site, Tracy pulled out his cellphone and scrolled through pictures of an event where different kinds of animals were brought to the neighborhood:

> *That's a llama. That's a buffalo. There was a porcupine, a Lemur, three groundhogs— there was a lot of stuff there. It went well, very well. It actually went better than what we expected.*

At this event, staff were able to attract community members and expose them to an enrichment activity which, as Tracy went on to say later, is "one of the main ways to interact" with the community. Reno, similarly, discussed how his site worked with different social service organizations to help women and young people:

> *We pair with a lot of different organizations to help different groups, and reach different—like we paired up with Community of Hope which targets women from 12 to elderly, 'cause there's a lot of young pregnant women. There's a lot of young children male and female, of women that's forgotten about, due to whatever the living arrangements, their parents or what's going on. They are getting just as violent as the man. We go to schools, we mentor, we have about 67 youths from about eight years, about 12 years old we mentor, that have been disruptive in the home.*

Although violence is often coded as an adult or masculine endeavor, as implied through Reno's mention of "they are getting just as violent as the man," there are some women and children who may also engage in violence. Furthermore, Reno's account highlights the high levels of work that CV staff do, such as mentoring 67 "disruptive" young people, which requires a lot of time and energy. Yet, pairing with "different organizations," staff are able to "help different groups" and expand their reach.

Finally, CV staff drew explicit and firm boundaries between them and the police. Although police would sometimes be at a shared meeting or event, staff tried "to have little to no dealings with them," as Ehren commented. Robbie discussed media projects that mobilized shared identities, such as identifying staff as part of the community, and the inability of participants to say that CV facilitated any interactions with the police. Additionally, many believed that in order to do their work successfully, collaborating or interacting with the police could place them at "risk" or in a "dangerous" situation. Ehren further details:

> *I know for a fact that we don't do any dealings with the police. We don't call them for anything. If the police get to a shootin' before us, we leave. We don't show up. We don't have any dealings with the police. We can't be credible messengers dealin' with the police. No one would trust me. No one would be- feel comfortable to even come to someone. Participants come to our office. They feel comfortable here. We try to ask the police to stop pulling people over in front of our office. They seem to do it a lot.*

From asking police "to stop pulling people over in front of" their offices to refusing to "show up" after the police had already been deployed, CV staff limited their overlaps and potential interactions with the police. Refusing to "call them for anything," several, like Robbie, believed that they could maintain their status as "credible messengers." Credibility, similar to rapport and shared identities, was considered a crucial aspect of CV work. In this regard, because community members often harbored distrust in law enforcement, working with the police could make current and future participants feel uncomfortable.

◆ CHALLENGES AND MISSING RESOURCES

While CV staff drew upon various tools or strategies that were considered crucial to their work, several challenges and missing resources were noted. The emotional labor and toll that this work demands could negatively impact their mental health and complicate life outside of CV. Working long and often unpredictable hours could cause some, like Lennox, to "carry" their work home and create "angry phases" with romantic partners. Others, like Ehren, had "bad anxiety" that could be "triggered" in situations reminiscent of the past. Explaining how mental health could be impacted by day-to-day work, Cameron said:

> *I would say that my first year of doing it, it changed in a negative way because I was dealing with a lot more…We got leather skin. You know what I'm saying? Leather does eventually crack and break and things like that. On the outside, we do this every day, so people are like, "Oh, he's just going to work. Oh, he's clocking in and just going to work." Even over at our headquarters and everything, they just look at us like we go to work every day just like they doing. It's not the same…The stuff that we have to carry with us, you can't just forget about it.*

Although previous experiences with or exposure to violent situations have familiarized all CV staff violence, it can take a serious toll on staff members mental health. During his first year, Cameron's mental health changed "in a negative way." While staff members had "leather skin," the wear and tear of interacting with violence can create a "crack and break." Additionally, while staff members are viewed as simply getting paid or "just going to work," this kind of work creates traumas that staff "have to carry" with them.

Additionally meeting the needs and expectations of multiple institutions involved in the implementation and running of the CV program further complicated the work of staff members. Data collection requirements from CV Global, expectations of a demonstrated impact from the City and funders, and various integration issues with umbrella organizations that housed CV programs created frustration with perceived bureaucratic red tape. Lennox suggested that investments and investors may have shifted the goal from preventing violence to churning out metrics. Karrie was concerned with the hierarchy of organizations associated with the CV program that created a lot of "miscommunications" and distanced staff members.

Often, these sentiments created a distrust of bureaucratic structures among CV staff. For example, Karrie dared any "politician or funder…go and stop someone from shootin' up a place

first before" they told him how to do his job. Similarly, Cameron believed that bureaucratic requirements could cause more harm than aid:

> *I get it, but it's quite disrespectful and demeaning to a lot of the people that work for me and a lot of people that they're going out there to see. These people don't wanna get in no pictures with us, and they don't want it to get posted inside of a report that I gotta send to the health department or whoever I gotta send it to…It's a whole lot..they say, "Well, this is what you have to do because the funders are saying we need this," or "The funders say they want this." The funders say, the funders say, the funders say…It gets to the point where I'm getting tired of hearing that because it seems like the program is actually about the funders. It's not about helping the people out here.*

According to Cameron, the metrics or expectations of CV Global and funders can be "disrespectful and demeaning" to CV staff and their communities. Because staff members work with vulnerable communities, the expectation to take pictures that will be "posted inside a report" is difficult to achieve. Furthermore, the constant barrage of "the funders say they want this" or makes some, like Cameron, feel as if "the program is actually about the funders" rather than "helping the people out there."

From a desire for more media coverage to the need for business cards, some staff members described various missing resources that contributed to some of their challenges. Ehren was frustrated because while "the city and the community asks a lot" from CV staff, staff did not have enough resources to handle these requests. As such, the general lack of access to resources put a personal financial strain on some staff members. Reno believed that he "spent probably about $6,000" of his own money" since he started because "sometimes people need help right then and there." Furthermore, access to liquid assets were imperative in emergency situations as Cameron describes:

> *But be able to relocate somebody or to be able to put somebody in school or to be able to get somebody—like I've gotten participants out of town because they lives were threatened. If I need to be able to tonight buy a redeye flight to Florida so I can send them to they family, and it costs $700 for a one-way ticket, I need to be able to do that…*
>
> *The thing is, some people might think that spending that much money or that kind of a thing on one person. It's like these are pivotal individuals. We're talking about the highest-risk people. Me moving this person, this one person out of the neighborhood can mean that that's 16 shootings that won't happen next year, but they don't understand the gravity of the situation most of the time.*

As Cameron describes, having access to financial resources could help CV staff "relocate" and "put somebody in school" and may reduce future violence. For example, helping somebody or their family get out of town immediately could help those whose lives are "threatened." Cameron also suggests that those who position spending money on one person do not "understand the

gravity of the situation." In this regard, further investing in financial resources to help "the highest-risk people" could result in the reduction of future violent encounters.

Furthermore, some staff pointed to additional missing structural or communal resources that could strengthen their work. For example, several staff wanted access to transportation vehicles that could allow them to take participants to new areas of the city or show them different kinds of experiences; as Tracy noted, the majority of the people where he was from "aint never been to a baseball game." Others believed that recruiting female CV staff could help mitigate challenges in engaging with high-risk women. Contemplating the perceived increase of gun-related violence among women, Ehren states:

> *It'd also make it easier to talk to some of the high-risk women. I can only talk to high-risk women that I have a rapport with or that I build a rapport with, but it's not as easy when you're not a woman. If we had women here, they can relate to them. Talkin' about things that I just don't know. I'm not a woman…I remember the…shop owner down the street, she was sayin' it would be good with some women, 'cause they could come talk to the prostitutes and the women that's out here. 'Cause a lot of women that have been gettin' shot around here. I think the last—out of the last 10 shootin's, maybe 5 or 6 of 'em were women. Yeah. Some of 'em were women shooting, actually shooting the gun. It's a lot of high-risk women.*

According to Ehren, while he is able to engage with "high-risk women" that he already has a rapport with, connecting with other women is difficult. He suggests that having a female CV staff member could provide someone for high-risk women to build relationships with. For example, in talking to a neighboring business owner, Ehren learned that a female staff member would be useful in talking to the sex workers working on the street. He also explains that because several women "have been gettin' shot" in the neighborhood, the numbers of high-risk women, particularly those involved with guns, has increased.

◆ REWARDS AND IMPACT OF CURE VIOLENCE

While CV staff members described several challenges and barriers that complicated their work, all believed that the program was reducing violence, impacting their communities, and changing themselves. Considering CV's role in dealing with violence, Cameron suggested that his neighborhood had seen a "decrease in…homicides and aggravated assaults, robberies, and things of that nature." Echoing this sentiment, Lennox explained that CV had "impacted" his neighborhood "tremendously" because of changes he had observed:

> *The enjoyable part is being able to ride up and down the streets of [Neighborhood] and see the community people now being able to catch the bus, walking through the neighborhood when the weather was good or when the weather—whenever a good day is outside, whether it be—regardless to what the season is, the park is filled with a bunch of basketballs being bounced and played, children running around on the playgrounds,*

so just seeing the community coming back out into the community. You can see that they are confident in being in the community without the fear of being hurt.

For Lennox, CV has facilitated several holistic changes in his neighborhood. For example, he has noticed that people in his community now feel safer catching the bus, walking around outside, and "running around on the playgrounds." In this regard, Lennox describes a shift in his community's mindset that has made them feel more "confident in being in the community without the fear of being hurt."

Yet, one of the more nuanced aspects of impact that CV had was on the staff members themselves. Because all staff had previously been exposed to or involved with violence prior to joining the program, working with CV was profoundly transformative and meaningful. Recognizing that he is "aggressive" and a "reactor," Reno took CV techniques and applied them to himself—"I have to mediate myself before I leave my house." Similarly, Lennox explained that since all staff were their "first participants," they constantly reminded themselves that they were there "to cure violence and not be the executors of it." Describing this tension between working to cure violence within and external to themselves, Robbie states:

It's [the work] rewarding because it gives me an opportunity to look at the heart of the matter, the problem that's going on in our community, and just to go back and reflect coming up in the neighborhood I grew up here. I was a part of that problem. Now, I have an opportunity to undo some of the wrongs that I've caused in our city, in our communities.

He later added:

It's not easy work because how do you tell a person that never had an education, never had a father, that's had to survive on his own from a child, to put his gun down? That's the only friend that he believe he has. Yeah, it's challenging. I think we have to be transparent. We have to be vulnerable and approachable. We have to be—we have to have the courage to share our story.

According to Robbie, working with CV is "rewarding" because it has given him "an opportunity" to "reflect" not only on himself, but the violence within his own community. In considering how he was "a part of that problem," he believed that he now had a chance to "undo some of the wrongs" that he created and to help facilitate change. Robbie also describes the difficulty of doing CV work as it is hard to tell people navigating economic, academic, and social abandonment to put the "gun down." In doing so, CV staff members utilize vulnerability, approachability, and "have to have the courage to share [their] story."

Much of these sentiments were also considered life-saving because some CV staff members believed, as Ehren commented, that they would most likely "be dead or in jail" without this responsibility. Explaining this thought further, he continued:

Tremendously and positively. It's been very impactful. The fact that I'm not in the streets is impact because my friends joke about me bein' the type of shooter that shoots any and everything. It's vital that people like me aren't in the streets, but not in jail either, not comin' back out here with nothing. Bein' changed from nobodies to somebodies seein' your whole world bein' changed. Cure Violence is impactful because it saves lives. It saves lives from both sides of the gun, from the person that was gonna shoot and the person that was gonna get shot.

