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Evaluating the Impact of Gun Involved Violence
Elimination (GIVE) Initiative within the City of
Rochester

By

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A Capstone Project Submitted in Partial Fulfillment of the Requirements
for the Degree of Master of Science in Criminal Justice

Department of Criminal Justice

College of Liberal Arts

Rochester Institute of Technology
Rochester, NY
May 7, 2020

RIT

Master of Science in Criminal Justice

Graduate Capstone Approval

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Graduate Capstone Title: **Evaluating the Impact of Gun Involved Violence Elimination (GIVE) Initiative within the City of Rochester**

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Table of Contents

Chapter 1: GIVE Overview/Introduction.....4
 Brief Overview of GIVE Initiative.....6
 Importance of Evidence-Based Strategies of GIVE and Proper Implementation.....10
 Partners and Stakeholders of GIVE.....11
 Application of Problem-Based Policing and Procedural Justice Principles.....13
 Problem-Oriented Policing Strategies.....13
 Procedural Justice.....14
 Four Major Evidence-Based GIVE Strategies.....16
 Hot Spot Policing.....17
 Focused Deterrence.....19
 Street Outreach.....21
 Situational Crime Prevention.....23
 Conclusion.....23

Chapter 2: Theoretical Approaches Surrounding Gun Violence and GIVE.....25
 “Code of the Streets” Thesis.....25
 Social Learning Theory.....31
 Rational Choice Theory.....34
 Deterrence Theory.....38
 Discussion.....41
 Conclusion.....44

Chapter 3: Literature Review of Gun Violence Prevention Framework/Strategies.....45
 Literature Search Method/Strategy.....47
 Findings/Results.....48
 Directed Patrol/Hot Spot Policing Model.....50
 Focused Deterrence Model.....53
 Public Health Model (Cure Violence)58
 Discussion.....61
 Conclusion.....65

Chapter 4: Data Analysis Section and Results.....66
 Analysis of the Gun Involved Violence Elimination (GIVE) Program.....67
 Study Setting.....69
 Methodology.....71
 Data.....72
 Analysis Strategy.....73
 Findings/Results.....75
 Discussion.....79
 Conclusion.....80

References.....82

Chapter 1: Gun Involved Violence Elimination (GIVE) Overview/Introduction

Within the city of Rochester, gun violence has become something of a common occurrence within local neighborhoods and streets where violent crime continues to flourish. Between 2010 and 2018 the recorded number of shootings that have occurred in the city of Rochester were around 1,679, with around 200 being categorized as fatal shootings (<https://data-rpdny.opendata.arcgis.com/>). Many of the issues plaguing the Rochester Police Department in addressing the issue of gun violence are due to a misperceived idea of what causes gun violence in the first place and how to go about it without having to waste their resources on ineffective tactics. Much of these incidents have mostly occurred within densely urban neighborhoods where calls for “shots-fired” have become commonplace as guns are used in the majority of homicides (Smith & Cooper, 2013; Braga & Weisburd, 2010). This inability for police to respond in a timely fashion and being able to solve them has also led to most officers being perceived as being unaccountable for preventing further gun violence due to relying on traditional police methods that revolve around “reacting” to crime (Sherman 1998; 2013).

This is one of the major reasons why evidence-based policing programs have been welcomed almost full-heartedly by law enforcement agencies, as they allow law enforcement to incorporate tactics that involve more proactive solutions to reported shootings instead of relying on reactive methods. These strategies help officers in creating new and efficient responses to complex criminal issues such as gun violence, which can be caused by a multitude of factors such as conflict between individuals or groups, while also providing law enforcement solutions that are cost-effective to budgetary restrictions and may have much better appeal to other officers (Koper, Woods, & Kubu, 2013). These programs also rely on the cooperation and resources

EVALUATING THE IMPACT OF GIVE INITIATIVE WITHIN THE CITY OF ROCHESTER

provided by community stakeholders and social service providers in which help structure these strategies to fruition and to provide proper procedures to ensure success.

When it comes to how law enforcement agencies within Rochester have reacted to a perceived lethality in gun violence, they have taken some steps in ensuring that gun violence does not become an even bigger problem within the City of Rochester. This is one of the main reasons why the city implemented the Gun Involved Violence Elimination (GIVE) Program. A requirement for most strategies that are implemented is that they must ensure that the strategies taken place must have elements pertaining to problem-oriented policing (POP) model and the theory of procedural justice (DCJS, 2017). As will be discussed in this paper, these two principles are important when discussing evidence-based strategies against gun violence. In essence, the introduction of the GIVE initiative prompted a proactive and efficient strategy design that law enforcement can use to combat further gun violence within the city of Rochester.

The GIVE initiative promotes the use of numerous strategies that have been scientifically proven to resolve criminal issues within specific areas based on the method in which they are implemented by either law enforcement, state/federal government, or community organizations. The strategies rely upon successful methods used by law enforcement in reducing gun violence and other crimes that go hand-in-hand with the issue, including gang violence, drug abuse, prostitution, domestic violence, etc. (Sherman, 1998). This first working paper is centered around giving an introduction to the GIVE program within the city of Rochester, and to identify what types of strategies and/or theories are used in the implementation process in order to produce a reduction in gun violence levels (fatal and nonfatal shootings).

Brief Overview of the Gun Involved Violence Elimination (GIVE) Initiative:

Beginning in July 2014, the Gun Involved Violence Elimination (GIVE) Initiative was implemented within the city of Rochester after being funded by the Division of Criminal Justice Services (DCJS) of New York in an effort to implement new and innovative tactics that would help the Rochester Police Department tackle the ever growing issues of gun violence within certain streets and neighborhoods (DCJS, 2017). The program was originally known as Operation Impact that measured Part I crimes outside of New York City. From 2004 to 2014, the DCJS provided funds to different law enforcement agencies located within New York areas outside the NYC parameters in order to combat general violent crimes such as aggravated assault, murder, and robbery (DCJS, 2017).

DCJS established that it would take the steps needed to incentive state and local police departments who are stationed within states/towns that are associated with around 80 percent of the Part I crimes to adopt more innovative approaches to the issues of gun violence by granting them access to GIVE funds and resources that they can use to implement hot spot plans, deterrence strategies, outreach programs, etc. (DCJS, 2017). The DCJS created the GIVE program and began to advocate that police should now be taking a different approach to gun violence when it came to how to properly cooperate with the community and taking care of what might be the causes of the growing issue, whether it was based on individual or place-based concerns.

There are currently 17 New York Counties who are sponsored by the GIVE initiative as the DCJS spends around \$13.3 million on sending funds out to local law enforcement departments (DCJS, 2017). Even though previous efforts and funding by the DCJS alongside local law enforcement agencies had reduced violent crime significantly beforehand, cities still

EVALUATING THE IMPACT OF GIVE INITIATIVE WITHIN THE CITY OF ROCHESTER

saw firearm-related shootings present within major metropolitan cities within New York and that needed to be dealt with. The overall goals for the program are for officers to incorporate crime data analysts' tactics plus develop evidence-based training procedures/practices in order for police departments to easily implement smarter decisions in addressing gun violence within certain areas (DCJS, 2018).

Under the GIVE program, DCJS requires that local law enforcement agencies around New York had to focus on preventing and reducing firearm-related homicides and non-fatal shootings through the use of different evidence-based strategies that have proven to be effective responses (DCJS, 2017). There are many departments within the DCJS that help with the many functions that the GIVE initiative emphasizes. The DCJS commissioner and deputy commissioner oversee the activities performed by each department, the GIVE program manager who's in charge of coordinating the planning process and activities, and one of two GIVE unit representatives are assigned to each jurisdiction to provide feedback and evaluation (DCJS, 2018).

In order to be funded through GIVE, DCJS requires that each department writes a detailed proposal plan that states their reasoning and what they would use the funds for in order to combat gun violence within their city. They would also have to state what kinds of resources were at their disposal to assist them and who would they collaborate or are working with at the time to secure full implementation of the plan going forward (DCJS, 2018). The amount of grant money that is spent would be based on the stated reasons behind funding and significant benefits that can come from such funding (DCJS, 2018).

There are four core elements of GIVE that help guide how applicants should create strategies (DCJS, 2017). The first element involves "people", meaning that any strategy that is

EVALUATING THE IMPACT OF GIVE INITIATIVE WITHIN THE CITY OF ROCHESTER

created should be able to identify the key offenders who are believed to be mostly responsible for shootings and firearm-related homicides. Previous studies have presented evidence where focusing on a few or a specific group of offenders (ex. juvenile offenders, young adult offenders) who are more likely to be caught using a firearm for a variety of purposes can help in decreasing shootings and fatal homicides (Kennedy & Braga, 1998; Braga, Kennedy, Warring, & Piehl, 2001). The second element is based on the idea of “place-based” innovations. This is based on practitioners taking in to account the environment where gun violence is most likely to take place due to some important characteristics that may allow crime to take place (Lum, Koper, & Telep, 2011). Practitioners of the GIVE initiative are required to come up with a process to map out geographic areas (hot spots) through problem-oriented policing strategies that take into account where violent crime is highly concentrated (Braga & Weisburd, 2012).

The third element, “alignment”, is whether one can describe how practitioners will incorporate tools provided by the DCJS and community stakeholders in order to help better align with their goals which has been proven to help increase organizational performance for law enforcement personnel (Kaplan & Norton, 1992). The goals of interests to GIVE are designed to help create a clear and organized procedure of what officers and stakeholders should hold up to and wish to achieve as an organization. This also means ensuring that both the community at large plus its stakeholders understand the objectives and facts behind the initiative in order to ensure that the program is properly implemented. The final element involves “engagement”, which involves having the community become involved in the process through different outreach endeavors. Having the personal feedback and support of the community can help police and outreach workers in identifying the main issues and concerns that people feel are important to them (Blader & Tyler, 2003). Through the GIVE program, practitioners are required to plan out

how they would be able to have stakeholders and community members a “voice” and speak on how they saw officer’s actions and their efforts.

Importance of Evidence-Based Strategies on GIVE and Proper Implementation:

Firearm-related violence is not something that can be solved in an instance. The use of guns and handguns serve multiple interests for individuals, with the most blatant use being for one’s own protection from threats to their safety (Cook & Ludwig, 1996). Even with gun control laws being approved and policies which have attempted to address purchasing firearms, restricting the amount of ammunition, and even banning certain semi-automatic weapons, there are still firearms being distributed behind closed doors and being used to commit violent crimes that have taken a toll on many communities and cities (Braga & Pierce, 2005). While police have relied upon citizens calling for officer assistance in response to shootings or officers being assigned on random patrol beats to be on the spot when a shooting does occur, these strategies would provide less comfort for citizens who are plagued by fears of being shot while being unable to rely on the police for assistance (Sherman, 1998).

Evidence-based strategies that are utilized by police officers are methods that have been scientifically tested and evaluated on whether they produce the most efficient outcomes, the main purpose being that they reduce a certain number of crime or decreasing the costs that it might take to reduce such crime down. Sherman (2013) states that these focused law enforcement strategies allow for different approaches to be made while taking in to account the data that is collected by officer reports and practitioner assistance. This also allows for these strategies to be easily tested and evaluated in order to ensure their effectiveness. Such strategies that have been proposed as “promising” include enabling hot spot policing (Sherman et. al., 1995), focused

EVALUATING THE IMPACT OF GIVE INITIATIVE WITHIN THE CITY OF ROCHESTER

deterrence models (Braga et. al., 2001), situational crime prevention tactics (Clarke, 2009), supply side intervention strategies (Papachristos, Mearses, & Fagan, 2007), etc.

Strategies such as these help us to coordinate around constructing certain measurements that can be used regarding how to decrease the level of harm/criminal actions reported within specific places while also taking into account individuals who are repeat offenders or persons of interest (Sherman, 2013). Evidence-based policing strategies can also help officers' control how they spend their budget and keep them from overspending (Sherman, 2013). Law enforcement departments have come to accept the use of scientifically evaluated strategies in order to combat certain criminal issues. Weisburd and Erk (2004) found that little evidence supports the traditional law enforcement model to actually work in eliminating specific crimes that are easy to solve through an "encounter." In contrast, research evidence supports the continued investment in proactive policing innovations that call for greater focus and tailoring of police efforts, combined with an expansion of the toolbox of policing beyond simple law enforcement.