Ehren believed that because his work with CV removed him from "the streets" he, and his community, have been "tremendously and positively" impacted. Joking with his friends, his work transformed him from "bein' the type of shooter that shoots any and everything" to becoming a part of community change. Ehren also makes a comment on the lack of resources and opportunities that can keep people in the streets or release them from jail "with nothing." In this regard, he suggests that CV "is impactful" because it "saves lives from both sides of the gun."

Residents and Businesses Owners or Employees

◆ TYPES OF AND EXPERIENCES WITH VIOLENCE

The violence detailed by residents and business owners or employees across all three CV neighborhoods was largely described as shootings, domestic assaults, home invasions, robberies, stabbings, burglaries, and lootings. In some neighborhoods, community members discussed "hearing gunshots" on a regular basis. For example, Jordan, a white business owner in Dutchtown, described seeing "a couple people hanging out the top of their [car] roofs shooting at each other." Similarly, Parker, a Black man, stated that he had seen "domestic violence, shootings, [and] stabbings" while working in Wells Goodfellow. Others experienced indirect violence such as having friends get "robbed and killed…over the years," as Ross reflected about his life in Wells Goodfellow. However, several participants, such as Ani, a Walnut Park resident, described experiencing several forms of direct violence:

We'd been in the house for two weeks. We had a home invasion, a real-life home invasion and just was so scary...Then a few months ago, my son and me were in the alley on the weekend. A car tried to mow us down, like literally tried to run us over...Last week, I pulled up in front of my house, and there was two teenage boys with automatic weapons. I had just got home from school with my son and I look over, and there's these two teenage boys with them ski masks things that they wear now and automatic weapons. My heart just stopped in my chest.

Within two weeks of moving into Walnut Park, Ani and her family were the victims of "a real-life home invasion." More recently, she and her son were walking down an alley when a car "tried to mow" them down. Additionally, one week prior to her interview, she picked up her son from

school and found "two teenage boys with automatic weapons" and ski masks standing near her house. Ani's story highlights the fear and exposure to violence that many residents experienced within their neighborhoods.

Similarly, Rio, a Black woman also from Walnut Park, had a personal experience with gun violence and robbery:

> *Well, you know when you stick your head out the front door to see what's going on, and somebody's trying to steal your car and they shoot at you, it was pretty terrifying because the bullet came very close, it hit the door and bounced off the door, the metal frame in the door but it came very close. I was afraid the person would come back, things like that could happen, and my children were young then.*

When opening the front door of her house to investigate what was happening, Rio was met with gunfire from the person attempting to steal her car. Describing the ordeal as "pretty terrifying," the bullet had come "very close" to hitting her and "bounced off the door" instead. In particular, Rios was "afraid [that] the person would come back" and harm her or her young children.

 Although direct and indirect violence certainly impacted how community members navigated their environments, several participants also discussed forms of structural violence that they believed contributed to neighborhood violence. For example, Ira and Finn who were white business owners in Wells Goodfellow, blamed the "decades and decades of redlining and racism" that contributed to the cumulative disadvantage of Black and Brown communities. Parker explained that because "St. Louis was known for redlining," the "divide between economic groups and races" has created a lot of poverty and "discrimination." Some recognized these actions as reflective of an abandonment by the City of St. Louis which, contemporarily, manifested in a perceived lack of city services. Discussing these frustrations, Reese, a Black woman from Wells Goodfellow, said:

> *People come and dump their trash over here. They just dump their trash, and then it takes a while for the city to come and get it. My trash doesn't get collected on the regular. I feel like, since this area is pretty low on the totem pole of the city's hierarchy— they don't really take as much care in this area as they do other areas. The streets are pretty wack. The streets are terrible.*

Reese believes that her neighborhood is "pretty low on the totem pole of the city's hierarchy" for two reasons. In describing the condition of the streets within Wells Goodfellow as "pretty wack" and "terrible," she suggests a lack of investment in the infrastructure of the neighborhood. Similarly, the influx of trash that people "dump" in her neighborhood coupled with a perceived inability to have trash "collected on the regular" exacerbated the notion that the city does not "care" about Wells Goodfellow.

Although some residents and business owners or employees believed that the police or a police presence helped to reduce violence, many expressed a distrust and irritation with the police. Although Jordan and his colleagues have called the police in certain situations, they often "just

pray" that the situations will work themselves out because "the police don't necessarily respond very fast." Detailing these concerns, Casey, a white male, discusses his experience in Dutchtown:

> *They [police] don't communicate with us. They certainly don't have a worthwhile presence. They don't address the constant issues and clear sources of problems that we bring to them. It's really frustrating. I mean, I can't say what all my neighbors do, but I don't call the police anymore. There's no point. Unless somebody's dying on the ground, they're not going to come.*

Casey roots his apathy towards the police in a lack of communication, "worthwhile presence," and inability to "address the constant issues and clear sources of problems." He suggests that while he and other residents alert the police about their various concerns, the police have yet to create meaningful change. As a result, Casey believes that "unless somebody's dying on the ground," there is "no point" in calling the police because "they're not going to come" anyway.

◆ CHANGES IN NEIGHBORHOOD VIOLENCE

Community members reported varying perceptions of changes in neighborhood violence. In Wells Goodfellow, for example, Ira and Finn believed that "crime has…become more an issue" whereas Parker suggested that "it has reduced." Walnut Park residents also disagreed on the levels of violence within their community as some, like Morgan, a white woman, thought that the "light at the end of the tunnel" was nonexistent in comparison to Ross, a Black man, who believed that violence had "calmed down a lot over the years." Dutchtown residents had similar converging and diverging sentiments as expressed in the excerpts below. Andy, a white woman, explained:

> *It's feeling better in the last couple years, but over the last decade, or even anybody I've talked to forever, this area is the wild wild west. It is crazy out here, with young people just experiencing some lawlessness and things…[Yet]...because we're really honing in to community, the violence is dropping now, and it's showing some success and hearing better things, more people are all understanding that it's not—we'll go to the community meetings, and there'll be a crime report and be like, "Well, there's armed robberies and issues that happen, but they're lower this year.*

As Andy described, while Dutchtown used to feel like "the wild wild west," changes in working together as a community created a shared "understanding." For example, although community meetings discuss the presence of "armed robberies and [other] issues," the decrease in rates of occurrence has created "some success."

In contrast, Riley, a Black woman from Dutchtown, believed that violence and crime was on the rise:

I feel like now it's [violence] worse, and it seem like it's worse now because it's like every time I turn on news, you have people that are stealin' cars. Unfortunately, my car was stolen July of last year from the Kia Boys, or whatever they wanna call themselves, and they stole my car right in front of my house.

Generally, Riley's perception of violence and crime in Dutchtown was shaped by news media and personal experiences with crime. Watching news that warns of car theft coupled with her vehicle being stolen by a neighborhood group directly "right in front" of her house, she believed that violence in Dutchtown had gotten "worse."

◆ EFFORTS TO ADDRESS VIOLENCE AND INTERACTIONS WITH CURE VIOLENCE

A variety of efforts were shared by community members with the goal of addressing crime and violence. Some, like Ani, took a more individual approach, such as putting "iron bars on every single window" and adopting a pit bull as part of a home security system. Casey, a white male Dutchtown resident and business owner, appreciated the redevelopment of a neighborhood park and recreational center, a "fundraiser to get furniture for the pool," and various "movie nights in the park" to create a "safe family friendly atmosphere."

Community members also worked to build social networks and cohesion to combat neighborhood violence. For example, when Reese and her neighbors noticed "anything suspicious or anything off," they would exchange text messages or calls to "come together" and "fix" the issue. As another example, Andy and other business owners or employees were working together to "create more lighting on the sidewalk" in an effort to "create a better [and] safer space." In contrast, some believed that it was better to address violence with violence. For example, Tobie, a white woman from Walnut Park, recounted a home invasion experience where violence was appreciated:

Two guys kicked in the back door, and it was our neighbors—the police told me afterwards that they got three calls within five minutes that we were being broke into from our neighbors, because we were at the grocery store, my mom and I. They said that they got three calls within five minutes that we were broke into, and then they got the fourth call, shots fired. One of our neighbors, when they came out, shot one in the butt.

When Tobie and her mother were at the grocery store, two men "kicked in" her back door. Although her neighbors had already called the police, one of her neighbors waited until the invaders were outside and "shot one [of them] in the butt." After recounting this experience, Tobie later explained that the response of her neighbors made her feel more "protected" in Walnut Park.

Considering other resources outside of law enforcement or vigilante justice, few community members had heard of the CV program and most wished that there was a program to address violence in their neighborhood. Those who brought up CV were located in Dutchtown and

appreciated the efforts put forth by staff members. Andy, for example, thought that the area "seemed more dangerous" before CV was implemented and various programs within the program that cultivated a "community bond" through increased social services. Further describing this sentiment, Casey said:

> *We've worked really well with the folks at Cure Violence. We love them. They're there for us when we need them, we know the work they do. We trust them to do what they do. I think they're pretty successful at it. Obviously, they can't be everywhere all the time, but they make a difference.*

Having "worked" with CV to resolve issues, Casey believed that staff members were "pretty successful" and could be "trust[ed] to do what they do." Although he recognized that staff are unable to be "everywhere all the time," he suggested that they have made "a difference."

However, Angel, a person of color, had a less optimistic perspective of CV. Generally, she believed that the program's impact was "very limited" because of their lack of weapons. As such, Angel compared CV's approaches to addressing violence as "like going into a gunfight with a slingshot." Yet, a few, like Robyn, a white business owner, suggested that no matter the measurable impact, CV encouraged people to "try harder:"

> *People are together, talkin', doin' stuff together, which is great…Everybody has to try, and that's all. That's all it takes. I think the neighborhood's coming up, I think, but I said that [several] years ago too. They're tryin' to get money for the awnings or façade or whatever and get money for—they had people in the parking lot overnight to make sure don't nobody steals the cars, and lighting, and they gave money—the roundabout down there—15,000. They got a bunch more proposals on, which is really great, and I'm really proud of 'em.*

For Robyn, trying harder manifested in people gathering "together, talkin', and doin' stuff." Having worked in the area for several years, he noticed that when CV arrived, proposals were put forth to "make sure don't nobody steals the cars," create better infrastructure such as a "roundabout," and increase "lighting" to make the area safer. In this regard, because people were working together, Robyn suggested that Dutchtown was "coming up" and that he was "really proud of" the CV staff.

◆ HOW TO CURE VIOLENCE

Overwhelmingly, residents, business owners, and CV staff suggested that the lack of economic, social, and structural resources contributed to violence within their communities. Similarly, all participants explained that curing violence needs to happen across multiple levels of intervention including policy changes, increased social service support, and greater community engagement.

First, several participants described policy changes in relation to supporting economic development, business growth, public education, and a reduction of structural violence. For

example, Casey believed that "having support at City Hall" would help "fuel" economic developments. Others thought a multi-pronged approach could combat violence and offer different opportunities. Considering how her neighborhood and various structural aspects could facilitate change, Ani said:

> *I think it would be good if they could put up some decent stores and fast-food places and stuff. It would make it accessible for some of these young people to get jobs within walking distance. Once you get so poor…and…if you're a certain race or you're a certain something, then it's harder for you to get a job anyway. When you get so poor, it's really hard to make money. Sometimes you're just forced into doing a certain type of life…I guess maybe if police patrolled more. I know the response time when we called about the home invasion. A guy was talking about mowing everybody down, and I was just for sure I was gonna die. I think it took 'em like two hours to get there…By that time the guy had—I was so lucky my partner ended up calmin' the guy down, because I was just pissin' him off…and he left…by the time the cops got there.*

According to Ani, if her neighborhood "put up some decent stores and fast-food places" it could help make the area more "accessible" for young people to have nearby employment. She also suggests that employment discrimination and poverty limits access to money can coerce people "into doing a certain type of life" such as engaging in violence. Considering additional structural concerns, Ani believes that "if the police patrolled more" and quickened their "response time" then she might feel safer in violent situations such as her "home invasion."

Describing other approaches to curing violence, participants noted that the affordability and ease of access to guns increased levels of violence in their neighborhoods. Andy, for example, commented that "guns are a problem" because they are "extremely dangerous," often "in the hands of kids," and are "too affordable." In this regard, some, like Reese, suggested "gun safety' courses in addition to "youth counseling." Reno thought that if there were "strict" penalties on tinted car windows then fewer people would "ride deep with all these guns" because they would be visible. In this regard, several wanted stronger "gun control" laws, as Ross detailed further:

> *I think gun control would be a lot better because nowadays—it ain't like it used to be. A lotta these kids can go to a store and buy guns and stuff 'cause they're not gonna be felons or whatever. You got a lotta kids, a lotta the guys, I'm not tryin' to say necessarily kids, but them guys ages 21, 20, 21 to 30. You gotta a lotta guys out here ridin' around here with weapons and stuff 'cause they can legally get 'em. It's just crazy.*

As illustrated, Ross thought that "gun control would be a lot better" if young children were unable to "go to a store and buy guns." Evident in his statement, the restriction of gun ownership to those without a felony record may not be enough to combat gun related violence. As such, Ross believed that just because the law says that someone could "legally get 'em" does not equate with effectiveness.

Second, participants suggest that increased social services could assuage the needs of people navigating poverty and social injustices. For example, Ira and Finn believed that rather than calling law enforcement when "someone's having a true mental breakdown" mechanisms should be in place to deploy a social worker instead. Parker thought that making education and housing more affordable could help reduce the need for violence:

> I *would offer free school at community college like Forest Park...Currently right now the City of St. Louis is maybe 1,000 employees short. If you go…through the program at the community level, you go to school free and the city will hire you. You gotta go through the program to get hired. Now you have a city employee…Then you become eligible for some type of affordable housing. If you work for the city for two years we'll help give you grant money to purchase a condo or we'll assist you in buying property or real estate…Currently people want their houses fixed, but subcontractors can't find enough plumbers, enough electricians, enough HVAC heating and cooling, enough roofers, enough carpenters. These programs would be free. Now you're are pulling resources and you are developing a workforce.*

Parker proposed a multi-leveled approach to addressing violence in his neighborhood. Noticing that the City of St. Louis "is maybe 1,000 employees short," he suggests that offering free community college, a pathway to city employment after graduation, and "some type of affordable housing" could produce more city employees. Additionally, because there is a constant need for home maintenance, creating a skilled labor force could also provide more opportunities. As such, Parker's suggestion would cultivate city "resources" to help create "a workforce."

Third, several mentioned that greater community action and collaboration among residents, programs, and businesses could help combat violence within neighborhoods. For example, Andy suggested that if stakeholders, such as "churches and all the social workers" could communicate via "walkie-talkies" then that could bolster opportunities for "basic human care." Others, like Sidney, a Black woman from Wells Goodfellow, thought that community norms could be changed by a collaboration between individual people and law enforcement:

> *I think it [curing violence] would probably look like something like getting the neighbors involved. You know? Having some police presence. You know? Talking about getting people more safety-conscious and more responsible for their actions or something like that. Yes. If doing something of a violent nature, they have to be held accountable for that.*

According to Sidney, curing violence could be achieved by "getting the neighbors involved" and increasing "police presence" within the neighborhood. Additionally, she believed that holding people "accountable" for their actions, and encouraging them to become "more safety-conscious," could change the "violent nature" of the individual and her neighborhood.

Finally, some suggested that providing socio-emotional support to people living in high crime and low-income neighborhoods could help fill material and non-material gaps in resources necessary for wellbeing. Explaining that people have to provide "a piece of the village that is missin' in each person's life," Karrie describes:

> *If they wanna change it, if they wanna cure violence, you're gonna have to respect it. You're gonna have to understand that these kids don't always have two parent households and backup when we think we presentin' them with somethin' great. They like, I don't even know how I'm fixin to eat tonight. You can't talk to the kids. Then you can't talk to the parents because they think they either gonna go to jail because they think—they feel they're bein' judged. They feel inadequate already. They're psychologically damaged. They're traumatized. It's already a struggle there.*

In order to cure violence, as discussed by Karrie, people have to "respect it." Doing so would impart an understanding that a lot of children, parents, and families are navigating poverty and fear of being ensnared by law enforcement. For example, while he and other CV staff members may offer community members "somethin' great," many of them are more concerned with "how [they're] fixin' to eat tonight." Additionally, although CV may be able to offer different opportunities, some may already be "traumatized," "feel inadequate," feel as if they are "bein' judged," and grappling with "psychologically" damaging issues. In this regard, the first step in curing violence is recognizing that there is "already a struggle there."

Discussion

Given the limited description of changes in violence across the CV neighborhoods it is important to note that our findings suggest several key differences that *may* have contributed to differences in perspectives: direct experience with violence and race. Throughout our interviews, **individuals who have been less directly impacted by violence had more positive views of violence trends in the neighborhood and those identifying as being a racial minority perceived violence as growing rather than receding.** These findings are informative for the design and evaluation of violence prevention programs. Better understanding who is the most involved and impacted by violence will allow for more nuanced and targeted outreach and response activities. From this perspective, the primary goals of CV were well-aligned with holistically resolving the challenges of violence within communities, but were hindered by limited staff capacity and resources.

Overall, the findings of the qualitative evaluation suggest that the CV program has been successful in meeting two of the three programmatic aims: identifying and interrupting potentially violent conflicts and treating high risk people. With regard to the third aim, changing community norms, our findings are more mixed. This finding may be attributable to two reasons: 1) The limited number of CV staff available to build strong connections with community members and 2) **The majority of residents, except for those in Dutchtown, were completely unaware of the program's existence.** For example, although the staff engage with

other kinds of service providers (e.g., business owners or employees) in their respective neighborhoods, interviews suggest there is little engagement with the broader community outside of high-risk people (this is underscored by results of the community survey, which showed relatively low levels of awareness of CV). However, a few residents living in Dutchtown had developed connections to CV through community events. In this regard, the primary responsibility for CV staff across all three sites was to identify and interrupt potentially violent conflicts to hopefully treat high risk people. In cases where violence erupted, efforts to build community were placed on pause. Additionally, while staff had separate job titles and roles, the overlapping dynamics of their jobs overburdened them and required them to meet varying reporting, caseload management, and individual demands. As such, the program staff relied primarily on word of mouth and individual touchpoints or relationships within their communities to shift the prevailing community norms and attitudes about violence. However, given the finite resources each site has to operate, the lack of community acknowledgement or awareness, and the development of marketing material our findings suggest that - **CV had limited yet incremental effectiveness.**

Limitations

Although the qualitative aspect of this evaluation was able to capture a range of experiences, opinions, and suggestions related to the CV program and violence within St. Louis more broadly, several limitations should be noted. First, recruiting for interviews with community members was difficult due to the pauses in the evaluation's contract and the time-consuming nature of qualitative research. Similarly, the reduced project timeline limited the amount of data able to be collected. For example, while several participants were initially interested in being interviewed, delaying their interviews for weeks due to project delays caused some to lose interest. As a result, the sample for the community interviews within each neighborhood was quite small and may not be diverse enough to capture a broader range of community norms or perceptions of violence. Second, this project was unable to collect any data in the comparison sites which could make an assessment of different community perceptions and norms around violence; this could have produced information regarding whether sentiments and experiences shared by community members in CV neighborhoods are similar to or different than those in comparison sites.

Future qualitative investigations into the impact of violence prevention programs in the City of St. Louis would benefit from a longitudinal analysis that could better capture changes in community norms. Additionally, because the participant sample was primarily representative of older people, as only 10% of participants were between the ages of 24-33 years-old, this work could benefit from a greater inclusion of younger people; this may be particularly important as most of the interviews suggested that younger people between the ages of 17 and 21 may be engaging in higher levels of violence.

SECTION 6 | CONCLUSIONS

The results of this evaluation show mixed evidence of the effectiveness of Cure Violence in St. Louis. With regard to community norms, we found no changes in community attitudes and norms that we can directly attribute to the CV intervention. Similarly, no notable differences in experiences with violence were found that can be attributed to the intervention. There is evidence of a significant decrease in rates of violence in the Wells-Goodfellow CV site. It is estimated that approximately 12 instances of violence were prevented since the start of CV in Wells-Goodfellow that can likely be attributed, at least in part, to program implementation. There is no evidence of a significant decrease in violence in the Dutchtown or Walnut Park sites as a result of the CV program.

The qualitative evaluation revealed that staff were able to successfully identify and interrupt potentially violent conflicts and treating high risk people, but faced challenges of limited staff capacity and lack of resources. Additionally, interviews with community members showed an overall lack of awareness of the CV program outside of businesses owners and employees.

With the exception of decreased violent crime rates in Wells Goodfellow, there is an overall lack of evidence for the effectiveness of CV. While the promise shown in the Wells Goodfellow site should certainly be recognized, significant challenges were faced while conducting this evaluation that may have contributed to the lack of conclusive evidence otherwise. The first major challenge we faced was a delay in the start of the evaluation, which ultimately did not begin until 15 months after the intervention started. This prevented us from gathering baseline data that would allow us to measure changes in community norms pre- and post-intervention. Instead, we were limited to measuring changes in norms *within* the intervention, therefore missing out on any short-term changes that may have taken place during the first 15 months of implementation.

Another major challenge emerged during the start of the second year of the evaluation. There was a period of approximately 2 months cumulatively where it was unclear whether there would be continued funding from the City of St. Louis to sustain the program and subsequently complete the evaluation. With no funding in place to continue, we were forced to pause all evaluation activities while decisions were made about program funding. This pause had significant repercussions for all components of the evaluation. During this pause, we were notified by the City that there was no funding in place to continue the program past June of 2023. As a result, the time frame of the evaluation was cut from a three-year period down to a 22-month period, requiring a re-design of the evaluation. The initial delay in the start of the evaluation combined with the unforeseen pause in evaluation activities and the ultimate shortening of the evaluation timeline all limit the conclusiveness of our results. Moving forward, we strongly recommend that evaluation be a priority from the start of any violence prevention efforts to ensure that the effectiveness of these efforts can be properly measured.

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APPENDIX A | ADDITIONAL PARTICIPANT SURVEY INFORMATION

One of the intermediate program goals of Cure Violence is to change the norms, attitudes, and violent conduct of the highest risk individuals in the catchment areas. Potential enrollees are identified by staff during outreach activities and while performing violence interruptions and are then enrolled in the program to receive case management. Once someone agrees to participate in the Cure Violence intervention, their assigned outreach worker conducts an assessment of their individual needs surrounding education, employment, housing, healthcare access, food, transportation, and more. Based on this assessment, outreach workers connect participants with the appropriate services in the community. Outreach workers attempt to maintain regular contact with participants to provide ongoing support and mentorship to improve participants' attitudes and approaches to conflict.