Weisburd and Erk (2004) state as one of their propositions that:

"There has been increasing interest over the past two decades in police practices that target very specific types of criminals and crime places. In particular, policing crime hot spots has become a common police strategy for addressing public safety problems. While only weak evidence suggests the effectiveness of targeting specific types of offenders, a strong body of evidence suggests that taking a focused geographic approach to crime problems can increase policing effectiveness in reducing crime and disorder." (Weisburd & Erk, 2004: 12).

Makarinos and Pratt (2012) have emphasized that the most effective method of combating gun violence involved using evidence-based programs that involved community-law enforcement collaboration and a problem-oriented policing methodology. Programs such as these involve law enforcement-based characteristics and elements that have been proven to help in decreasing the levels of violent crime within different city districts based on following tactics that allow for better information/data gathering techniques to be utilized, implementing further

EVALUATING THE IMPACT OF GIVE INITIATIVE WITHIN THE CITY OF ROCHESTER

executive policy changes based on tackling specific type of crimes, training officers in evidence-based strategies, and working with community stakeholders/partners (Makarios & Pratt, 2012). Specifically, strategies that evoke a sense of legitimacy of police accountability and community mobilization are the major themes that have helped propel these types of programs to become acceptable measures for helping to deter criminally violent behavior (Makarios & Pratt, 2012). Such strategies may involve disrupting illegal gun distribution markets, enforcing more patrol officers within certain crime ridden areas, hold deterrence-based orientation meetings, etc. (Makarios & Pratt, 2012).

However, there are limits to how much effort officers or stakeholders may place on attempts to change to these innovative practices. In order for proper implementation to be established, benchmarks and metrics should be established to control for implementation quality while guiding practitioners to continue discussion and debate on what works and doesn't work when it comes to conducting evidence-based strategies (Masseti, Holland, & Gorman-Smith, 2016). This is important when discussing how theory is used in constructing programs that implement these strategies in order to ensure that there is a foundation behind the actions taken within the program (Snipes & Maguire, 2015). The GIVE program requires that strategies or policies that are created to address gun violence must contain elements in which police incorporate problem-oriented policing (POP) techniques and procedural justice details that help to mend community-officer relationships to ensure the program efficiently works.

Partners and Stakeholders of GIVE:

In order for the GIVE initiative to be implemented effectively within the city of Rochester, partners and stakeholders for GIVE were to have as much of a stake in solving the issue of

EVALUATING THE IMPACT OF GIVE INITIATIVE WITHIN THE CITY OF ROCHESTER

firearm violence issues within inner-city neighborhoods as the local community does. This is especially true when it comes to law enforcement personnel creating different beneficial relationships between different sectors of the community, with them being on board and willing to sponsor further collaboration and acknowledgment of the issue that gun violence has caused to the local community. The support from community members, which may include additional social service provider assistance and other services, provides officers the means to allocate responsibilities while also allowing the GIVE practitioners to employ different methods in application of either deterrence, hot spot, or procedural justice-based policy action. Officers rely significantly on the input and assistance of key community members and citizens when it comes to creating a safe and sound environment within their communities (Brunson, 2015).

Partners and stakeholders are required to help in submitting a work plan of a detailed proposal of evidence-based strategies and application within different contexts. Law enforcement officers that partake in the GIVE initiative include personnel from the Rochester Police Department, the Monroe County Sheriff's Office, probational officers and parole officers (Gun Involved Violence Elimination Initiative Story Map, n.d.). These duties might include gathering intel on certain individuals and neighborhoods with higher propensities of firearm violence incidents, managing ongoing retaliatory conflicts involving certain groups or gangs, and/or collectively plan strategies and activities alongside other law enforcement and community organization partners. These partners may also work together through joint enforcement units and provide deterrence-based action in order to dissuade offenders from further violence (GIVE Story Map, n.d.).

Application of Problem-Based Policing and Procedural Justice Principles:

The DCJS requires that all strategies and actions must be organized as problem-oriented policing strategies and should include procedural justice principles whenever possible. These two categories are significant in that they allow Rochester police officers and crime analysts to identify a specific criminal issue while planning out methods to combat it through analysis of previous scientific based research, and ensure that the Rochester community is able to have their voices heard about what they think about police efforts plus have offenders/victims/citizens living within these violence prone areas become a part of the discussion of how to deal most effectively with gun violence.

Problem-Oriented Policing Strategies:

The Problem-Oriented Policing (POP) model has been considered as an effective evidence-based strategy in preventing further violence within certain cities and communities due to the processes emphasized and structured in order to determine the specific issues that need to be addressed (Goldstein, 1979). POP strategies involve not only the use of new policing strategies, but also a brand-new approach in how the police collaborate with the community and other local businesses/institutions to help in their tasks (Peak & Gleasnor, 2018). This model also allows officers much discretion in working on the job instead of the traditional operational decision-making process (Peak & Gleasnor, 2018). The POP method has been used by other law enforcement agencies in order to combat growing issues of crime such as firearm-related violence, gang violence, and drug distribution. The lessons taken from this idea involve identifying what the issues are in a particular city/county and then implementing certain activities and strategies geared towards eliminating or deterring such issues from becoming much more troublesome (Goldstein, 1979).

EVALUATING THE IMPACT OF GIVE INITIATIVE WITHIN THE CITY OF ROCHESTER

The most common trait surrounding problem-oriented policing is that law enforcement officials address the underlying issues of a particular issue pervading the community that they watch over and identify specific strategies that should be taken to address these issues (Goldstein, 1979). Problem-oriented policing strategies usually incorporate what's known as the SARA problem-solving model that allows law enforcement officers to identify the issues obstacles that threaten law enforcement efforts to reduce gun violence by looking at the causal factors in order to develop a response plan tailored to address these factors (Center for Evidence Based Crime Policing, n.d., "Problem-Oriented Policing"; Goldstein, 1979). The process involves law enforcement and practitioners identifying the problem that is of concern to the public/police, conduct research/identify relevant data to narrow scope of the problem, brainstorm new alternative solutions to the problem, and then conduct an evaluation assessing the effectiveness of the solution before and after implementation (Peak & Gleasnor, 2018).

The method in which Rochester's GIVE program has implemented this strategy involves determining areas that are most prone to gun violence incidents and highlight those areas as designated seven Problem-Oriented Policing (POP) Areas. The city of Rochester is geographically divided in to five geographic areas (Central, Lake, Genesee, Clinton, and Goodman). The POP areas were mapped out within these sectors based on information gathered by RPD and observations from other community members (GIVE Story Map, n.d.). These areas are constantly monitored by law enforcement while they gather information which is used to plan out strategies based on situational factors that are present. Strategy responses that may be taken by the RPD include planning deterrence efforts by going after high-risk offenders, patrolling hot spot areas through directed patrol and establish relationships with different community

EVALUATING THE IMPACT OF GIVE INITIATIVE WITHIN THE CITY OF ROCHESTER

organizations and businesses who can help in providing important feedback and information for effectiveness (CEBCP, n.d., “Problem-Oriented Policing”).

Procedural Justice:

The philosophy behind procedural justice stands on the basis that police can perform much more effectively in the course of their work when they have established trust and understanding within the communities that they are stationed (CEBCP, n.d., “Community Policing and Procedural Justice). Procedural justice emphasizes that the community is and would be more willing to support and be more satisfied with police officer’s actions when showed respect and honesty by officers (Tyler, 2004). Research has shown that citizens are inclined to cooperate with law enforcement in cases where the police are able to maintain a trustworthy, honest, and respectable nature while performing their duties in order to ensure legitimacy (Sunshine & Tyler, 2003). When officers are seen performing procedurally just stops and traffic encounters by citizens, they are perceived as more legitimate by individuals who entrust their lives and safety to them (Mazerolle, Antrobus, Bennett, & Tyler, 2013).

Blader and Tyler (2003) identifies the 4 principles of procedural justice that law enforcement should follow. These principles include citizen participation, citizens perception of law enforcement activities being neutral to every individual, officer’s treatment of citizens, and officers must show commitment to protecting the rights and liberties of every citizen (Blader & Tyler, 2003). These principles involve citizen compliance with the law and officers’ actions/beliefs of preserving the law and citizens. This also includes ensuring that the rules followed by law enforcement are perceived as procedurally just. Without the support and/or involvement of citizen support, officers might become more disconnected with the body of people that they are sworn to protect, effectively giving them less of a chance to likely to

EVALUATING THE IMPACT OF GIVE INITIATIVE WITHIN THE CITY OF ROCHESTER

produce results that are less than satisfactory. This disconnect between officers and citizens can result in police legitimacy being called in to question and more critics questioning the actions of officers who are seen as doing little or nothing for the community. Police legitimacy can have a huge impact on how community members may or may not cooperate with the police in order to combat crime (Tyler & Fagan, 2008).

This model of measurement of law enforcement effectiveness is used profoundly within each GIVE strategy, such as focus group sessions that follow up on GIVE practitioners within Rochester and community stakeholders preserving elements involved in identifying issues in procedural justice. Procedural justice elements are to be incorporated in each strategy of the GIVE plan in Monroe county where officers and GIVE practitioners provide a forum for transparency, voice, fairness, and respect in preventative actions to curb gun violence locally (DCJS, 2017). For instance, one GIVE activity relies on focus group sessions being conducted every two days per month in order to assess police community relations and whether procedural justice was begin met with local GIVE activities which included routine patrols, call-ins, orientation meetings, etc. (GIVE Story Map, n.d.). They allow multiple parties to join the discussion, including community leaders/groups, nonprofit executives and local business owners, where concerns and opinions are discussed about the efforts made by the RPD on the effectiveness of their proactive policy on gun offenders and whether changes need to be made.

Four Major Evidence-Based GIVE Strategies:

The list of strategies that the city of Rochester could choose from could involve hot spot policing, focused deterrence, crime prevention through environmental design, and street outreach. Within the GIVE initiative within the city of Rochester, they implemented all 4

categorical strategies. The strategies that are mainly used within the City of Rochester involve hot spot policing, focused deterrence, street outreach strategies, and crime prevention through environmental design.

Hot-Spot Policing:

Hot-spot policing strategies involve identifying concentrated instances of violent crime within a given area that can be used to implement further prevention activities. This element is based on the idea of law enforcement focusing on utilizing limited resources within specific areas where crime is likely to be present and perhaps account for the majority of violent crime. (CEBCP, n.d., “Hot Spots”). The problem-oriented based strategy is utilized with the emphasis on implementing place-based policing metrics which require monitoring and analysis of micro areas such as neighborhoods, street blocks, and/or district sections, in order for law enforcement to focus its efforts within concentrated areas instead of the entire city/town (CEBCP, n.d., “Hot Spots”). The emphasis is placed on these areas in order to allow resources to be concentrated within the most highly concentrated areas for violent crimes such as firearm shootings/gang-related violence.

Hot spots areas are usually categorized as smaller units of geography that police can identify as containing a high concentration of crime (Sherman, Gartin, & Buerger, 1989). These areas may belong to a cluster of crime that may surround it due to the easiness of not being caught by police and less surveillance. Evidence has shown that efforts by officers to focus on these high-crime areas is a much more efficient use of time for law enforcement due to the idea that focusing limited resources on just a small number of areas that are related to higher criminal activity is a much more satisfying use of time (Sherman & Weisburd, 1995; Braga & Weisburd, 2010). This has led to much praise by police of the use of hot spot policing tactics, as they have

EVALUATING THE IMPACT OF GIVE INITIATIVE WITHIN THE CITY OF ROCHESTER

helped produce significant crime prevention results through the use of proactive arrests, focused patrols, and problem-oriented policing techniques within these areas (Weisburd & Eck, 2004).

A systematic review of hot-spot based policing strategies has shown that most studies that used these methods with produced significant impacts of the program on issues related to violent crime such as gun violence, gang level activity, etc. (Braga, Papachristos, & Hureau, 2012). They emphasize that these POP strategies, when applied to hot spot policing activities helped produce a bigger reduction effect on gun violence than other strategies that used tradition policing tactics (Braga, et. al., 2012). Other available evidence suggests that hot spots policing interventions are more likely to be associated with the diffusion of crime control benefits into surrounding areas rather than crime displacement (e.g., Braga & Weisburd, 2010). While there is evidence of the success of using hot spot mapping techniques by police officers, there is also present evidence that shows how they may present obstacles in maintaining police legitimacy amongst citizens when officers might be seen as more intrusive or forceful (Haberman, Groff, Ratcliffe, & Sorg, 2016).

The GIVE initiative requires that recipients who utilize funds and resources from the DCJS to establish “hot spots” should understand and explain how these smaller area locations contribute the growing issue of firearm-related incidents (DCJS, 2017). Within the city of Rochester, the 6 POP areas were constructed based on crime mapping techniques and information gathered by officers in identifying the most credible areas in which high activity of violent crimes, especially for gun violence, may be located. This information can then be used in formulating plans to target specific gangs or individuals who are known to roam around certain streets/blocks by having routine patrols, events planned out by street outreach agents, and/or advertising a deterrence message towards potential offenders.

Focused Deterrence:

Law enforcement within the GIVE counties in the state of New York are required to employ focused deterrence strategies in order to specify target offenders that are most likely to commit firearm-related crimes or at the very least are responsible for the increase in gun violent crimes. The theory behind focused deterrence is that by increasing the consequences of violent crime, the consequences for getting caught would be higher (Kennedy, 1997). The overall idea of focused deterrence strategies is that police can increase the certainty, swiftness, and severity of punishment in a number of innovative ways, often by directly interacting with offenders and communicating clear incentives for compliance and consequences for criminal activity. These approaches all focus on high rate offenders, often gang members or drug sellers with the idea that if they targeted these specific individuals, the amount of gun violence within the city would decrease as a result (Braga et. al., 2001). Tactics that were installed included longer sentences on repeat offenders, strategies targeting illicit firearm traffic networks, expanding communication network between Boston community and gang members, and handing out a deterrence message which states that gun violence would no longer be tolerated within the community (Braga et. al., 2001).

These strategies that were used in GIVE are what we call the “pulling levers” framework popularized in Boston, Massachusetts (Braga et. al., 2001), in which gangs were notified at call-in meetings that violence would no longer be tolerated and if violence did occur, every available legal lever would be pulled to bring an immediate and certain response. The use of the “call-in” meetings or what are sometimes called offender notification meetings have been proven to be effective methods in deterring further gun violence related behavior/actions (Wallace, Papachristos, Meares, & Fagan, 2015). This “hard” message is usually delivered by officers and

EVALUATING THE IMPACT OF GIVE INITIATIVE WITHIN THE CITY OF ROCHESTER

even local prosecutors, which are then accompanied by a “soft” message with the main theme being that they would be willing to help them change their life of crime through efforts to get them the help they need and give them access to the available services (e.g., job training, drug treatment), for gang members or juveniles who are interested in engaging in more pro-social behavior (Braga et. al., 2001).

Rochester police and probation officers who are assigned to perform custom notification duties are tasked with gaining direct contact with the recently released parolees and offenders under probation in an effort to help improve the focus of law enforcement when it came down to eliminating tensions between offenders and officers. Officers are assigned to reach out to these offenders who are required to allow them to routinely check on them at their place of residence to ensure compliance with regulations of release from prison/jail such as not being in contact with further criminals or criminal activity, no illegal possession of a firearm/handgun, no illegal substances or drugs, while also communicating a message of deterrence to them in an effort to cease further criminal activity from these individuals (GIVE Story Map, n.d.; Corsaro & Engel, 2015).

Another strategy that is used by RPD involves orientation meetings where each participant of these gatherings is sponsored by a probation or parole officer in order to establish communication and understanding of the concerns from law enforcement and the offender (GIVE Story Map, n.d.). These services offer offenders to receive the deterrence message needed to tell them that their actions to further themselves within criminal activity will no longer be tolerated while also allowing them the chance to address concerns that they themselves have of either receiving the proper services needed for them to change. The meetings also create an open forum for partners to the program (ex. probation, parole, etc.) and offenders who have entered

EVALUATING THE IMPACT OF GIVE INITIATIVE WITHIN THE CITY OF ROCHESTER

the program to mend relationship between the two parties instead of letting it become adversarial while still creating a deterrence effect that is hoped to keep them from committing any further crimes (Papachristos et. al., 2007). This allows for direct contact between partners and potential firearm offenders within a less adversarial setting rather than traditional contact (arrest, street stops, court appearances). GIVE partners are to deliver a stern message that emphasizes both the potential punishment and consequences for criminal behavior as well as any potential assistance to the crime, while also offering awards and benefits for the offenders changing the way they live their life (GIVE Story Map, n.d.; Wallace et. al., 2015).

Street Outreach:

The Cure Violence (CV) model of gun violence prevention involves the efforts of community mobilization, conflict mediation and treatment counseling in order to gain the support and funding from community stakeholders while assisting individuals at high-risk of being involved in gun violence or other lethal-related crimes (Butts, Roman, Botswick, & Porter, 2015). The purpose of the model is to create individual-level and community-level change within communities struggling with gun violence that may be perpetrated by youths based on personal conflicts/disputes. The model attempts to eliminate the transmission of violence produced by these conflicts by implementing a public health method that helps in mediating violent behavior while providing participants different outlets for their aggression (Butts et. al., 2015). Violence Interrupters (VI) and Outreach Workers (OW) who are employed by the programs are required to have “experienced” what life is like in the urban neighborhoods and streets that are plagued by gun violence or gang violence in order to partake as employee workers. This means that they had to have previous experience with the criminal justice system where they were arrested for gun or gang-related offenses (Skogan, Hartnett, Bump, & Dubois, 2009).

EVALUATING THE IMPACT OF GIVE INITIATIVE WITHIN THE CITY OF ROCHESTER

Street outreach workers and violence interrupters respond immediately to shooting incidents in order prevent further retaliation, help guide conflicts to peaceful resolutions before they become more complicated and respond to hospitals in order to assist family members who have been injured or killed. Violence interrupters are required to be credible messengers and individuals who can gain the trust of high-risk offenders to prevent them from committing further violence while also giving them avenues to look for assistance from social service providers (Butts et. al., 2015). Outreach workers are also required to engage with their community, religious organizations/clergy, and local businesses through events and rallies in order to meet high-risk youths involved with street gangs/gun violence while setting up progress goals and connect them to beneficial services (Skogan et. al., 2009).

Operation SNUG is a street outreach program that works within the state New York, with one program located in Rochester being formally known as the Save Our Youth (SOY) Program, that helps provides support for young juveniles and/or violent gun offenders who are in need of help with getting away from a life of crime (GIVE Story Map, n.d.). Staff that are employed by the program are hired due to being from the specific areas in question that are known for gun violence or gang-related activity. They may have a criminal history background or even have a reputation of carrying a firearm during the commission of a crime, which allows them to relate to offenders and deter them from violent behaviors (Butts et. al., 2015). Employees may also track down different potential candidates for the program based on contacts and experience living within these areas where gang violence and crime have become common nature. They will also intervene in volatile disputes that may lead to violence in order to demonstrate to these individuals most at risk of violence and to community members that there are much more peaceful methods of dealing with conflicts and disputes (Butts et. al., 2015).

Situational Crime Prevention:

The idea surrounding Crime Prevention through Environmental Design (CPTED) involves manipulating the environment that may be conducive of violent crime and lethal retaliation. Activities surrounding this method are known to focus on the situational factors that occur in certain settings and institutions in order to eliminate the tendencies to resort to violence-related behavior. The goals are to make crime a less attractive option through the use of public/private entities besides law enforcement services (Clarke, 2009). This may involve placing CCTV cameras within specific areas in order to deter further crimes from occurring or taking down abandon houses/buildings that may attract further criminal activities (Clarke, 1992a).

These CPTED projects are normally concentrated within the POP areas under GIVE with the idea that if they changed certain features within the environment (ex. panhandlers, trash, posting certain warning signs, vacant houses, etc..), then they would see a decrease in violent crime within the city. RPD and stakeholders have relied upon the use of smaller CPTED projects so far in order to address physical disorder and other concerns tied to place-based strategies (GIVE Story Map, n.d.). The hope is that these changes to the environment will help change the dynamic in which crime might transpire when there is more transparency present within such areas. This would cause offenders to deter from further violent criminal activity as a result (Clarke, 2009).

Conclusion:

GIVE is structured in a way to promote numerous strategies and tactics that are designed to address the implementation of proactive police procedures and attempts to define how officers can tackle growing gun violence rates within their specific county/city without having to resort

EVALUATING THE IMPACT OF GIVE INITIATIVE WITHIN THE CITY OF ROCHESTER

back to traditional police methods. Emphasis is placed on providing ideas and innovations in establishing relations between law enforcement and community organizations in order to address how to target actions against gun violence towards high-risk offenders. Strategies such as hot spot policing and CPTED use place-based strategic reasoning to locate specific micro areas to target gun violence activity while also changing the way locations look to make them less appealing to criminals to hang around or cause crime around (Lum et. al., 2011).

Problem-oriented policing and procedural justice elements are an essential requirement for any strategy/policy that is implemented by officers in order to ensure proactive engagement by law enforcement against gun violence. Activities such as call-ins and custom notification meetings allow for them to start communication networks with offenders in order to get the word out about the RPD's "serious" stance on the issue of gun violence and crime. The use of data and statistics allow for both RPD officers and researchers to plan out comprehensive plans and strategies that can be implemented in order to deter further gun violence.

Chapter 2: Theoretical Assumptions Surrounding Gun Violence and GIVE

The GIVE initiative is based on the efforts of both law enforcement and community stakeholders putting their resources in to funding and creating innovative strategies that the police and the community can utilize in the fight against gun violence within the city of Rochester. What fuels the goals and strategies that organize the program must be based on theoretical assumptions that allow for scholars and practitioners to understand how to go about dealing with individuals who are caught up in gun violence and how to prevent such incidents from occurring much more frequently. Crime prevention programs are bound by theory in order to help practitioners understand what strategies should be put in place in order to deal with certain issues that involve more than just “reactive” policing tactics (Sherman, 1998). Gun violence incidents can happen in the most inopportune times and it becomes even more of a crisis for the public when it involves innocent bystanders who become the innocent casualties.

This section of my capstone will explore four specific types of theories that examine the issues surrounding gun violence within the U.S. The theories that will be discussed are the “code of the streets” thesis, social learning theory, rational choice theory and deterrence theory. These four theories help provide an explanation of how each GIVE strategy functions. I will be giving an overview of these four theories that best fit in with a theoretical explanation of firearm-based crime and how individuals become accustomed to gun carrying based behavior and violent actions.

“Code of the Streets” Thesis:

Anderson (1999) describes what are known as “street codes”, which are as a set of rules and guidelines emphasizing respect and aggression that are permeated within inner-city culture.

EVALUATING THE IMPACT OF GIVE INITIATIVE WITHIN THE CITY OF ROCHESTER

Inner city neighborhoods could be characterized as having high rates of poverty, alienation, violence, and mistrust in the police and community structures. It is described as a culture characterized by rejection of the mainstream norms and values, coupled with the adoption of an alternative value system due to being alienated from the formal systems governing society. The street code establishes a set of behaviors or situational scripts that help govern interactions on the streets in order to avoid being victimized and persecuted by others.