As illustrated in the theory of change (Appendix D), the program is designed to provide participants with access to education/training and employment, encourage prosocial bonds and relationships, teach nonviolent approaches to conflict resolution, and to instill nonviolent goals and values. This, in turn, encourages participants to avoid risky situations and to apply nonviolent approaches to conflict resolution. This will ultimately lead to a decrease in violence. The evaluation team initially proposed a longitudinal survey to capture changes in norms and attitudes among participants enrolled at the three Cure Violence sites. Below we briefly describe the survey instrument we developed and document the barriers to survey implementation we experienced. As a result of these barriers and the eventual condensed evaluation timeline, this survey was cut from the final evaluation.

Survey Administration

The survey was designed to be administered at baseline, when participants are first enrolled in the program, then again 6 months into the program, and once more after a full year of enrollment. This would allow us to assess short- and longer-term changes in participants' attitudes and behaviors. As with the community survey, we intended to compensate respondents with a $25 gift card each time they completed the survey.

The process of enrollment into Cure Violence is anonymous. Outreach workers do not record the names of enrollees. This helps protect their identities and eases concerns about being associated with the program. In order track the progress of participants, each enrollee is assigned a unique identifier, through which only their assigned outreach worker can identify the participant.

Due to the anonymous nature of enrollment, we did not have direct communication with program participants. As such, we had to rely on the outreach workers to facilitate survey administration. Since the role of program staff in this portion of the evaluation is vital, and as participants may associate this survey and its contents with the Cure Violence program itself, it

is crucial to have staff buy-in. While we were optimistic that we could begin survey collection during Year 1, concerns expressed by the Cure Violence Staff led us to delay the launch of the participant survey.

Survey Content

The survey was intended to assess participants' attitudes toward violence and their own violent behavior. We proposed a series of validated measures commonplace in research among high-risk samples, consistent with the CV logic model, and, in some cases, that have been used in prior CV evaluations. We also attempted to keep some survey items consistent with those captured through the community survey for comparative purposes.

Prosocial Bonds

Prosocial relationships are characterized by a concern for others and the community as a whole. To assess prosocial bonds, we used the *collective efficacy* scale also used in the community survey.[14] Both elements of this scale, *willingness to intervene* and *capacity for informal social control,* capture participants' perception of their neighborhood's ability to work together to achieve a common good. We also included items gauging how much respondents' feel that their friends and family members would approve of or endorse their own violent conduct. Assuming the CV intervention is effective, we would expect to observe positive changes in prosocial attachments and reductions in peer approval of violent conduct, as respondents begin to associate less with delinquent peer groups.

Norms and Attitudes around Violence

To assess the degree to which participants embrace nonviolent goals and values, we included measures related to their perceived norms and attitudes toward violence. As in the community survey, we included items capturing *Code of the Streets, Legal Cynicism,* and *Stigma of System Involvement*, which generally capture participants' acceptance or tolerance of violence and justice involvement.[20,21,22,23,24] As participants engage with the program and begin to embrace nonviolent goals and values, we would expect changes in their attitudes and norms toward violence to be reflected in these scales.

Participants' level of nonviolent conflict skills and their application of nonviolent approaches to conflict resolution were measured through various items gauging their trust in institutions and their likelihood of resolving conflict through nonviolent means. To assess trust in institutions, we asked if they can count on the following groups to intervene when violence occurs: police, EMS, fire department, public leaders, community programs, clergy, and teachers/school administrators (participants may answer "yes," "no," or "not sure"). To understand participants' likelihood of resolving conflict through nonviolent means, we proposed presenting respondents with various scenarios depicting conflict and asked them to list different ways they could resolve it, followed up by a question asking which of those options they would choose and why. These scenarios were adapted from Butt's and Colleagues evaluation of Cure Violence in New York City.[l]

Perceptions of and Experiences with Community Violence

As with the community survey, the participant survey draft included questions gauging how much participants *fear crime* in their neighborhood, how they perceive their *risk of victimization* in their neighborhood, and whether they *avoid* certain activities for fear of being victimized. These measures would allow us to assess how crime affects the everyday behaviors of participants and the extent to which they avoid situations involving the risk of violence.[27] We also planned to ask participants to self-report the number of times they engaged in various acts of criminal violence (such as purposely damaging or destroying property that did not belong to them, carrying a hidden weapon for protection, and threatening to attack someone with a weapon), and whether they were personally victimized in the last six months. As participants engaged with the program, we would expect that their involvement in potentially violent situations would decrease, leading to a decline in violent conduct.

Access to Education, Training and Employment

In order to measure participants' access to education, training, and employment, we included questions about participants' needs and whether or not those needs have been addressed by program staff. Participants were to be asked whether they needed help with any of the following: getting a job, getting into a school or GED program, resolving a conflict, securing housing, accessing healthcare or mental healthcare, buying food or groceries, buying family supplies, finding housing, and getting transportation. This section also inquired about the frequency and duration of participants' meetings with their outreach workers, how the participant became involved with the program, and their overall satisfaction with Cure Violence.

Barriers to survey administration

We encountered a number of barriers that prevented us from launching the participant survey. Transparency about the survey with program staff is vital. This is especially true since we would be relying on outreach workers to help encourage participants to complete the survey instrument. To successfully administer the survey, site staff must be comfortable with the instrument, as any material that they share with participants can potentially be seen as a reflection of the program.

To gain the support of staff, we solicited feedback about the survey content from site supervisors and attempted to finalize the instrument as a team. Over the course of multiple meetings, we fielded questions about the survey design, edited the phrasing of sensitive items, and eliminated various questions that were of particular concern to the site supervisors. Unfortunately, we were not able to produce a final draft of the instrument that was satisfactory to both site staff and the evaluation team. It is evident that the lack of communication during the development of the community survey instrument impacted our ability to successfully work together to finalize the participant survey. Our inability to openly communicate with the sites early on in the evaluation, and the resulting distrust felt by CV staff, was a clear contributor to the delay of the participant survey launch. Specifically, the site supervisors expressed the following concerns:

Sensitive questions would jeopardize outreach worker/participant relationships: The relationship between new enrollees and CV outreach workers is a fragile one. CV staff take measures to ensure that new participants feel that their safety is not threatened by engaging with the program (e.g., participant identities are anonymous, CV staff does not share participant information with law enforcement). The site supervisors were concerned that many of the proposed survey items would jeopardize the relationship between participants and their outreach workers, even if the survey were completed anonymously. These concerns were not isolated to a small number of questions that could be edited for wording or altogether excluded. Rather, the supervisors believed that the overwhelming majority of items would be perceived as interrogative and thereby erode the trust and rapport that CV staff work to build with participants.

The incentive was too low to attract participation: Those who are enrolled in the program have been identified by CV staff as high risk for engaging in violence. According to the site supervisors, many participants in the program are active in the underground economy and their earnings are such that a $25 gift card would not be incentive enough to participate in the survey.

The survey did not capture some ways in which the program works: While all of the questions included in the survey were related to the program logic model and the pathways through which the program is designed to work, the site supervisors expressed some doubt that the program would operate on all the pathways in the model. They proposed that there are some alternative pathways and associated outcomes that they believe the program would affect.

Meeting with the site supervisors about the survey was very valuable in demonstrating the disconnect between our evaluation efforts and the work that the Cure Violence staff is doing on the ground. The concerns could not be addressed by simply changing some wording or eliminating a few questions, and without the support of program staff, the survey could not be administered. After consulting researchers who have done similar evaluations and weighing our options, we decided that the best way forward would be to conduct the qualitative portion of the evaluation before revisiting the participant survey. Through this process, we had hoped to strengthen our relationship with the staff and built the rapport needed to facilitate the participant survey. Unfortunately, we did not have the opportunity to finalize and administer the participant survey due to evaluation pauses and loss of funding to complete the evaluation.

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St Louis Neighborhood Survey

Thank you for taking the time to complete this survey. Your responses, along with others across the City of St. Louis, will help us understand if and how a local violence interruption program works to prevent violence in your neighborhood. Your honest answers will help us understand what it is like to live in your neighborhood and what your experience with violence has been.

We will share the results of this survey with the people who take the survey (including you), the City of St. Louis Department of Health, and the Board of Aldermen. However, your responses will be **completely anonymous**. The survey will take about 30 minutes to complete. You may skip any questions you wish. Once you have completed the survey, you will be sent an additional $15 gift card.

Please provide the access code from the postcard or letter you received about this survey.

Your access code: _____

1. **How important do you think it is for Americans to do the following?**
   a. Vote in elections
      Not at all important   Somewhat important   Very important

   b. Volunteer some time to community service
      Not at all important   Somewhat important   Very important

   c. Serve on a jury if called
      Not at all important   Somewhat important   Very important

   d. Report a crime they witness
      Not at all important   Somewhat important   Very important

   e. Serve in the military when at war
      Not at all important   Somewhat important   Very important

2. **How much do you agree or disagree with the following?**
   a. I trust my LOCAL government (e.g., the city of St. Louis).
      Strongly Agree Agree Neither Agree nor Disagree Disagree Strongly Disagree

   b. I trust my STATE government.
      Strongly Agree Agree Neither Agree nor Disagree Disagree Strongly Disagree

   c. I trust my FEDERAL government.
      Strongly Agree Agree Neither Agree nor Disagree Disagree Strongly Disagree

3. Were you registered to vote in the last PRESIDENTIAL election?
      Yes   No

4. If you were not registered, why not? (SKIP IF REGISTERED TO VOTE)
   Did not want to Did not know how to Did not know I needed to Not allowed because of a felony conviction

5. If you were registered, did you vote? (SKIP IF NOT REGISTERED TO VOTE)
      Yes   No

6. Did you vote in the most recent MAYORAL election?
      Yes   No

7. Do you plan to vote in the next PRESIDENTIAL election?
      Yes   No

8. During the last 12 months, did you perform any UNPAID VOLUNTEER OR COMMUNITY SERVICE work that was NOT mandated by a court?
      Yes   No

The following questions ask about your NEIGHBORHOOD. Your neighborhood includes the places within SEVERAL BLOCKS in every direction of where you live.

9. Thinking about your typical day, how much time do you spend in your neighborhood?

None at all   A little of the time   Some of the time   Most of the time   All of the time

10. **Please choose how much you agree or disagree with the following statements.**

   a. I feel I'm a part of my neighborhood.

   Strongly Agree   Agree   Neither Agree nor Disagree   Disagree   Strongly Disagree

   b. Participating in my neighborhood is a positive thing for me.

   Strongly Agree   Agree   Neither Agree nor Disagree   Disagree   Strongly Disagree

   c. I feel a bond with my neighborhood.

   Strongly Agree   Agree   Neither Agree nor Disagree   Disagree   Strongly Disagree

   d. I am proud of my neighborhood.

   Strongly Agree   Agree   Neither Agree nor Disagree   Disagree   Strongly Disagree

   e. It is important for me to be politically active in my neighborhood.

   Strongly Agree   Agree   Neither Agree nor Disagree   Disagree   Strongly Disagree

   f. If the people in my neighborhood work together, we can solve problems in our neighborhood.

   Strongly Agree   Agree   Neither Agree nor Disagree   Disagree   Strongly Disagree

   g. I really feel that any problems faced by my neighborhood are also my own problems.