Anderson's (1999) "code of the streets" theory follows how violence is perpetuated within poor urban neighborhoods based on the pressures to follow the street codes when facing others who display aggressive behavior and how the majority of young African Americans living within these disadvantaged neighborhoods are more susceptible to commit violent crimes when it best fits their interests/motives. Anderson (1999) also states that within these poor urban neighborhoods, there are two contrasting depictions of individuals who live within them. "Decent" individuals judge themselves as accepting mainstream values such as being polite and kind to others, even though they are among the "working poor" (Anderson, 1999). They are classified as the majority of people within the neighborhood who do not accept the street codes but acknowledge the existence of violence that is committed within their area. Individuals that are classified under the "street" label are characterized as disorganized and less caring of others except their immediate families (Anderson 1999). They are more likely to engage in street violence and the follow the street codes as a way to cope with the stress of living with limited financial resources (Anderson, 1999).

There is an emphasis that street culture produces these codes upon individuals living within areas that find importance with displaying respect, masculinity, retaliation, and the use of violence means in order to keep themselves safe from others (Anderson, 1999). In thinking of

EVALUATING THE IMPACT OF GIVE INITIATIVE WITHIN THE CITY OF ROCHESTER

this, it may be the reason why guns are used in most dispute related situations, as being able to come out on top in a boiling conflict is much quicker when he/she has a firearm (Anderson, 1999). In other words, street culture is based off on maintaining this phenomenon of respect (depending on what that means) of others, toughness, and exacting retribution when someone disrespects you through the use of violence, even if it is just a simple bump on the shoulder. This assumption is based on the idea that offenders carrying out violence in order to keep a sense of control of their image/reputation and to ensure steady dominance of power within a specific area through violence (Wolfgang & Ferracuti, 1967). Within urban-based neighborhoods, youths and individuals that grow up in these areas become entrenched in a “survival of the fittest” mentality where they are likely to react to any threat to their person/identity through violent actions. Instead of being shamed for displaying aggressive behavior, offenders are instead rewarded for such behavior by being able to inflict pain upon others while also gaining respect, status, and wealth as an extrinsic result (Wolfgang & Ferracuti, 1967).

Young individuals who accept the street code to these subcultural expectations actively engage in preemptive and retributive violence as a means of achieving both status and respect among potential rivals. When threatened, insulted, or physically assaulted, supporters of the code are expected to respond back with violence or face a loss of status as a man of the streets (Anderson, 1999). This could also lead to other individuals who have grudges or beef with a certain individual to go after him/her without fear of being retaliated back (Anderson, 1999). However, this can lead to individuals become victims of retaliation themselves due to the chances that others feel threaten by such retaliation as well (Anderson, 1999). Gang members may identify with this philosophy even more due to being under constant pressure to maintain the facade of masculinity and toughness that should not be perpetrated whatsoever. They might

EVALUATING THE IMPACT OF GIVE INITIATIVE WITHIN THE CITY OF ROCHESTER

see that living by the “code of the streets” gives them a boost in self-esteem, power over others due to reputation status, gaining monetary funds through illegitimate means, and other benefits that may have not been attainable when following such ideals (Stewart & Simmons, 2010).

People who live within diverse neighborhoods accept the street culture even more because they live within impoverished areas where the ability to have access to goods such as an education, employment, and housing hinder them from achieving any further happiness (Anderson, 1999). One study points out that socioeconomic status, community context, victim’s experience, and peer influence are the most statistically significant factors when analyzing how offenders may conduct themselves towards committing violent crimes (Sampson & Lauritsen, 1994). These macro-societal structural conditions will cause them to adapt to situations through violent methods and rely on individuals who may even enforce such violent tactics, including using a firearm during the commission of crimes. This is why people may rely on carrying firearms on themselves as necessary to live within certain communities and how they may rely on the drug trade to survive, making everyday life on the streets that more volatile (Anderson, 1999).

Allen and Lo (2010) attempt to determine if this is true by exploring the social mechanisms linking individual level disadvantage factors with beliefs involving the analysis of the effect of the code of the street with drug trafficking and gun carrying. They implement Anderson’s (1999) code of the streets thesis within their line of studying in order to ascertain how offenders commit themselves to following these informal guidelines in order to ensure their reputations are not damaged or to follow up on commitments made to a certain group of individuals (Allen and Lo, 2010). The data that they collected was taken from a sample of male inmates, which was then compared to a sample of male high school students in order to

EVALUATING THE IMPACT OF GIVE INITIATIVE WITHIN THE CITY OF ROCHESTER

determine whether social disadvantage was a major influence in future deviant behavior. When they observed both of their sample populations, they found that the variables of race and adopting beliefs about gun carrying from the code of the street were significant predictors of both drug trafficking and gun carrying type behaviors (Allen and Lo, 2010). Behaviors that involve gun carrying and drug distribution are usually found to go hand-in-hand, where they are in response to the admittance of the deficiencies within their community that is normally situated by the code of the streets (Anderson, 1999).

Burgasen, Thomas, and Berthelot (2014) sets out to examine the incident and contextual-level predictors of offender gun use and physical injuries that are sustained by victims of both robbery and aggravated assault. They discovered that individual-level predictors are mostly influenced by community characteristics, such as socioeconomic status and educational level. While most individuals within this study were categorized as “decent” and not strongly committed to the street orientation or the code of the street, all residents are cognizant of the behavioral norms it prescribes and understand that abiding by these norms may reduce their risk of victimization and increase their odds of surviving a lethal encounter (Burgasen et. al., 2014). Their results suggest incidents involving guns are relatively more prevalent in cities with high levels of socioeconomic disadvantage and violence. When observing if race had any influence on if individuals would experience gun violence, it was found that African Americans had an increased likelihood of being victims of gun crimes (Burgasen et. al. 2014).

Some of the specific structural conditions within these neighborhoods and institutions may help foster the street code, which are accepted by these communities that are typically characterized as volatile or distrustful of law enforcement and social services (Anderson, 1999). This is based on the idea that dealing with people at higher risk of gun violence might not trust

EVALUATING THE IMPACT OF GIVE INITIATIVE WITHIN THE CITY OF ROCHESTER

the legal and criminal justice system that is supposed to support and protect them in their time of need when they are victimized by others. A growing mistrust between police officers and community members creates a friction within certain neighborhoods that can impact how crimes are reported within a certain time frame and whether such efforts will cause the number of similar incidents to decrease or increase (Mazerolle, Bennett, Davis, Sargeant, & Manning, 2013).

Procedural justice is a required element for every GIVE strategy that is to be implemented by practitioners based on the idea that the lack of trust with law enforcement within the inner city of Rochester supports the establishment of street codes amongst urban youths. The constant lack of trust and alienation within these urban populations in Rochester is what help led to an increase acceptance of the street codes by offenders. GIVE acknowledges this and addresses the issue by emphasizes that the RPD must train its officers to exercise their authority in a procedurally just manner. It becomes more important when it comes to these youths and young adults who live within these concentrated disadvantaged neighborhoods see the police as legitimate due to the fact that most of the time they may be more cynical and dissatisfied with police efforts based on their tolerance for deviant behavior (Sampson & Bartusch, 1998).

Within the list of GIVE strategies that are promoted, street outreach programs help to tackle this culture of violence through the use conflict mediation techniques by outreach workers and violence interrupters in order to help assist the community and certain individuals to refrain from committing violence. The Save Our Youths (SOY) organization located within the city of Rochester that are employed under GIVE are tasked with understanding these social and macro-economic factors that may influence how individuals get themselves to accept a culture of

aggressive violence and try to go out to that community to spread the message that it no longer has to be the case.

Street outreach workers utilize a public health approach in order to help offenders mediate ongoing violent disputes while also building relationships with the area's youths and gangs (Whitehill, Webster, Frattaroli, & Parker, 2013). This strategy is based on identifying the cultural characteristics that have led to the culture of violence to be established within the inner-city areas and having workers who have actually lived within these areas go out and talk with these individuals to help establish better relations (Whitehill et. al., 2013). Outreach workers use what is known as the Cure Violence approach in order to mediate further disputes and violence while establishing relationship with individuals in the community and local law enforcement (Butts, Roman, Bostwick, & Porter, 2015). Staff take in to account the struggles and rationale that potential offenders might have to conduct violence based on and let them talk with individuals who have lived in similar situations that may involve dealing with drugs and violence.

Social Learning Theory:

Social learning theory was first introduced by Akers (1998) as an explanation of how criminal behavior is learned and maintained within a given sample of individuals. His idea was that criminal behavior is programmed within youths at a young age through a process of socialization, in the same manner as any other behavior is learned. Akers's theory is composed of four fundamental elements that help people learn what is acceptable and unacceptable behaviors include differential association, definitions, differential reinforcement, and imitations (Akers & Sellers, 2004). Children start learning how to behave this way through the interactions with individual peers and relatives within their social environments. As time goes on, it then becomes

EVALUATING THE IMPACT OF GIVE INITIATIVE WITHIN THE CITY OF ROCHESTER

“normal” for them to enact what they have seen as tolerable behaviors, including when it is acceptable to use a firearm to get what they want or as a tool for retaliatory or defensive purposes (Brennan & Moore, 2009). What follows from this is that the use of firearms in the commission of crime is also learned behavior when it becomes normal to see guns within the household or being used to shoot people.

What’s interesting is that Aker’s social learning theory has gone through multiple iterations over time as he has gone to refined what measurements and factors must be set up in order to understand how an offender is brought up to commit crime or in our case, carrying a gun and committing a crime with it. Akers (1998) argued that an understanding of the individual’s environment was key to understanding their criminal and deviant behavior. The social structure (i.e., family, friends/peers, goods, income, etc.) has an organizing feature that indirectly effects the performance and/or adoption of criminal and deviant behavior. It is helpful in putting together how we find those who have experienced high victimization patterns, especially when figuring out the source of such trends.

One of the important features of social learning theory is about family structure and how it influences individuals in the coming years based on how and what they are taught and whether they were cared for and learned how to be socially responsible through their parents or other so-called “role models” in their lives. Marganski (2013) investigated whether the criminological construct of attachment plays a role in the link between family violence victimization experiences in childhood and adult violent behavior. They used the data that was collected from a random list of undergraduate students, which was then used to estimate the overall impact that interactions with family members and propensity of seeing violence portrayed by their adult matriarchs may have on their future adult behavior.

EVALUATING THE IMPACT OF GIVE INITIATIVE WITHIN THE CITY OF ROCHESTER

Their results showed a significant association between direct experiences of victimization and future violent behavior (Marganski, 2013). Juveniles can be shaped by how their parents treat them and what they teach them overtime. This will affect how they will manage to comprehend from those times and how they will apply them when away and living by him/herself. For instance, when a child is situated with parents that abuse them or choose not to show them affection that they deserve, they may take that as them having no self-worth and may attempt to find an outlet for their aggression.

Childhood as a predictor for violent crime is perhaps the most delicate attribute of social learning theory that has only been recently touched upon by social researchers. Looking through the study conducted by Caffrey (2013) helps to clarify this by saying that the exposure to guns in childhood can be a helpful predictor in determining future criminal gun use, for this specific sample of felons. This may suggest that men who use guns in the commission of crime have a familiarity with guns which stems from childhood exposure. That is, the use of guns was socialized into their behavior. Caffrey (2013) also uses two specific childhood experiences in his study, which involve an exposure to violence within the home and an exposure to guns within the home. Both scenarios are of interest when looking back to how children learn certain behaviors through either being the victim of violence or having a gun present at home/environment.

Social learning theory is similar to the “code of the streets” thesis based on the idea that individuals incorporate an ideology of “retaliatory violence” whenever someone threatens them based on what they have learned from their other peers. When juveniles and young offenders experience a lifestyle in which guns are a necessity for survival and/or authority over others, they will more than likely use it in case something terrible happens such as other retaliating against

him/her. Because of this similarity, it is appropriate to state that social learning theory is best applied to the street outreach strategy that is utilized by the GIVE initiative, in which offenders have already “learned” how to go about violating the laws and getting in to troubles with gangs and drugs, while coming to accept that this is their way of life.

During childhood, youths will internalize what they learn from their parents or peers and will use them when confronted with situations that may resort to learnt behaviors. As they learn how to cope with this new line of how to live and survive, they must manage to find other individuals who also agree that these values are normal to portray and carry out within the public eye. Outreach workers employed through the SOY organization can help give these individuals the opportunities and goods needed to become less involved in violent crime because they themselves grew up in these environments where they learned the necessity of violent behavior (Whitehill et. al., 2013). This theory is also applicable to procedural justice principles within the GIVE initiative given that they may also come to distrust policing activities based on how others within their community view them.

Rational Choice Theory:

Rational choice theory is based on the understanding that offenders choose to commit crime based on a careful analysis of the rewards of committing a crime successfully and the risks of getting caught in the act. People will purposely engage in criminal behavior as it suits them based on after they weigh the costs of committing a crime and the potential benefits of doing so (Cornish & Clarke, 1986/2018). This choice to engage in delinquent behavior is made by “rational” decision-makers who are motivated and capable of perceiving the gains of a violent crime while outweighing the risks that are involved. These choices to engage in crime may be

made due to numerous factors based on individual and/or situational circumstances (Cornish & Clarke, 1986/2018).

The process in which offenders choose to commit a crime can be expressed in two significant stages. The first stage is called the “initial involvement model”, which involves whether offenders are willing to get involved in criminal activity in the first place, unless it is to satisfy their own wants and needs (Cornish & Clarke, 1986/2018). The second stage is known as the “criminal event model”, which involves individuals deciding on engaging in criminal activity, but also deciding on what specific crime should he/she commit based on the situational context (Cornish & Clarke, 1986/2018). Both stages involve acquiring specific information that is useful when considering on committing a crime and what particular crime to commit.

A study conducted in Australia attempted to analyze how offenders who committed robberies made decisions regarding using a firearm while they were doing (Harding, 1993). Offenders reported that their weapon choice during the commission of a robbery was based on what they saw as a required element to fulfill in order to complete the crime. The most common element was said to be “victim management”, which involves making sure that the victim complies with their demands through the threat of lethal force (Harding, 1993). The reasons for offenders to carry around guns can vary based on different values that they may have, such as “victim management”, the operational value of a gun for “defensive” or “offensive” purposes, “retaliatory”, etc. (Harding, 1993; Brennan & Moore, 2009).

One recent study attempted to determine whether exposure to violence affected the perceptions of risks/costs and perceived rewards of offending through the use of firearms (Loughran, Reid, Collins, & Mulvey, 2016). The authors found that gun carrying reduced the perceptions of risks that were connected with offending while the actual level of risk of

EVALUATING THE IMPACT OF GIVE INITIATIVE WITHIN THE CITY OF ROCHESTER

becoming a victim themselves increased (Loughran et. al., 2016). This helps support the rational choice perspective because it shows that behaviors associated with carrying a firearm are influenced by not only self-defense or self-preservation, but by the perception of risks versus the rewards that are related to committing a crime in general (Loughran et. al., 2016).

One specific strategy that officers have used and that the GIVE initiative currently implements that follows the logic behind rational choice theory and the idea of “criminal events” playing as a factor in the commission of violent crime is called situational crime prevention, which involves using “opportunity-reducing measures that (1) are directed at highly specific forms of crime, (2) involve the management, design or manipulation of the immediate environment in a systematic and permanent way as possible, (3) make crime more difficult and risky, or less rewarding and excusable as judged by a wide range of offenders” (Clarke, 1997/2010, pg. 4). This strategy factors in the environment and the specific crime type, with criminal events being the main focus instead of just offender’s disposition to become involved in violent crime.

Situational crime prevention takes the rational choice perspective and attempts to change the environment in which crime may proliferate based on the “greater weight to non-instrumental motives for crime and the ‘limited’ or ‘bounded’ nature of the rational processes involved” (Clarke, 1997/2010, pg. 9). For example, installing CCTV cameras within areas of interest can potentially interfere with offender’s perceptions of the benefits of committing violence within such areas, especially with a firearm (Clarke, 1997/2010). Street lighting may also deter further crimes from occurring in such areas that may escalate to a shootout if the right elements are in place. These added features are installed in a way that takes into account how offenders may come to terms that they will more than likely be noticed or get caught in the act when deciding

EVALUATING THE IMPACT OF GIVE INITIATIVE WITHIN THE CITY OF ROCHESTER

on committing a crime. The GIVE initiative emphasizes that these environmental features/changes that are implemented by officers and community members must be built with the intent to create incentives to refrain from violence in such areas while also engaging criminals to think about how committing a crime would affect them in the long run due to the perceived risk of getting caught.

GIVE uses what is known as Crime Prevention through Environmental Design (CPTED) in order to assess how crimes should be addressed based on how they may contribute to crime and what changes can be made to increase the difficulty of committing such crimes in the first place (Clarke, 1997/2010). CPTED is designed to address four main elements of certain environments: surveillance, access control, territoriality, and technical maintenance (NCPC, 2009). Practitioners who implement these strategies need to ensure that the areas of interest are designed in a way where surveillability is increased (ex. CCTV cameras, street/traffic light cameras), implement measures that establish transition from public to private areas (ex. electronic PINs, gates/fences), there are established perimeters to help define public and private property(s) (ex. sidewalks, display signs), and routine maintenance of the areas are conducted to ensure conditions no longer deteriorate (ex. clean-ups, landscaping).

The use of hot spot policing that is also utilized by the GIVE initiative helps in directing RPD officers to locations where gun violence is likely to occur based on recent shootings that are reported. It provides law enforcement with increased surveillance capabilities in areas where crime is likely to occur, giving offenders much more to think about when making the decision of whether to commit a crime or not based on the perceived lack of alternative options. Hot spot policing also becomes a factor for offenders to consider when judging the risks of committing a crime in areas where police are likely to be on patrol. Officer's presence within these areas will

affect the perceptions of offenders when they consider benefits versus the cost of carrying a firearm on themselves. As I will discuss in the next section, the focused deterrence strategy relates to rational choice theory due to the fact that it presents violent offenders with not just a change in rewards and risks involved, but also the legal sanctions that will be invoked once they are caught by the police.

Deterrence Theory:

When thinking about how deterrence theory when applied in the context of criminal behavior, sociologists and criminal justice researchers emphasize that when criminals prepare to commit a crime, they'll first be weighing the options of getting arrested and the certainty of getting sent away for a long time. Beccaria's deterrence theory (1963 [1764]) stated that criminals are motivated by their own self-interests and that the only method in reducing these motives to commit violence was through implementing punishment that are equally proportionate to whatever crime might be committed by the offender. He then argues that only punishments that are certain, severe, and arrive swiftly are the most effective principles to follow when handing out sentences and warnings to potential violent criminals who may be tempted to go about using a firearm in an unsafe manner in a particular neighborhood that can cause significant harm and fear amongst community members (Beccaria, (1963 [1764])).

Deterrence theory states that violent crime can be hindered when criminals evaluate the costs of committing the crime compared to the benefits of going through with it (Zimring & Hawkins, 1973). Deterrence is distinguished between "general" deterrence, where the message of deterrence is sent to the general population based on punishment being followed through when a

EVALUATING THE IMPACT OF GIVE INITIATIVE WITHIN THE CITY OF ROCHESTER

crime occur, and “specific” deterrence, where the punishment is applied based on deterring future criminal behavior in the near future for certain individuals/groups (Cook, 1980).

While the ideas are similar to the rational choice theory, deterrence theory regulates the risk perception of offenders and cost/benefit calculation based on legal repercussions that are put in to place to deter them. Instead of the idea of influencing the environment in which the offenders may find themselves in, practitioners must be informed about how to influence offenders’ perceptions of getting caught in the act, get arrested, and suffer a severe penalty (Nagin, 1998). This often involves understanding how deterrence theory is applied to the certainty, swiftness, and severity of the punishment is handed out to each offender. Personal and vicarious learning are important to take into account when talking about deterrence theory and the commission of gun violence. Within communities that experience low-level and high-level crimes such as firearm assaults and homicides, most of the time they do not result in a swift arrest being made. Offenders witness this as matter of fact and learn from it either directly or indirectly about how to avoid punishment further down the line (Paternoster & Piquero, 1995).

Deterrence theory can be considered when taking in to account the certainty of getting arrested, the severity of getting punished, and the swiftness of the process, which would deter a general population of offenders from enacting further firearm violence based on growing fears of getting caught (Durlauf & Nagin, 2011). However, it has recently come to be known that offenders who are committed to performing violent crimes, including firearm violence, might not even take the presence of officers seriously enough to not even worry about being caught holding an illegal weapon on him/her. They might even think they can get away with it enough to go commit it again at a later time and location (Porgarsky, Kim, & Patemoster, 2007).

EVALUATING THE IMPACT OF GIVE INITIATIVE WITHIN THE CITY OF ROCHESTER

This is why focused deterrence, a much stricter model than the general deterrence model, which promotes the use of deterrence against specific groups/individuals who are contributors to the growing issue of violent crime in a given region, has been shown to provide a more effective deterrent effect on criminals. Focused deterrence model takes on the idea of specific deterrence in order to take on specific individuals who are most likely to be involved with violent crimes and/or misdemeanors that may lead up to violent crime (Braga et. al., 2001). Focused deterrence strategies are designed to help prevent crime from occurring by communicating to the public and potential criminals the law enforcement strategy through advertising. Zimring and Hawkins (1973: 142) once stated that, “the deterrence threat may best be viewed as a form of advertising”.

This sort of communication is intended to stop crime from occurring through a “retail deterrence” message that is sent to a small target population based on what type of behavior would no longer be tolerated (Durlauf & Nagin, 2011). This is only effective if the message is communicated to the relevant audience and not just the general population, ensuring that the message’s personalized nature. Within the case of gun violence, any actions involving shootouts, firearm assaults, firearm homicide, and other crimes utilizing a firearm would be met with a severe response from law enforcement. For example, the deterrence message might be applied to a smaller group of chronic offenders who may be gang affiliated in order to help send a message to other gang members that their actions would have severe consequences (Kennedy, Piehl, & Braga, 1996). Through the actions of law enforcement against any violent actions that gang members took, it would be communicated throughout the specific group population in order to deter them from further acts of violent crime.

The best application of focused deterrence through specialized tactics on the prevention of gun violence has been the implementation of Operation Ceasefire in Boston Massachusetts.

EVALUATING THE IMPACT OF GIVE INITIATIVE WITHIN THE CITY OF ROCHESTER

The Boston Police Department used a “pulling lever” deterrence strategy that would gear police response to this growing issue of gang and gun violence around a specific, high-risk group instead of the general population (Kennedy, 1997). This way, police could effectively address and attend to specific activities geared around eliminating these trends by going after potential sources, which include sending out a message to every single offender who owned a firearm or was in a street gang that further violence and escalation would no longer be tolerated and that there would be swift and certain punishment for those who got caught by them (Braga et. al., 2001).

The “pulling levers” strategy utilizes deterrence theory by targeting specific groups or individuals who can be categorized as causing such behavior or criminal activity to continue on. Street gangs have become a well-known target for law enforcement to get out due to how much influence they have had in the criminal sphere of violent actions taken against the community and law enforcement (Braga et. al., 2001). The GIVE initiative implements focused deterrence through the use of call-in meetings and custom notifications. Firearm offenders that are identified by law enforcement are given information on the activities that will cause further criminal activity from them to receive an immediate response by officers as well as handing out severe punishments/costs. In essence, this will influence individual’s decision-making processes when committing gun violence by increasing the perceived risks of engaging in such acts.

Discussion:

When we observe how different attempts at resolution of gun violence are perceived by the public and individuals, it seems as though most are willing to collaborate with law enforcement in order to tackle the issues pervading firearm-related shootings (Mazerolle et. al.,

EVALUATING THE IMPACT OF GIVE INITIATIVE WITHIN THE CITY OF ROCHESTER

2013). This is especially true since these incidents involve a volatile threat to everyone's safety.