   Strongly Agree   Agree   Neither Agree nor Disagree   Disagree   Strongly Disagree

11. **How likely or unlikely are your neighbors to do something, like get involved, if they saw the following events?**

   a. Children are skipping school and hanging out on a street corner.

   Very Likely   Likely   Neither Likely nor Unlikely   Unlikely   Very Unlikely

   b. Children are spray-painting graffiti on a local building.

   Very Likely   Likely   Neither Likely nor Unlikely   Unlikely   Very Unlikely

   c. Children are showing disrespect to an adult.

   Very Likely   Likely   Neither Likely nor Unlikely   Unlikely   Very Unlikely

   d. A fight breaks out in front of their house.

   Very Likely   Likely   Neither Likely nor Unlikely   Unlikely   Very Unlikely

   e. The fire station closest to their home is threatened with budget cuts.

   Very Likely   Likely   Neither Likely nor Unlikely   Unlikely   Very Unlikely

12. **How much do you agree or disagree with the following statements?**
   a. People around here are willing to help their neighbors.
      Strongly Agree   Agree   Neither Agree nor Disagree   Disagree   Strongly Disagree

   b. This is a close-knit neighborhood.
      Strongly Agree   Agree   Neither Agree nor Disagree   Disagree   Strongly Disagree

   c. People in this neighborhood can be trusted.
      Strongly Agree   Agree   Neither Agree nor Disagree   Disagree   Strongly Disagree

   d. People in this neighborhood generally DO NOT get along with each other.
      Strongly Agree   Agree   Neither Agree nor Disagree   Disagree   Strongly Disagree

   e. People in this neighborhood DO NOT share the same values.
      Strongly Agree   Agree   Neither Agree nor Disagree   Disagree   Strongly Disagree

13. **How much do you agree or disagree with the following statements?**
   a. When someone disrespects you, it is important that you use physical force or aggression to teach them not to disrespect you.
   Strongly Agree   Agree   Neither Agree nor Disagree   Disagree   Strongly Disagree

   b. If someone uses violence against you, it is important that you use violence against them to get even.
   Strongly Agree   Agree   Neither Agree nor Disagree   Disagree   Strongly Disagree

   c. People will take advantage of you if you don't let them know how tough you are.
   Strongly Agree   Agree   Neither Agree nor Disagree   Disagree   Strongly Disagree

   d. People do not respect a person who is afraid to fight physically for their rights.
   Strongly Agree   Agree   Neither Agree nor Disagree   Disagree   Strongly Disagree

   e. Sometimes you need to threaten people in order to get them to treat you fairly.
   Strongly Agree   Agree   Neither Agree nor Disagree   Disagree   Strongly Disagree

14. **How much do you agree or disagree with the following statements?**
   a. It is important to show others that you cannot be intimidated.
   Strongly Agree   Agree   Neither Agree nor Disagree   Disagree   Strongly Disagree

   b. People tend to respect a person who is tough and aggressive.
   Strongly Agree   Agree   Neither Agree nor Disagree   Disagree   Strongly Disagree

   c. Sometimes you have to use physical force or violence to defend your rights.
   Strongly Agree   Agree   Neither Agree nor Disagree   Disagree   Strongly Disagree

d. Arguing or fighting with other people usually makes matters worse rather than better.

Strongly Agree   Agree   Neither Agree nor Disagree   Disagree   Strongly Disagree

15. **How much do you agree or disagree with the following statements?**

a. Laws are made to be broken.

Strongly Agree   Agree   Neither Agree nor Disagree   Disagree   Strongly Disagree

b. It's okay to do anything you want as long as you don't hurt anyone.

Strongly Agree   Agree   Neither Agree nor Disagree   Disagree   Strongly Disagree

c. There are no right or wrong ways to make money – only easy ways and hard ways.

Strongly Agree   Agree   Neither Agree nor Disagree   Disagree   Strongly Disagree

d. Other people should NOT get involved in fights between friends or family members.

Strongly Agree   Agree   Neither Agree nor Disagree   Disagree   Strongly Disagree

e. These days, a person has to live pretty much for today and let tomorrow take care of itself.

Strongly Agree   Agree   Neither Agree nor Disagree   Disagree   Strongly Disagree

We are now going to ask some more questions about your NEIGHBORHOOD. Remember, your neighborhood includes the places that you spend time within SEVERAL BLOCKS in every direction of where you live.

16. Thinking about STREET VIOLENCE (fights or confrontations that happen outside or on the streets), how do you think YOUR NEIGHBORHOOD compares to OTHER NEIGHBORHOODS in St. Louis?

My neighborhood is less violent   My neighborhood is about the same   My neighborhood is more violent

17. In the last month, how many times have you HEARD GUNSHOTS in your neighborhood?

Never   Once or twice   Three to five times   More than five times

18. How common or uncommon would you say it is for people to BELONG TO STREET GANGS in your neighborhood?

Very common   Common   Neither Common nor Uncommon   Uncommon   Very Uncommon

19. How common or uncommon would you say it is for people to CARRY GUNS in your neighborhood?

Very common   Common   Neither Common nor Uncommon   Uncommon   Very Uncommon

20. Have you ever seen someone THREATENED WITH A GUN in your neighborhood?

Yes   No

21. If a FIGHT were to break out near your home, how likely or unlikely is it that your neighbors would BREAK IT UP?

Very Likely   Likely   Neither Likely nor Unlikely   Unlikely   Very Unlikely

22. If a FIGHT were to break out near your home, how likely or unlikely is it that the POLICE WOULD BE CALLED?

Very Likely   Likely   Neither Likely nor Unlikely   Unlikely   Very Unlikely

23. If a FIGHT were to break out near your home and the POLICE WERE CALLED, how likely or unlikely is it that the POLICE WOULD SHOW UP?

Very Likely   Likely   Neither Likely nor Unlikely   Unlikely   Very Unlikely

24. If a FIGHT were to break out near your home and the POLICE CAME, how likely or unlikely is it that the POLICE WOULD RESOLVE IT PEACEFULLY?

Very Likely   Likely   Neither Likely nor Unlikely   Unlikely   Very Unlikely

25. **How much of a problem are the following situations in your neighborhood?**

   a. Cars speeding

     Not a problem at all   Somewhat of a problem   A very big problem

   b. Run down or poorly kept buildings

     Not a problem at all   Somewhat of a problem   A very big problem

   c. Groups causing trouble

     Not a problem at all   Somewhat of a problem   A very big problem

   d. Gunshots

     Not a problem at all   Somewhat of a problem   A very big problem

   e. Gangs

     Not a problem at all   Somewhat of a problem   A very big problem

   f. Mail or package theft

     Not a problem at all   Somewhat of a problem   A very big problem

   g. Street racing

     Not a problem at all   Somewhat of a problem   A very big problem

26. **There are a number of organizations in St. Louis that are here to help communities. Please select all of the organizations you have heard of before.**

a. Forward Through Ferguson
b. Ready by 21
c. Cure Violence
d. Cops and Clinicians
e. Better Family Life

f. Life Outside Violence
g. Crime Victim Center
h. 2-1-1
i. READI Chicago
j. United Community Action Network

The next set of questions asks about violence in your neighborhood, which may be upsetting for you to think about. You may skip any questions that you would prefer not to answer.

27. **Have any of these events happened to YOU in your neighborhood WITHIN THE PAST 12 MONTHS?**

   a. You were chased where you thought you might have been seriously hurt.
      Yes   No

   b. You were beaten up, mugged, or seriously threatened.
      Yes   No

   c. You were the victim of sexual assault or attempted sexual assault.
      Yes   No

   d. You were attacked with a weapon, like a knife, box cutter, baseball bat, chain, or broken bottle.
      Yes   No

   e. You were shot at by someone.
      Yes   No

If you answered YES to any of the events above, please answer the following question ONLY FOR THE EVENTS YOU EXPERIENCED. If you answered NO to all events, please skip to QUESTION 30.

28. **In the last question, you said something violent happened to you in the past 12 months. Thinking of the MOST RECENT time something like this happened, did you REPORT the incident to the POLICE?**

   a. You were chased where you thought you might have been seriously hurt.
      Yes, reported   No, didn't report

   b. You were beaten up, mugged, or seriously threatened.
      Yes, reported   No, didn't report

   c. You were the victim of sexual assault or attempted sexual assault.
      Yes, reported   No, didn't report

   d. You were attacked with a weapon, like a knife, box cutter, baseball bat, chain, or broken bottle.
      Yes, reported   No, didn't report

   e. You were shot at by someone.
      Yes, reported   No, didn't report

If you answered NO, DIDN'T REPORT to any of the events above, please answer the following question. If you answered YES, REPORTED to all events, please SKIP TO QUESTION 30.

29. In the last question, you said you DID NOT report on or more of these incidents, why not? Please select all that apply.

a. Police could not do anything

b. Police would not help me

c. Worried about revenge from attacker or others

d. Did not want attacker to get in trouble

e. I handled it myself

f. It was a private or personal matter

g. Other (please specify) _____

30. **Have you seen any of these events happen to SOMEONE ELSE in your neighborhood WITHIN THE PAST 12 MONTHS?**

a. Someone else was chased where you thought they could be seriously hurt.

     Yes   No

b. Someone else was beaten up, mugged, or seriously threatened by another person.

     Yes   No

c. Someone else was a victim of sexual assault or attempted sexual assault.

     Yes   No

d. Someone else was attacked with a weapon, like a knife, box cutter, baseball bat, chain, or broken bottle.

     Yes   No

e. Someone else was shot at.

        Yes   No

f. Someone else was killed as a result of violence, like being shot, stabbed, or beaten to death.

        Yes   No

31. **How often do you AVOID the following activities out of FEAR OF BEING ATTACKED in your neighborhood?**

a. Walking along at night.

Never Avoid   Rarely Avoid   Sometimes Avoid   Often Avoid   Always Avoid

b. Going to the corner store.

Never Avoid   Rarely Avoid   Sometimes Avoid   Often Avoid   Always Avoid

c. Going to nearby parks.

Never Avoid   Rarely Avoid   Sometimes Avoid   Often Avoid   Always Avoid

d. Sitting at the bus stop.

Never Avoid   Rarely Avoid   Sometimes Avoid   Often Avoid   Always Avoid

e. Sitting outside my house.

Never Avoid   Rarely Avoid   Sometimes Avoid   Often Avoid   Always Avoid

f. Walking alone during the day.

Never Avoid   Rarely Avoid   Sometimes Avoid   Often Avoid   Always Avoid

32. In the past 12 months, has anyone from your neighborhood tried to sell you something that you thought might be stolen?

        Yes   No

    33. If yes, how many times would you say this has happened in the past 12 months?

        Once   2-3 times   More than 3 times

    34. If yes, how much would you value the TOTAL cost of the goods at?

        a. Less than $50   d. $250 - $500

        b. $50 - $100   e. $500 - $1,000

        c. $100 – 250   f. Greater than $1,000

35. **Please read the following statements and choose how much you agree or disagree.**

   a. It's okay to beat up someone if they hit you first.

      Strongly Agree   Agree   Neither Agree nor Disagree   Disagree   Strongly Disagree

   b. It's okay to beat up someone if you have to stand up for or protect your rights

      Strongly Agree   Agree   Neither Agree nor Disagree   Disagree   Strongly Disagree

   c. It's okay to beat up someone if they are threatening to hurt your friends or family.

      Strongly Agree   Agree   Neither Agree nor Disagree   Disagree   Strongly Disagree

   d. It's okay to beat up someone if they talk badly about you behind your back.

      Strongly Agree   Agree   Neither Agree nor Disagree   Disagree   Strongly Disagree

36. **Please read the following statements about POLICE IN GENERAL and choose how much you agree or disagree.**

   a. Police treat citizens with respect.

      Strongly Agree   Agree   Neither Agree nor Disagree   Disagree   Strongly Disagree

   b. Police take time to listen to people.

      Strongly Agree   Agree   Neither Agree nor Disagree   Disagree   Strongly Disagree

   c. Police treat people fairly.

      Strongly Agree   Agree   Neither Agree nor Disagree   Disagree   Strongly Disagree

   d. Police respect citizen rights.

      Strongly Agree   Agree   Neither Agree nor Disagree   Disagree   Strongly Disagree

   e. Police are polite to people they talk to.

      Strongly Agree   Agree   Neither Agree nor Disagree   Disagree   Strongly Disagree

   f. Police make choices based on facts, not feelings.

      Strongly Agree   Agree   Neither Agree nor Disagree   Disagree   Strongly Disagree

37. **Please read the following statements about POLICE IN GENERAL and choose how much you agree or disagree.**

   a. Police explain to people why they do things.

      Strongly Agree   Agree   Neither Agree nor Disagree   Disagree   Strongly Disagree

   b. Police admit when they make mistakes or get things wrong.

      Strongly Agree   Agree   Neither Agree nor Disagree   Disagree   Strongly Disagree

   c. Police act based on their own personal opinions.

Strongly Agree Agree Neither Agree nor Disagree Disagree Strongly Disagree

d. Police handle problems fairly.
Strongly Agree Agree Neither Agree nor Disagree Disagree Strongly Disagree

e. Police serve all people equally.
Strongly Agree Agree Neither Agree nor Disagree Disagree Strongly Disagree

f. Police make sure people get what they deserve under the law.
Strongly Agree Agree Neither Agree nor Disagree Disagree Strongly Disagree

38. **Please read the following statements about POLICE IN GENERAL and choose how much you agree or disagree.**

a. Police enforce the laws the same way across all people.
Strongly Agree Agree Neither Agree nor Disagree Disagree Strongly Disagree

b. Police give people of color less help because of their race.
Strongly Agree Agree Neither Agree nor Disagree Disagree Strongly Disagree

c. Police provide better services to rich people.
Strongly Agree Agree Neither Agree nor Disagree Disagree Strongly Disagree

d. You should accept police choices even if you think they are wrong.
Strongly Agree Agree Neither Agree nor Disagree Disagree Strongly Disagree

e. You should do what the police tell you even if you think it is wrong.
Strongly Agree Agree Neither Agree nor Disagree Disagree Strongly Disagree

f. Police in my neighborhood have too much power.
Strongly Agree Agree Neither Agree nor Disagree Disagree Strongly Disagree

39. **Please read the following statements about POLICE IN GENERAL and choose how much you agree or disagree.**

a. Police do a good job of protecting my basic rights.
Strongly Agree Agree Neither Agree nor Disagree Disagree Strongly Disagree

b. I trust the police to make choices that are right for my community.
Strongly Agree Agree Neither Agree nor Disagree Disagree Strongly Disagree

c. Most police officers in my neighborhood do their job well.
Strongly Agree Agree Neither Agree nor Disagree Disagree Strongly Disagree

d. I would call the police to report a crime.
   Strongly Agree   Agree   Neither Agree nor Disagree   Disagree   Strongly Disagree

e. I would call the police if I thought I saw someone acting suspicious.
   Strongly Agree   Agree   Neither Agree nor Disagree   Disagree   Strongly Disagree

f. I would provide tips to the police to help find a criminal.
   Strongly Agree   Agree   Neither Agree nor Disagree   Disagree   Strongly Disagree

The survey is nearly complete. We are now going to ask you some questions about SAFETY in your neighborhood, which is several blocks in every direction of where you live.

40. **Please rate how safe or unsafe YOU would FEEL in the following situations.**

    a. Alone inside your house.

       Very Safe   Safe   Neither Safe nor Unsafe   Unsafe   Very Unsafe

    b. Outside in your neighborhood at night.

       Very Safe   Safe   Neither Safe nor Unsafe   Unsafe   Very Unsafe

    c. Walking alone toward a group of people that you don't know.

       Very Safe   Safe   Neither Safe nor Unsafe   Unsafe   Very Unsafe

41. **Please choose how much you agree or disagree with the following statements.**

    a. Going to prison gives you more respect from people in the neighborhood.

       Strongly Agree   Agree   Neither Agree nor Disagree   Disagree   Strongly Disagree

    b. Going to prison is honorable because it means you didn't snitch.

       Strongly Agree   Agree   Neither Agree nor Disagree   Disagree   Strongly Disagree

    c. If I went to prison, I would get more respect from people in my neighborhood.

       Strongly Agree   Agree   Neither Agree nor Disagree   Disagree   Strongly Disagree

    d. I would rather go to prison than have my friends think less of me.

       Strongly Agree   Agree   Neither Agree nor Disagree   Disagree   Strongly Disagree

42. How many people have you known personally or professionally who have been arrested for a crime?

       None   A few   Several   Many

43. **Please rate your fear of the following situations happening to YOU in YOUR NEIGHBORHOOD, from being not at all afraid to being very afraid.**

    a. Being approached on the street by a beggar or panhandler.

       Not at all afraid   Somewhat unafraid   Neither afraid nor unafraid   Somewhat afraid   Very afraid

    b. Being cheated, conned, or swindled out of your money.

       Not at all afraid   Somewhat unafraid   Neither afraid nor unafraid   Somewhat afraid   Very afraid

    c. Having someone break into your home while you are away.

       Not at all afraid   Somewhat unafraid   Neither afraid nor unafraid   Somewhat afraid   Very afraid

d. Having someone break into your home while you are there.

   Not at all afraid   Somewhat unafraid   Neither afraid nor unafraid   Somewhat afraid   Very afraid

e. Being raped or sexually assaulted.

   Not at all afraid   Somewhat unafraid   Neither afraid nor unafraid   Somewhat afraid   Very afraid

f. Being murdered.

   Not at all afraid   Somewhat unafraid   Neither afraid nor unafraid   Somewhat afraid   Very afraid

g. Being attacked by someone with a weapon.

   Not at all afraid   Somewhat unafraid   Neither afraid nor unafraid   Somewhat afraid   Very afraid

h. Having your car stolen.

   Not at all afraid   Somewhat unafraid   Neither afraid nor unafraid   Somewhat afraid   Very afraid

i. Being robbed or mugged on the street.

   Not at all afraid   Somewhat unafraid   Neither afraid nor unafraid   Somewhat afraid   Very afraid

j. Having your property damaged by vandals.

   Not at all afraid   Somewhat unafraid   Neither afraid nor unafraid   Somewhat afraid   Very afraid

k. Having your car broken into.

   Not at all afraid   Somewhat unafraid   Neither afraid nor unafraid   Somewhat afraid   Very afraid

l. Having your packages or mail stolen.

   Not at all afraid   Somewhat unafraid   Neither afraid nor unafraid   Somewhat afraid   Very afraid

You have already rated your fear of different kinds of crimes. Now, we are going to ask you about the CHANCES of experiencing one of the following events in YOUR NEIGHBORHOOD.

44. **Please rate how likely or unlikely you think it is that you will experience the following situations in the NEXT 12 MONTHS in YOUR NEIGHBORHOOD.**

   a. Being approached on the street by a beggar or panhandler.

      Very Likely   Likely   Neither Likely nor Unlikely   Unlikely   Very Unlikely

   b. Being cheated, conned, or swindled out of your money.

      Very Likely   Likely   Neither Likely nor Unlikely   Unlikely   Very Unlikely

c. Having someone break into your home while you are away.

Very Likely   Likely   Neither Likely nor Unlikely   Unlikely   Very Unlikely

d. Having someone break into your home while you are there.

Very Likely   Likely   Neither Likely nor Unlikely   Unlikely   Very Unlikely

e. Being raped or sexually assaulted.

Very Likely   Likely   Neither Likely nor Unlikely   Unlikely   Very Unlikely

f. Being murdered.

Very Likely   Likely   Neither Likely nor Unlikely   Unlikely   Very Unlikely

g. Being attacked by someone with a weapon.

Very Likely   Likely   Neither Likely nor Unlikely   Unlikely   Very Unlikely

h. Having your car stolen.

Very Likely   Likely   Neither Likely nor Unlikely   Unlikely   Very Unlikely

i. Being robbed or mugged on the street.

Very Likely   Likely   Neither Likely nor Unlikely   Unlikely   Very Unlikely

j. Having your property damaged by vandals.

Very Likely   Likely   Neither Likely nor Unlikely   Unlikely   Very Unlikely

k. Having your car broken into.

Very Likely   Likely   Neither Likely nor Unlikely   Unlikely   Very Unlikely

l. Having your packages or mail stolen.

Very Likely   Likely   Neither Likely nor Unlikely   Unlikely   Very Unlikely

45. **Please choose how much you agree or disagree with the following statements.**

a. People from my racial group are more likely to be unfairly stopped and questioned by the police.

Strongly Agree   Agree   Neither Agree nor Disagree   Disagree   Strongly Disagree

b. Police treat young people worse than old people.

Strongly Agree   Agree   Neither Agree nor Disagree   Disagree   Strongly Disagree

c. Police treat rich people better than poor people.

Strongly Agree   Agree   Neither Agree nor Disagree   Disagree   Strongly Disagree

d. Police treat people from my racial group worse than people from other racial groups.

Strongly Agree   Agree   Neither Agree nor Disagree   Disagree   Strongly Disagree

e. Police treat males worse than females.

Strongly Agree   Agree   Neither Agree nor Disagree   Disagree   Strongly Disagree

46. While on patrol, police officers are more likely to STOP AND QUESTION:

    a. A White person in a mostly Black neighborhood.
    b. A Black person in a mostly White neighborhood
    c. The officers would react the same way in both instances

47. If a police officer stops a car that is going ten miles over the speed limit, the officer is more likely to GIVE A TICKET to:

    a. A driver who is White.
    b. A driver who is Black.
    c. The officers would be equally likely to give the ticket to a Black or White driver.

48. If a person is in court for stealing from a department store, who is more likely to receive a JAIL SENTENCE for this offense?

    a. A person who is White.
    b. A person who is Black.
    c. The same sentence would be given regardless of whether the offender was Black or White.

49. Who would a jury be more likely to give the DEATH PENALTY?

    a. A White person convicted of murdering a Black person.
    b. A Black person convicted of murdering a White person.
    c. The sentence would be the same in both instances.

50. Did you have any face-to-face contact with POLICE in the LAST 12 MONTHS?

Yes   No

IF you answered YES to the previous question, please answer questions 51-54. If you answered NO to the previous question, please SKIP TO QUESTION 55.