The theories that I have referenced as helping to explain the prevalence of the use of firearms during the commission of crimes help to paint a portrait of how offenders are able to take possession of a firearm and accept the use of such weapons during the commission of a crime.

For example, gun carrying behavior becomes a norm of individuals who need to preserve themselves while taking their aggression out on others (Brennan & Moore, 2009). They also base this change in behavior on their environmental surroundings and whether it would benefit them to commit a crime through firearm violence (Brennan & Moore, 2009).

Hot spot policing satisfies the theories of rational choice and deterrence the most based on how officers and the community can manipulate the perceptions of the capability of criminal activity being less risky or not. Hot spot areas are created based off the information that is collected and gathered by officers that can then be used to create formal strategies to help law enforcement target gun violence while creating a stern message that anyone caught in the commission of committing a crime with a firearm would be met with severe consequences.

CPTED strategies are also used in order to influence the perception of offenders to commit a crime based on the potential benefits and costs by decreasing the former while increasing the later. Plans can be set up where specific crimes are identified by organizers such as armed robbery, gun assaults, gun homicides, or gang shootings within a specific neighborhood/district.

The main objective among those who adhere to the street codes is the development and maintenance of a tough reputation that allows them to feel better about themselves and fit in within their peers who display the same types of behaviors and ideals. They may take any interaction that is not significant, such as an innocent comment that someone said, and see as

EVALUATING THE IMPACT OF GIVE INITIATIVE WITHIN THE CITY OF ROCHESTER

something that is damaging to their reputation. The trivial matter then becomes more serious because aggression is the norm based on the code of the streets.

Street outreach and procedural justice are supported by the “code of the streets” thesis and social learning theory based on how offenders perceive a set of rules and/or codes that help govern how they interact with others and satisfy their own needs growing up. Such influences are important to consider when acknowledging the influence of the reputation standard that one has and its possible impact on the context in which the incident occurs (Dierenfeldt, Thomas, Brown, & Walker, 2017). For instance, while one’s reputation for toughness may generally result in an individual becoming a victim of a crime, this same reputation may in fact attract challenges from fellow street culture adherents who are seeking a means of establishing or bolstering their own reputation. Thus, in average communities, the influence of victim–offender familiarity with violent incidents occurring in the public eye may serve to decrease the probability of gun victimization during aggravated assaults (i.e., attacks involving the use/ display of a weapon or serious physical injury) (Dierenfeldt et. al., 2017).

From what has been said so far on how gang and community members may try to “cope” and “normalized” gun violence type behavior, it should be that focused intervention efforts that follow the logic behind these theories can perhaps be able to produce significant reductions in gun violence if applied in the correct manner, especially when it comes to gunshot victims that are among gang members. Focused programs and policies that apply these integrated assumptions such as these offer an important alternative to the broad-sweeping practices or policies that might otherwise expand the use of the criminal justice system (Braga et. al., 2001). GIVE practitioners need to observe how an individual’s circumstances growing up and when it

EVALUATING THE IMPACT OF GIVE INITIATIVE WITHIN THE CITY OF ROCHESTER

comes authorizing directed patrol routines for officers if such actions will deter further violence or not.

Conclusion:

Gun violence prevention programs and strategies have been used within recent years to tackle the issues that are inherent to causing gun violence. Changing the culture of violence within these neighborhoods can be the first step in gaining confidence from others and support from community leaders/members. This goal is most important in prevention programs that work to reach out to young juveniles who may be within these environments that promote aggression and violence with guns and give him/her other choices to take in life (Butts et.al., 2015). Perhaps they see that they see no other relevant options or don't know that they have them available to them even when they might see an advertisement about local community services, referrals, and people that might help them make the right decisions without having to join a gang or "fit in".

The perceptions of offenders to the easiness of committing crime only heightens them up to use firearms to get what they want or even send a message to any opposition. As a result, law enforcement should be required to set up strategies and policies where they can change or create new incentives for offenders to reconsider against using a firearm during the commission of a crime without resorting to more lethal or ineffective tactics. The GIVE initiative must be able to properly understand the theories that are utilized in order to implement the strategies that are emphasized as effective measures against gun violence within the city of Rochester. In the next section of this capstone, I will discuss how previous gun violence prevention programs implemented the strategies utilized by the GIVE initiative and analyze the results that came from them being implemented in taking on firearm violence.

Chapter 3: Literature Review of Gun Violence Prevention Frameworks/Strategies

Firearm-related violence has become an important public policy issue that has left many law enforcement officials and community leaders struggling to come up with long-term solutions to the issue. Given that firearm control has become a significant topic as of late due to increased presence of mass shootings being portrayed on TV and in the media, it is easy to forget that a majority of firearm-related incidents actually are within concentrated areas of disadvantaged and urban neighborhoods (Braga, 2003). Gun violence has the unfortunate effect of disrupting a community and causing pain and trauma to those affected by the incident plus their friends and family members. The average societal cost of gun violence within the U.S is around \$100 billion every year (Cook & Ludwig, 2005). Due to these overbearing costs that gun violence presents which is felt by both the community and local law enforcement agencies, much hope has been placed on new and innovative strategies that have been adopted by law enforcement agencies in order to deal with at high-risk offenders while also working alongside community organizations who may also have a hand in attempting to get rid of firearm violence.

This literature review is focused on programs that implement evidence-based strategies that have been proven to work against gun violence rates through supporting scientific evidence showing whether there was statistical significance of the program efforts (Sherman, 1998). Previous research has shown that most of the time, law enforcement proactive strategies and community-law enforcement collaboration type programs produced significant decreases in gun-related violence when in comparison to laws surrounding gun control and gun buy-back programs (Makarios & Pratt, 2012). The programs that will be featured in this review will mainly feature law enforcement agencies and/or a community organization taking the initiative in implementing an evidence-based strategy based on determining whether place-based

EVALUATING THE IMPACT OF GIVE INITIATIVE WITHIN THE CITY OF ROCHESTER

conditions call for a certain strategy to be used to confront an issue threatening the community. Most of the programs that will be analyzed deal extensively with measuring the impact of the initiative in question based on if there is a reported reduction or rise in firearm homicides and/or nonfatal shootings such as robbery, aggravated assault, or burglary with a firearm (Braga et. al., 2001; McGarrell, Steven, Alexander, & Wilson, 2001).

My review will analyze the three different frameworks that have been used by law enforcement and/or community-based organizations in the fight against gun violence: 1) Directed patrol/hot-spot policing; 2) Focused Deterrence; and 3) Cure Violence/Public health model. The reason that I included directed patrol and hot spot policing together is because officers assigned to patrol detail usually work within designated “hot spot” areas that have been identified through field research and information gathering by officers (Sherman and Rogan, 1995; McGarrell et. al., 2001; Rosenfeld, Deckard, & Blackburn, 2014). Emphasis will be placed on whether the evaluation determined if the program helped in reducing firearm-related crimes included fatal and/or non-fatal shooting outcomes (i.e., gang shootings, gun assaults, robbery, burglary, robberies, etc). Other factors that will be looked at include any perceptual change in the accepted violence-related behaviors/attitudes among repeat/high-risk offenders, programmatic displacement effect of the program to nearby neighborhoods/areas, healing police-community relationships through the promotion of activities that deal in law enforcement and community collaboration, and/or whether the program could be explained for the reduction in gun violence reported (Papachristos et. al., 2007; Skogan et. al., 2009; Corsaro & Engel, 2015).

Literature Search Method/Strategy:

The literature search process involves the examination of numerous electronic scholarly articles that were evaluated and acquired through the use of the RIT's Summon search engine and other online databases/resources (e.g., SAGE Journals, ProQuest, and Google Scholar). Articles that were chosen were narrowed down to whether the authors evaluated an evidence-based policing/community strategy where the theme was either directed patrol, focused deterrence, and/or a public health model (particularly studies that evaluate the use of the Cure Violence model). Emphasis was placed on whether the studies discussed the significance of hot spot policing initiatives, which usually centers around mapping out concentric areas using crime mapping techniques based on reported incidents by citizens or police (Braga, Papchristos, & Hureau, 2012).

Specifically, sources were chosen for this review based on if they conducted outcome evaluations of the program's effect on overall violent crime and firearm-related shootings (fatal and/or non-fatal). My goal through this review is to present the benefits and significance of these programs that take a critical viewpoint of gun violence within certain neighborhood clusters while going over whether the evaluation studies performed on these programs also look in to other outcomes involving , norm/behavior changes of at high-risk offenders, change in perceptions of police legitimacy, program fidelity, and displacement effects of the program. It should be noted that most of the studies identified in this review involve mostly use a quasi-experimental approach to analyze effectiveness, with some studies even using nonequivalent comparison group studies to determine the difference with the treatment group.

I then used key terms such as "evidence-based policing strategies", "directed patrol", "focused deterrence", "pulling levers", "firearm-related violence", "hot-spot", "public health

EVALUATING THE IMPACT OF GIVE INITIATIVE WITHIN THE CITY OF ROCHESTER

model”, “gang-related shootings”, “Cure Violence”, and “street outreach” in my search engine in order to narrow down my journal article search. In ensuring that I keep my review sources specific to my topic, I will only include studies if they mention measuring gun-related homicides and violence. This is important when considering that gun violence is known to go hand-in-hand with instances of street related violence and drug distribution (Braga et. al, 2008). I excluded research articles/studies that do not address strategies that involved hot spot policing, problem-oriented policing, focused deterrence, the Cure violence model, and directed patrol activities.

Findings/Results from the Literature:

Table 1: Four Strategies Used in Gun Violence Prevention Program Evaluation Studies

<u>Study:</u>	<u>Directed Patrol/ Hot Spot Policing:</u>	<u>Focused Deterrence Strategy:</u>	<u>Cure Violence:</u>
Sherman & Ragon 1995	X		
Braga et. al., 2001	X	X	
McGarrell et. al., 2001	X		
Papachristos et. al., 2007	X	X	
Skogan et. al., 2009	X		X
Wilson et. al., 2010	X	X	X
Webster et. al., 2012			X
Braga et. al., 2013	X	X	
Rosenfeld et. al., 2014	X		
Corsaro & Engel, 2015		X	
Grunwald & Papachristos, 2017		X	

EVALUATING THE IMPACT OF GIVE INITIATIVE WITHIN THE CITY OF ROCHESTER

At first, my search for gun violence prevention programs resulted in around 25 potential evaluation studies being collected that dealt with the effectiveness of these programs. I then narrowed my search based on whether studies observed other programmatic outcomes that are related to the effectiveness of such programs including reported violent crimes and shooting incidents, program fidelity, behavior and/or norm changes, perceptions of police legitimacy, and displacement/diffusion effects. As a result, I collected around 11 eligible studies for this review that involved an evaluation of gun violence prevention strategies/programs implemented by either law enforcement or community organizations. These studies are listed in Table 1 based on the type of strategy that is used for the program under study. Three of the studies involved directed patrol and hot spot policing. Five studies involved the implementation of focused deterrence-based strategies. Three studies involve an analysis of community-based intervention programs using the Cure Violence model.

In order to guide my explanation of these intervention programs, I will attempt to highlight four ideas that are essential discussion points in determining the effectiveness of these programs: 1) policy/program showed a significant reduction in the number of gun violence incidents and/or reduction in violence-related norms/behaviors; 2) successfully employ any of the three strategies while demonstrating program fidelity; 3) inclusion of elements involving procedural justice and community incorporation to mend police-community relations; and 4) reports either a positive, negative, or neutral displacement/diffusion effect due to impact of the program. Tables 2-4 list out the different studies used for this literature review and what specific strategy is utilized by the program in question.