51. How many times did you have face-to-face contact with police in the last 12 months?

1   2   3   4   5 or more

52. Thinking about your MOST RECENT contact with police, which of the following BEST describes the reason for the interaction?

    a. I contacted police to report a problem or seek help for some reason
    b. I witnessed a crime
    c. I was pulled over during a traffic stop

    d. I was searched and/or frisked

    e. I was suspected of committing a crime

    f. Other (please specify) _____

53. Thinking about your MOST RECENT contact with police, which of the following BEST describes the outcome of the interaction?

    a. I was let go with a warning

    b. I was given a ticket or summons

    c. I was arrested

    d. Other (please specify) _____

54. Again, thinking about your MOST RECENT contact with police, do you believe the officer acted properly or improperly?

    a. The officer acted properly

    b. The officer acted improperly

55. Over the past 12 months while living in this neighborhood, have you been STOPPED by the police?

    Yes   No

56. Over the past 12 months while living in this neighborhood, have you been ARRESTED by the police?

    Yes   No

57. Over the past 12 months while living in this neighborhood, have you been CHARGED with a CRIME?

    Yes   No

58. Over the past 12 months while living in this neighborhood, have you been CONVICTED of a CRIME?

    Yes   No

59. Aside from you, how many other adults OVER THE AGE OF 18 live in your household?

    0   1   2   3   4   5 or more

60. How many children UNDER THE AGE OF 18 live in your household?

    0   1   2   3   4   5 or more

61. How many times have you moved in the past 12 months?

    0   1   2   3   4   5 or more

62. How long have you lived at your current address?

    Less than a year   1 – 2 years   3 – 4 years   5 or more years

63. Do you plan to move in the next 12 months?

    Yes   No

64. In what year were you born? Please provide 4-digit birth year (YYYY)

_____

65. Are you a United States citizen?

Yes   No

66. Are you of Hispanic or Latino origin or descent?

Yes, Hispanic or Latino   No, not Hispanic or Latino

67. What is your race? (Select all that apply)

a. White

b. Black or African American

c. Asian or Asian American

d. American Indian or Alaskan Native

e. Native Hawaiian or Other Pacific Islander

f. Other (please specify) _____

68. What is your gender?

Male   Female   Other (please specify) _____

69. What is your sexual orientation?

a. Straight/heterosexual

b. Gay/homosexual

c. Bisexual

d. Asexual

e. Pansexual

f. Other (please specify) _____

70. How would you describe your political affiliation?

Strong Democrat   Democrat   Independent   Republican   Strong Republican

71. How would you describe your political ideology?

a. Extremely liberal

b. Liberal

c. Slightly liberal

d. Moderate

e. Slightly conservative

f. Conservative

g. Extremely conservative

72. What is your marital status?

a. Single (never married)

b. Married, or in a domestic partnership

c. Not married, but living with partner

d. Divorced

e. Widowed

f. Separated

73. What is the highest level of school you have completed or the highest degree you have received?

a. Less than high school degree

b. High school degree or equivalent (e.g. GED)

c. Some college but no degree

d. Associate degree

e. Bachelor's degree

f. Graduate degree

74. What is your current housing situation?

a. Rent home/apartment

b. Own home/apartment

c. Staying with family

d. Living in a group home

e. Other (please specify) _____

75. Which of the following BEST describes your current employment status?

a. Employed full time

b. Employed part time

c. Unemployed looking for work

d. Unemployed not looking for work

e. Retired

f. Student

g. Disabled

76. What was your TOTAL HOUSEHOLD INCOME last year? This includes the money gained from full-time or part-time employment by people living in your household who help to pay the bills. It does NOT include money from social programs such as welfare, disability, unemployment, etc.?

a. $0 - $9,999

b. $10,000 - $19,999

c. $20,000 - $29,999

d. $30,000 - $39,999

e. $40,000 - $49,999

f. $50,000 - $59,999

g. $60,000 - $69,999

h. $70,000 - $79,999

i. $80,000 - $89,999

j. $90,000 - $99,999

k. $100,000 or more

77. Did you participate in the St. Louis Neighborhood Survey last year? The survey would have been completed between November 2021 and March 2022.

Yes   No   I'm not sure

Thank you for taking the time to complete this survey!

We would like to keep you informed of the results of this survey. We will use your email address to keep you updated on results, major findings, and presentations.

Would you like to stay informed of the results of this survey?

Yes   No

Community survey general flyer

Waves 1 & 2 postcard (front)

Wave 1 postcard 1 (back)

Dear Neighbor,

Your household has been randomly chosen to complete a survey to help us understand how Cure Violence, a local violence prevention program, is impacting your community. This survey is being sponsored by the City of St. Louis and conducted by researchers at Washington University. It will take about 30 minutes to complete, and you will receive a gift card for participating. All survey responses will be confidential.

You will receive another postcard in about a week with information about completing the survey. If you have any questions, please call/email: (314) 273-3620 | pryor@wustl.edu.

Thank you!
The research team

ADDRESS

PRST-STD

U.S. POSTAGE

PAID

133

Wave 1 postcard 2 (back)

Dear Neighbor,

It's time to take the St. Louis Neighborhood Survey! This survey will help us understand how Cure Violence, a local violence prevention program, is impacting your community. **You can claim a $10 gift by simply following the steps below. If you complete the survey, you will receive an additional $15 gift card.**

To open the survey and/or claim your gift card:

1) Open the camera on your smart phone or tablet. *Don't have one? Call (314) 273-3620 and we'll get you a paper copy of the survey or use the following link to access the survey:* **tinyurl.com/wpwbw634**
2) Pretend you are going to take a picture of the QR code below. **Don't actually take a picture**, just point the camera at the QR code.
3) Once your camera locks onto the QR code it will bring up a website with the survey. **Start by entering the access code on this postcard.** All survey responses are confidential.

Scan here:

PRST-STD
U.S. POSTAGE
PAID

Your access code:

Wave 1 postcard 3 (back)

660 S. Euclid
Campus Box 8217
St. Louis, MO 63110

Dear Neighbor,

A few weeks ago, you received a postcard inviting you to take a survey to help us understand how Cure Violence, a local violence prevention program, is impacting your community. This is a friendly reminder to please complete the survey if you have not already done so. **You can claim a $10 gift card by following the steps below. If you complete the survey, you will receive an additional $15 gift card.**

Scan the QR code and enter your access code to take the survey online. **If you would rather take the survey in person, we will be in your neighborhood on the following dates:**
- Date:
- Location:

Bring this postcard with you to claim your gift card and fill out the survey. Only one person from your household can complete the survey.

Scan here:

PRST-STD
U.S. POSTAGE
PAID

For questions, contact (314) 273-3620 | pryor@wustl.edu.

Your access code:

Washington University in St.Louis

INSTITUTE FOR PUBLIC HEALTH

December 1, 2021

Survey Access Code:

Hello Neighbor,

Over the past few weeks, we have attempted to contact your household to take part in the 2021 St. Louis Neighborhood Survey. **Our records show that you have not yet done so.** We are writing today to provide more background on our request with the hopes you will agree to complete the survey before it closes.

We are a small team of researchers from Washington University in St. Louis. We have been contracted by the City of St. Louis to evaluate Cure Violence, a neighborhood-based violence intervention program. As part of this process, **we are asking for your feedback.** Violent crime has increased in the recent past across the United States. St. Louis has not been spared from this trend. Indeed, in 2020 the city witnessed its highest murder rate we've seen in 50 years. While we know violence is on the rise, we want to learn more about how it affects the day-to-day lives of St. Louisans.

How was your household selected? We are asking about 1,000 St. Louis residents for their opinions and experiences with crime and violence. First, we identified neighborhoods to be included in our survey and then randomly selected households from within each neighborhood. Your household was chosen in this process. Your participation is a critical part of this research. In order to gain an accurate snapshot of current residents' experiences, it is important that each of the chosen households participate. We will use information from the survey to inform local efforts to combat violence in our communities.

We understand that your time is valuable. We have set aside $25 in gift cards for every household selected to participate in the survey. All households will receive $10 for logging into the survey website and another $15 if they complete the survey. **This is not a lottery or a raffle, you will be paid immediately upon finishing the survey.**

To participate, visit: **tinyurl.com/wpwbw634** or scan the QR code at the bottom of this page using the camera on your electronic device. You'll be directed to a website with further instructions. When prompted, enter the following survey access code:

If you have any questions or would like to be sent a paper version of the survey, please contact (314) 273-3620 or email pryor@wustl.edu

We thank you in advance for participating,

Victoria Anwuri
Associate Director, Institute for Public Health

Waves 1 & 2 tri-fold mailing (back)

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[BACK SIDE OF MAILING]

Act now!

Don't miss out on $25 in gift cards for taking the St. Louis Neighborhood Survey!

Washington University in St. Louis
INSTITUTE FOR PUBLIC HEALTH
Campus Box 8217
660 S. Euclid Ave
St. Louis, MO 63110

Neighbor
Address

Washington University in St.Louis

INSTITUTE FOR PUBLIC HEALTH

February 24, 2022

Survey Access Code:

Dear Neighbor,

We are contacting you to request your participation in the St. Louis Neighborhood Survey. The purpose of this survey is to evaluate Cure Violence, a neighborhood-based violence prevention program that is funded by the City of St. Louis. As a part of this process, **we are asking for your feedback.** Violent crime has increased in the recent past across the United States. St. Louis has not been spared from this trend. Indeed, in 2020 the city witnessed its highest murder rate we've seen in 50 years. While we know violence is on the rise, we want to learn more about how it affects the day-to-day lives of St. Louisans.

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The survey will close on March 10th, 2022. **This is your last chance to complete the survey and claim your gift cards.**

For your convenience, we have included a copy of the survey for you to fill out and mail in at no cost to you. Please follow the included mailing instructions to complete the survey and claim your gift cards. If you would rather complete the survey online, visit **tinyurl.com/wpwbw634** or scan the QR code at the bottom of this page using the camera on your electronic device. You'll be directed to a website with further instructions. When prompted, enter the following survey access code:

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Victoria Anwuri
Associate Director, Institute for Public Health

Wave 2 postcard (back)

660 S. Euclid
MSC 8217-0094-02
St. Louis, MO 63110

Dear Neighbor,

You are invited to participate in the 2022 St. Louis Neighborhood survey. You may remember completing this survey last year. Your continued participation is crucial. The results of this survey will help local leaders understand your experiences with crime and violence in your neighborhood. You will receive $25 in gift cards for participating in the survey. You can claim a $10 gift card for logging onto the survey website and another $15 gift card for completing the survey.

To take the survey online, scan the QR code using your smartphone camera and enter the access code provided on this postcard. **If you would like to take the survey on paper, call (314) 273-3620 or email pryor@wustl.edu to request a paper copy.**

The survey will take about 30 minutes to complete. **Only one person from your household can complete the survey.** All survey answers are confidential.

Scan here:

Or use this link:
tinyurl.com/wpwbw634

PRST-STD
U.S. POSTAGE
PAID

Your access code:

Washington University in St.Louis

INSTITUTE FOR PUBLIC HEALTH

Date

Survey Access Code:

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We are a small team of researchers from Washington University in St. Louis. We have been contracted by the City of St. Louis to help evaluate a local neighborhood-based violence intervention program. As part of this process, **we are asking for your feedback.** Violent crime has increased in the recent past across the United States. St. Louis has not been spared from this trend. Indeed, in 2020 the city witnessed its highest murder rate we've seen in 50 years. While we know violence is on the rise, we want to learn more about how it affects the day-to-day lives of St. Louisans.

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You may remember participating in this survey last year. We are conducting this survey over multiple years to measure changes in residents' experiences with violence. **If you completed the survey last year, it is important that you participate again this year.**

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Scan here with your device camera:

We thank you in advance for your participation,

Kimberly, Matt, and Ted
The Research Team

Washington University in St. Louis

INSTITUTE FOR PUBLIC HEALTH

Date

Survey Access Code:

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The survey will close on **XX/XX/XXXX**. **This is your last chance to complete the survey and claim your gift cards.**

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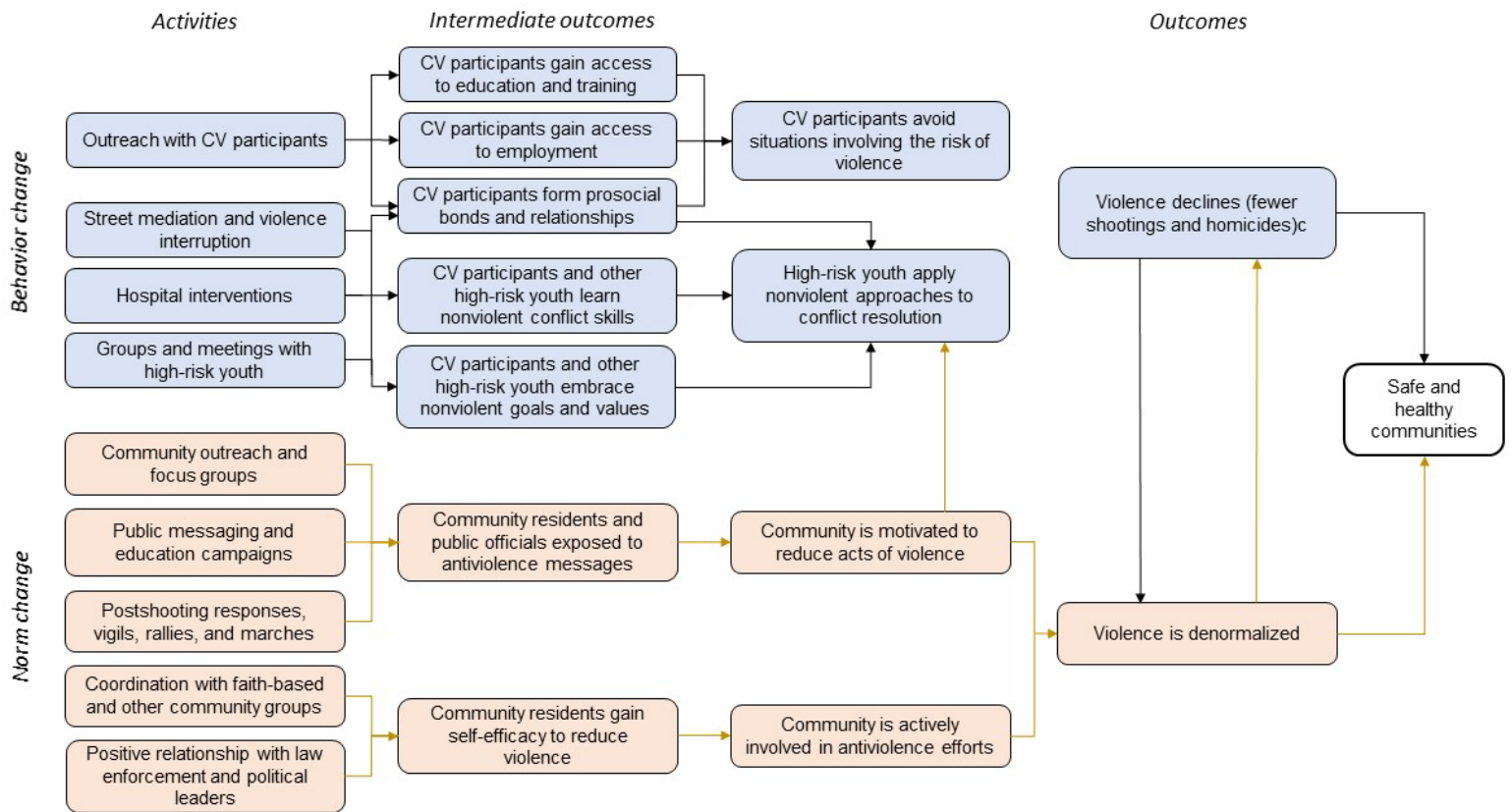
If you have any questions, please contact (314) 273-3620 or email pryor@wustl.edu

We thank you in advance for participating,

Kimberly, Matt, and Ted
The Research Team

Adapted from Butts et al.9

APPENDIX F | DETAILED EXPLANATION OF INTERVIEW RECRUITMENT EFFORTS

To rebuild trust between the evaluation team and Cure Violence staff, the qualitative researchers completed visits to all three sites. During these visits, the researchers met the site directors, site supervisors, violence interrupters, and outreach workers. As depicted in the year 1 report, CV staff at each site provided walking and driving tours of the program offices and catchment areas. The qualitative researchers observed how and where site staff engaged neighborhood residents by handing out flyers, informing the local community of the services provided through the CV program. Site staff were also encouraged to share input on what information would be useful to them, collected through the interviews. Largely, this work was completed with the goal of interviewing as many staff as possible.

To recruit community-level participants, two members of the evaluation team, one of which is a qualitative researcher, canvassed CV neighborhoods 10 times to post or distribute flyers, interact with local businesses, and talk to people on the street. As part of this process, the evaluation team also identified and contacted businesses via internet searches. This project also used snowball sampling, a common qualitative technique that encourages current participants to recommend other potential participants.[a] These efforts were also complemented by emailing respondents from the Wave 2 survey. While all of the interviews with CV staff took place in-person, interviews with residents and business owners were conducted using multiple approaches such as in-person, over the phone, and virtually via Zoom.

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[a] Parker, Charlie, Sam Scott, and Alistair Geddes. 2019. "Snowball Sampling." SAGE Research Methods Foundations.

APPENDIX G | INTERVIEW GUIDES

Cure Violence Staff Interview Guide

Thank you for taking the time out of your day and agreeing to do this interview! I want to encourage you to speak as freely as possible and to ask me any questions at any time. During our interview, please try not to mention your name or any names of the individuals you discuss. Remember, this is completely confidential and you may refuse to answer any question that you like.

Demographic Information

To begin, I would like to ask you a bit of background information.

1. How old are you?

2. How would you describe your racial and ethnic background?

3. What is the highest degree or level of education that you have completed?

4. How would you describe your gender?

5. How would you describe your sexuality?

6. What pronouns do you use?

7. What is your current employment status?

8. Have you ever been married?

    a. If yes: Are you currently married?

    b. If no: Are you involved in an intimate relationship?

9. Do you have any children?

    a. If yes: How many and how old are they?

Cure Violence (General)

1. How long have you worked at Cure Violence?

2. How did you get connected to Cure Violence?

3. How would you describe the neighborhood you work in?

    a. Why do you describe it that way?

    b. How do you think others would describe your neighborhood?

        i. Why do you think they describe it that way?

4. What does violence mean to you?

    a. Why do you define violence that way?

    b. What type of violence do you see and experience through your work?

        i. Why do you think you see _____?

        ii. How has, or hasn't_____ changed over time?

Implementation

1. What does a typical day look like for you at Cure Violence?

    a. How has, or hasn't, this changed over time?

2. What are the most challenging aspects of your work?

    a. Why are _____ the most challenging aspects?

3. What are the most enjoyable aspects of your work?

    a. Why are _____the most enjoyable aspects of your work?

4. What are the most important tools and strategies you use in your work?

    a. Probe: How did you realize that _____was an important tool/strategy?

    b. Probe: What tools are missing or what do you need to make your work better?

5. How does CV Global interact with your site?

    a. Probe: What do those interactions look like?

6. How does your program interact with other violence prevention programs?

    a. Probe: What do those interactions look like?

Identity and Community

1. How does your identity as _____impact your work?

    a. Probe: How does being _____positively impact your work?

    b. Probe: How does being _____negatively impact your work?

2. How does your work interact with other parts of your community?

    a. Probe: Such as businesses and other organizations?

    b. Probe: Such as the people you interact with?

3. How do you think Cure Violence has impacted your community?

4. How does what you do in your role at Cure Violence carry over into other parts of your life?

    a. Probe: How does your experiences at Cure Violence shape how you interact with your friends?

    b. Probe: How does your experiences at Cure Violence shape how you interact with your family?

Cure Violence (Broad)

1. Overall, what do you think about the Cure Violence Program in St. Louis?

    a. How has, if at all, this changed over time?

        i. Probe: What did you think about Cure Violence before you joined?

            1. Probe: What did you think about Cure Violence when you joined?

2. How do you think violence can be cured?

    a. What would you think it would look like?

        i. Probe: Where would Cure Violence fit in?

            1. Probe: Do you think the program is working? Why or why not?

3. How has your work with Cure Violence impacted you?

    a. Probe: How has your work impacted your family?

    b. Probe: How has your work impacted your friends?

4. How has your work with Cure Violence impacted you?

5. Is there anything else you want to share about your experience with the program that we haven't talked about?

6. What are your plans for the rest of the day?

Cure Violence Community Member Interview Guide

Thank you for taking the time out of your day and agreeing to do this interview! I want to encourage you to speak as freely as possible and to ask me any questions at any time. During our interview, please try not to mention your name or any names of the individuals you discuss. Remember, this is completely confidential and you may refuse to answer any question that you like.

Goals of the Interview

- Understand: How St Louis community members perceive and experience violence

- Identity: St. Louis community norms around violence

- Describe: Community member best practices for addressing violence

Thematic Questions: Neighborhood Description

1. How would you describe your neighborhood?
    i. Probe: Why do you describe it that way?
    ii. Probe: Have you always described it that way?

2. How do you think others would describe your neighborhood?
    i. Probe: Why do you think they describe it that way?

Thematic Questions: Neighborhood Description

1. How would you describe violence in St. Louis and your community?
    i. Probe: How did you come to that description?
    ii. Probe: What are some words or images that come to mind when you think about violence in St. Louis?

Thematic Questions: Impact of Violence

1. How do you define violence?
    i. Probe: What does violence mean to you?
    ii. Probe: How has that definition changed over time?

2. How has violence impacted your specific community (either negatively or positively?
    i. How do you think that has changed over time?
        1. Probe: What does that change look like?
        2. Probe: would you describe violence in St. Louis and your community?
    ii. Probe: How did you come to that description?

147

      iii.   Probe: What are some words or images that come to mind when you think about violence in St. Louis?

Thematic Questions: Media and Inside/Outside Perceptions of Violence

1. How have the media and general public described violence in your community?

    i.   Probe: How have you learned about these descriptions?

2. What are your reactions to how the media/general public is talking about violence in your community?

3. Is anything "missing" or incorrect in these narratives?

    i.   Probe: How do you think this happened?

    ii.   Probe: How have these narratives changed over time?

Thematic Questions: Community Norms Around Violence

1. How do you and others in your community feel about the violence in your neighborhood?

    i.   Probe: Why do you think that is the case?

2. How do you (or don't you) see violence being addressed within your community?

    i.   Probe: Why do you think that is the case?

3. What have been the challenges your community has experienced in addressing violence?

    i.   Probe: How do you think those have manifested?

4. What have been the successes you community has experienced in addressing violence?

    i.   Probe: How do you think those have manifested?

5. Have your community's approaches to addressing violence changed over time?

    i.   Probe: If yes, what has that change look like?

6. What do you think are solutions to violence in St. Louis?

    i.   Probe: How do you think those could be reached?

7. What kind of support is needed for you and other people to develop & implement these solutions?

    i.   Probe: Who should offer or create these resources?