EVALUATING THE IMPACT OF GIVE INITIATIVE WITHIN THE CITY OF ROCHESTER

Table 2: Directed Patrol/Hot Spot Policing

<u>Journal Article(s):</u>	<u>Question(s):</u>	<u>Methodology/Study Design(s):</u>	<u>Result(s):</u>
<u>Sherman and Rogan, 1995</u>	Can Kansas police take more guns off the street through directed patrol? What are the effects on gun crime?	ARIMA Time Series Analysis with Comparison Group, Difference of Means, and ANOVA	Intensive directed patrol near gun crime hot spots produced a 65 percent increase in firearms seized by police.
<u>McGarrell et. al., 2001</u>	Are the results in terms of reducing firearms crime from the Kansas City gun experiment observed within Indianapolis?	Pre/Post Time Series with Comparison Group	Results show directed patrol had significant effect in only one target area and not the others.
<u>Rosenfeld et. al., 2014</u>	Does the elevated enforcement of hot spot intervention help explain the impact of the intervention on firearm violence in hot spots?	Random control experiment and Multilevel Regression Analysis	Suggest that reductions were substantial in nondomestic firearm assaults, but no effects observed for firearm robberies

Directed Patrol/Hot Sport Policing Model:

Sherman and Rogan (1995) conducted an evaluation on the Kansas City (MO) Gun Experiment in order to determine if the program still held up after being implemented for around four years. This program was implemented by the Kansas City police department in response to a growing appreciation for these programs within certain cities and to ensure whether the program has any significant impact on reported gun violence within Kansas City. Through a non-equivalent quasi-experimental design, researchers were able to find a significant effect when it came to strategies of seizing guns when individuals were caught using a firearm during robberies, aggravated assaults, firearm homicides, etc. (Sherman & Rogan, 1995). However, they were unable to determine whether spatial displacement was present after the program was implemented but did observe that diffusion of benefits was apparent for two adjacent neighborhoods near the treatment area (Sherman & Rogan, 1995).

Following up on the Kansas City Experiment, the city of Indianapolis police department attempted to replicate the use of foot patrol officers by creating their own directed patrol program. The department wanted to replicate what had been done within Kansas City as a way to

EVALUATING THE IMPACT OF GIVE INITIATIVE WITHIN THE CITY OF ROCHESTER

help officers effectively use their resources to combat the instances of gang-related gun violence that were steadily rising. Unfortunately, the program only saw a significant reduction in gun violence within one “hot spot” area (the northern treatment areas) and not the eastern target area that were analyzed in the study (McGarrell, et. al., 2001). Between the years 1996-1997 after the program was officially implemented, the recorded amount of violent gun incidents within the North and East Section areas combined decreased from about 117 to 110 shootings (McGarrell et. al., 2001). The overall effect on lower shootings was found to have been present when observing the North target beats of the study, while there was never any effect that was detected within the East target beats even though both declines were found to be statistically significant (McGarrell et. al., 2001). The study also discovered possible displacement based on the program, however, as they found that there was a 10% increase in total firearm crimes within five nearby areas (McGarrell et. al., 2001).

Other studies that observed the effectiveness of hot spot policing and patrol have shown that the use of stationed officers as a strategy by itself might not produce the most efficient results that could benefit them. One such example that shows this involves a directed patrol and proactive policing program implemented in St. Louis, Missouri. An evaluation was performed on the program by analyzing a nine-month time period during which the program was implemented (Rosenfeld et. al., 2014). The results from the evaluation showed that through the analysis of the thirty-two hot spot areas in comparison with the controlled areas, the program was associated with a significant reduction in the number of firearm assaults (nonfatal shootings), and that there was no spatial displacement of crime due to the program (Rosenfeld et. al., 2014).

However, they did note that there were no effects of the intervention when the incident involved robberies through the use of firearms (Rosenfeld et. al., 2014). Perhaps the program

EVALUATING THE IMPACT OF GIVE INITIATIVE WITHIN THE CITY OF ROCHESTER

only had an effect on one category of gun crime (in this case aggravated assault instead of robberies). Nevertheless, it brings in to question how law enforcement might only be displacing the use of firearms to other easier to commit crimes such as robberies. The authors admitted that their might have been unmeasured variables such as informal norms influencing police behavior, community relations, and officer commitment to the experiment that may have influenced the results (Rosenfeld et. al., 2014).

One common deficit that these studies showed was that while they presented outcomes that saw either an increase or decrease in gun-related crimes, they did not account for violence-related behavior or norms that have been associated with the prevalence of guns being used during the commission of crimes, especially when it comes to gang violence being prevalently associated with owning an illegally possessed gun (Braga et. al., 2008). While some of the studies presented the idea that police behavior and norm changes within violent offenders could be the causal mechanisms for the reduction in gun violence observed (Sherman & Rogan, 1995; McGarrell et. al., 2001), these three articles were still unable or could not determine the actual factors and could only speculate that their programs had somewhat of an effect on firearm-related incidents, however small it might have actually been (Sherman & Rogan, 1995; McGarrell et. al., 2001; Rosenfeld et. al., 2014).

EVALUATING THE IMPACT OF GIVE INITIATIVE WITHIN THE CITY OF ROCHESTER

Table 3: Law Enforcement Focused Deterrence Program Studies

<u>Journal Article(s):</u>	<u>Question(s):</u>	<u>Methodology/Study Design:</u>	<u>Results:</u>
<u>Braga et. al., 2001</u>	Did Operation Boston Ceasefire have the desired effect of decreasing youth gun violence?	Nonequivalent Quasi-Experimental Experiment	Significant decrease in youth homicide (63% decrease), shots-fired (32% decrease), and gun assault incidents (44% decrease).
<u>Papchristos and Fagan, 2007</u>	Which of the four PSN strategies implemented in Chicago is most effective in reducing gun violence?	Quasi-Experimental Design through Propensity Score Matching and Linear Growth Curve Models	Most effective activity was the use of offender notification meetings that stressed individual deterrence
<u>Braga et. al., 2013</u>	Did the treatment offered to Ceasefire gangs change their violent behaviors toward retaliatory gun violence?	Propensity Score Matching and Growth-Curve Regression Models	Shootings reduced by around 31% when compared to total shootings involving matched comparison Boston gangs.
<u>Corsaro & Engel, 2015</u>	Did focused deterrence strategy reduce lethal violence by gangs and repeat offenders within New Orleans?	Poison Regression Analysis and Pre and Post Time Series Analysis	Activities implemented by program associated with high programmatic fidelity and assisted programmers in targeting higher risk groups
<u>Grunwold & Papachristos, 2017</u>	Did the original Project Safe Neighborhood communities that were targeted post implementation continue to experience positive effects from the program years later?	Program and Outcome Evaluations, Propensity Matching Scores and Logistic Regression Models	There was a positively programmatic effect detected – albeit smaller – with homicides and gun homicides for ATF gun traces, federal prosecution, and during PSN operation.

Focused Deterrence Model:

The first overall program that helped increase the amount of interest within focused deterrence and problem-oriented policing strategies was conducted in Boston, Massachusetts with the implementation of Operation Ceasefire (Braga et. al., 2001). An impact evaluation was conducted a couple years after it was implemented, with the question being whether the program actually achieved the desired effect of decreasing youth gun violence (Braga et. al., 2001). The evaluation helped in establishing that an increase in gun violence may be caused by an increase in gang violent-related activities (Braga et. al., 2001). The researchers discovered that Ceasefire was responsible for a significant decrease in juvenile homicides from 63% to 32% in calls of

EVALUATING THE IMPACT OF GIVE INITIATIVE WITHIN THE CITY OF ROCHESTER

shots fired (Braga et. al, 2001). However, they could not state for certain if the program had any impact on behavioral/violent norm changes within violent offenders in Boston.

A follow-up evaluation of the Ceasefire program went on to demonstrate whether the treatment offered by the program actually changed the violent, anti-social behaviors of gang members towards retaliatory firearm violence (Braga et. al., 2013). The reductions of shootings which involved street gangs was found to be around 31% in comparison to the total amount of shootings including comparison and treatment groups (Braga et. al., 2013). When comparing the treatment areas alongside the control areas, they found that the reductions in gun violence coincided with the treatment of Boston's Ceasefire initiative, although it was not specifically mentioned if fidelity was at issue or not (Braga et. al., 2013). It was also assumed that the individuals who were in gangs were able to get the word out about the deterrence message while talking about it amongst other gang offenders, which may have helped diffuse the message among other gangs within both the city of Boston and nearby areas (Braga et. al., 2013).

Another objective of these focused deterrence programs has centered around reducing violent criminal behavior among offenders and the propensity to commit violent crimes through the use of a firearm. The belief is that many individuals who are at high risk of being involved in violence and with an increase in gang or firearm violence levels will likely not be deterred by officers if they don't see them actually making arrests or seeing them take on more proactive roles, giving them the perspective that they can get away with it because the police are not legitimate (Corsaro & Engel, 2015). Chicago's Project Safe Neighborhood initiatives highlights the use of offender notification forums as being statistically significant in attempting to deter offenders who are at high-risk of performing violent crime ($p = 0.000$) (Papachristos et. al., 2007). This feature has been most widely used in other recent law enforcement programs that

EVALUATING THE IMPACT OF GIVE INITIATIVE WITHIN THE CITY OF ROCHESTER

have attempted to reduce gang violence as well as firearm shootings by holding call-ins for high-risk individual gang members in order to send out their deterrence message with more emphasis from community support and lethality of punishment (Corsaro & Engel, 2015).

An updated version of Operation Ceasefire known as the Group Violence Reduction Strategy (GVRS) was recently implemented within New Orleans, Louisiana, where a significant reduction in gang-related homicides of around 32.1% and a 16.3% reduction in nonlethal firearm assaults was discovered to be due to the effects of the high programmatic fidelity based on the use of multiagency task force strategies which included homicide review boards, offender notification sessions, tracking gang violence, and review data sources (Corsaro & Engel, 2015). Recognition of the program success was put on political and police official's commitment alongside the research team to demonstrate clear direction and establish support from the community overall. However, while implementation fidelity was touted as very high thanks to the use of the multiagency task force, the authors admit that the design of the study was of little importance to them as they assumed that amount of violence within New Orleans was widespread and could be analyzed through isolation (Corsaro & Engel, 2015).

Project Safe Neighborhood's (PSN) initiative was put into action in 2002 due to an increase in firearm-related violence incidents within the urban neighborhoods of Chicago. An analysis of the treatment areas under PSN showed a 37% decrease in homicide rates during the years it was implemented and that the most efficient strategy performed by the program was having offender notification sessions on a weekly basis (Papachristos et. al., 2007). These meetings often emphasize the deterrent message that gun violence would no longer be tolerated within the city of Chicago and that there would be severe consequences if any of them got caught. This effort was to help change the norms and behavioral attitudes of getting caught with

EVALUATING THE IMPACT OF GIVE INITIATIVE WITHIN THE CITY OF ROCHESTER

an illegally purchased firearm and whether it was worth using the firearm in a retaliatory shooting (Papachristos et. al., 2007).

The taskforce that was assigned to follow through on the implementation of PSN were found to have been successful in translating the overall goal of the program by connecting evidence-based strategies that would help in reducing gun homicides in specific areas that were assessed based on incident reports and community input (Papachristos et. al., 2007). However, their conclusion may not be determinate of the overall effectiveness of PSN due to the fact that there were so few “failures” that were identified during the study and there was no attempt to rigorously explore the violent crime trends within the implementation period such as whether displacement was apparent or whether rates would continue decrease for the long term or if would be short (Papachristos et. al., 2007).

About a decade later, another study performed by Grunwald and Papachristos (2017) went back to the Chicago neighborhoods to determine whether the PSN program still held some of its impact on attitudes and actions toward gun violence. They conducted a program evaluation of the PSN program within their target areas post implementation time and whether the effects were positively based. Grunwald and Papachristos (2017) discovered that homicides had decreased by 10% since the start of PSN in certain districts while also showing that there was a positively programmatic effect with overall homicides and gun-related homicides for certain ATF gun traces, federal prosecution, and during PSN operation. The effects were, however, smaller than what they were previously reported as a decade before. They also found similar results to the initial study performed by a decade before but also summarized that something else might've happened during the years after PSN was implemented to cause the reduction in gun violence (i.e., spillover effect).

EVALUATING THE IMPACT OF GIVE INITIATIVE WITHIN THE CITY OF ROCHESTER

Overall, there appears to be considerable evidence that the use of focused deterrence strategies in gun violence prevention holds essential benefits for law enforcement personnel and the community at-large. While the results from these studies might vary on whether activities performed under the program actually caused the reduction in gun violence rates, they show a certain aptitude where there is certainly a recorded decrease in firearm violence. It should be noted that while some of these studies showed displacement and/or diffusion effects on neighboring areas in length to the treatment cities, not all of the effects may be as significant overall in other programs that attempt to implement crime reduction efforts/programs, especially when it concerns larger units of geography (Telep, Weisburd, Gill, Vitter, & Teichman, 2014).

Table 4: Street Outreach/CURE Violence Program Studies

Journal Article(s):	Question(s):	Methodology/Study Design(s):	Results:
<u>Skogan et al., 2009</u>	Did Chicago's Ceasefire program effectively tackle incidents revolving gun violence in Chicago areas and implementing the CURE violence model?	Crime Mapping Technique And Time-Series Analysis	Found that the rate of firearm shootings went down about 16-28% within four of the seven sites that were analyzed during a 59-month period.
<u>Wilson et. al., 2010</u>	Did Pittsburgh's "One Vision, One Life" street outreach program successfully implement the Cure Violence model, and did they impact firearm-related violent behavior and incidents?	Propensity Score Matching and Crime Mapping Spillovers	Caused increases in gun violence in selected treatment areas and did not effectively implement the public health model of Cure Violence.
<u>Webster et. al., 2012</u>	Can the evidence-based public health approach used in Chicago's Ceasefire program be replicated in Baltimore?	Time-series analysis on homicides and nonfatal shootings and exposure to program measured using dichotomous variables	Discovered that program-related reduction was significant in reducing 35 non-fatal shootings and at least 5 homicides cases within a 112-month period in selected areas for the treatment.

Public Health Model (Cure Violence)

Skogan and his colleagues (2009) produced a decade long evaluation of the Chicago Project for Violence Prevention (CPVP); the Chicago Ceasefire project where they presented numerous case studies plus a pre and post impact evaluation in order to determine whether the current public health model process was being fully implemented within staff guidelines, activities, and data management. As a result of the implementation of the program in certain areas of treatment, they found that the rate of firearm shootings within Chicago's target areas went down about 16-28% within four of the seven sites that were analyzed during the 59-month period that was selected (Skogan et. al., 2009). Norms and behaviors related to offenders at risk of committing gun violence were found to have been impacted based on reports of participants of the program believing the program to be "very important", even though it had faced many obstacles and they as individuals have faced difficulty in changing their lifestyles (Skogan et. al, 2009).

Their evaluation concluded that the process and values emphasized by Chicago's Ceasefire program were able to significantly lower the average amount of shooting rates in most of the target areas that were examined in Chicago during its implementation period (Skogan et. al., 2009). One likely reason for why this is possible is due to the proper usage of conflict mediation sessions and activities, which emphasize that two conflicting parties come together and come to a peaceful understanding of a particular conflict instead of resorting to retaliatory violence (Whitehill et. al., 2013). These sessions are proctored by violence interrupters and/or outreach workers as they act as the mediators between the two parties to help resolve issues concerning territorial disputes, arguments over money or reputation, and ensuring that all participants think of the higher consequences of resulting to violence.

EVALUATING THE IMPACT OF GIVE INITIATIVE WITHIN THE CITY OF ROCHESTER

While these types of programs rely more on community mobilization efforts, they sometimes might not produce enough impact based on whether outreach workers and the community are committed to reducing firearm violence. Pittsburgh's One Vision, One Life program attempted to replicate the public health model similar to Chicago's Ceasefire initiative. However, the program also took in elements from Boston's focused deterrence Ceasefire initiative in order to deal with an increase in youth homicides relating to an increase in gang violence, implementing features such as clergy involvement and having outreach workers commit to deterrence-based messages to dissuade participants from partaking in gang or gun violence (Wilson, Chermak, & McGarrell, 2010). Unfortunately, an evaluation of the program later on found that the program effects had no significant impact on firearm homicides and assaults due to an organizational process that had poor implementation issues such as staff and management's commitment to taking on at higher-risk individuals and not using Cure Violence methods properly or ineffectively, with the effects of the program actually caused an increase in gun violence incidents (Wilson et. al., 2010).

One city that was able to show that a program that used the Cure violence model could be successfully implemented within a given city was seen in Baltimore, Maryland, which had a serious gun violence epidemic growing within its streets (Webster, Whitehill, Verniek, & Curriero, 2012). Program-related reduction effects were found to be significant in reducing around 35 non-fatal shooting incidents and at least 5 firearm homicide incidents within a 112-month period within the treatment and border areas selected for the program. When identifying the strongest program effects in certain areas, researchers discovered that Cherry Hill saw a 56% decrease in firearm homicides and a 34% decrease in non-fatal gun-related violence incidents. (Webster et. al., 2012). Conflict mediation sessions that were conducted by the outreach workers

EVALUATING THE IMPACT OF GIVE INITIATIVE WITHIN THE CITY OF ROCHESTER

was pointed out as one of the main features that helped provide them a more efficient method of communicating with participants and community members. When it comes to whether the studies measured for spatial displacement of crime or a diffusion of programmatic benefits, Webster and company (2012) were able to estimate a positive spillover effects on homicide incidents of the program within a certain target area neighborhood.

The public health model was, and still is a brand-new innovation within the scheme of preventing gun violence in certain areas that might could still be a major success if more communities implement the model. One of the main components that is stressed within these models is conflict mediation forums where the parties in conflict meet with each other, with VI's and OW's proctoring the sessions in order to settle the conflicts before they become much more volatile by relating to them on a personal level. However, there aren't many evaluations on these sorts of programs that can verify its effectiveness within the bigger picture or whether one certain factor may cause the most impact in reduced gun violence (Butts et al., 2015). This is why it is important that most studies evaluating public health models of gun violence analyze how effectively they follow policies and procedures in order to correctly ascertain if staff and officers are properly implementing these programs. Still, some of the studies that were acquired have shown the potential benefits of using a public health perspective in combating gun violence.

While the Cure Violence model provides a new and innovative approach to the issues of gang-related violence and firearm shootings, the approach might not work out if not implemented properly by practitioners. This model is not in contrast to how law enforcement would carry out initiatives on gun violence, as both stress the need to work and communicate with one another to establish an efficient collaboration of a program that relies on police and community input (Butts et. al., 2015). Fidelity to this public health approach is key to its success

due to the fact that a program that attempts to replicate the initiative unfaithfully will be inefficient in establishing itself as a credible program to combat the culture of retaliatory gun violence. A program such as this might also prove to only worsen the issue within certain communities as well (Wilson et. al., 2010). A street outreach program that plans to use the Cure Violence method should faithfully follow how to properly implement the strategies and components based on how they it can be utilized within their own community/jurisdiction (Butts et. al., 2015).

Discussion:

This literature review helps to inform us about the overall evidence surrounding the use and implementation of the three distinct evidence-based prevention strategies that have been utilized throughout the years based on their reported usage and effectiveness of reducing firearm-related violence within certain cities/neighborhoods. By espousing the literature involving these evidence-based programs, the GIVE initiative is able to take in to account “what works” in creating or evaluating efforts to eliminate gun violence while ensuring that practitioners and partners are able to understand the goals and procedures that need to be followed for the program to work effectively. Throughout this review, the studies that analyze the usage of hot spot policing/directed patrol, focused deterrence, and street outreach initiatives to help eliminate firearm violence have shown similar understandings of taking into account characteristics of certain neighborhoods that help explain what officers, outreach workers, and community stakeholders should review over in order to ensure that buy-in to the initiatives are met. This is what the DCJS and GIVE should review and take into account when implementing changes to strategies to ensure credibility to the city of Rochester.

EVALUATING THE IMPACT OF GIVE INITIATIVE WITHIN THE CITY OF ROCHESTER

When it comes to the general findings, programs that implemented evidence-based strategies, problem-oriented policing properties and criminal data analysis techniques that were present showed the most significant effects on reducing firearm violence (Braga et. al., 2001; Papachristos et. al., 2007; Skogan et. al., 2009; Webster et. al., 2012; Braga et. al., 2013; Rosenfeld et. al., 2014; Corsaro & Engel, 2015; Grunwald & Papachristos, 2017). Throughout this review process, it came to light that while evidence may point to the effectiveness of some programs, the route that researchers and practitioners took to get to their outcomes determined how effective their application is compared to other methods. For instance, while I did include older studies in my review that might be based off a weak quasi-experimental design, it was still important in the scheme of showing how recent studies may attempt to improve on what has been done in the past (Sherman & Rogan, 1995; McGarrell et. al., 2001; Braga et. al., 2001). In this sense, more rigorous quasi-experiments have been emphasized in order to definitively determine what certain elements of such evidence-based programs help advocate/deter further gun violence within these neighborhoods (Braga et. al., 2013; Corsaro & Engel, 2015; Grunwald & Papachristos, 2017).

From what has been gathered from this review, most studies have emphasized the effectiveness of the focused deterrence approach and the Cure Violence approach which show excellent promise of preventing future gun violence from occurring, with tactics such as changing offender behavior around firearm violence, program fidelity, changing perspectives of police and improving relationships in communities, and some detection of spillover effects to neighboring areas (Papachristos et. al., 2007; Skogan et. al., 2009; Webster et. al., 2012; Braga et. al., 2013; Corsaro & Engel, 2015; Grunwald & Papachristos, 2017). While directed patrol and hot spot policing may have produced somewhat positive results when it comes to reducing gun

EVALUATING THE IMPACT OF GIVE INITIATIVE WITHIN THE CITY OF ROCHESTER

violence in some junctures (Sherman & Rogen, 1995; McGarrell et. al., 2001), other studies that have evaluated the effectiveness of such strategies are limited based on a lack program fidelity present that shows the impact of programs on firearm shootings (Rosenfeld et. al., 2014).

Most of the programs that used a focused deterrence and/or Cure violence model approach were found to be successful in reducing gun violence in certain neighborhoods because practitioners of these programs tended to rely more on community resources and intelligence. For example, the PSN program implementation of offender notification meetings and the emphasis on conflict mediation tactics used in Chicago ceasefire were found to be most significant when evaluating for program variables (Papachristos et. al. 2007; Skogan et. al., 2009; Whitehill et. al., 2013). Much of the research that has evaluated the impact of focused deterrence and Cure Violence have considered program fidelity as an essential element to the program's success, with some reporting varying degrees of practitioners being able to follow procedures completely or just partly (McGarrell et. al., 2001; Skogan et. al., 2009; Wilson et. al., 2010; Webster et. al., 2012; Rosenfeld et. al., 2014; Corsaro & Engel, 2015; Grunwald & Papachristos, 2017). Unfortunately, an issue that constantly came up was how little the evaluation studies in this review presented few pieces of evidence which show proper program fidelity and how guidelines and tactics may have created a shift in officer/community action/behavior when reacting to firearm-related issues. Whether this is based on the implementors motivations and/or commitment to the program is up for debate, but still plausible given that there is no national rating system for these specific programs (Elmore, 1978).

When it comes to creating a program where the main goal is to establish comprehensive approaches that deal with reducing the amount of gun violence in a particular city or town, it's best to explain them by identifying the strategies that allow the program to be most effective in

EVALUATING THE IMPACT OF GIVE INITIATIVE WITHIN THE CITY OF ROCHESTER

preventing violence. Going back to Makarios and Pratts (2012) meta-analysis of the different law, policies, plus programs that attempted to tackle the issues of gun violence and gun control, they point out that programs which provided community-based approaches and collaboration with law enforcement outperformed other efforts. They also emphasized that the programs which had been proven to be effective in reducing gun violence were those that were characterized as being much more comprehensive and understandable that anyone could replicate the same format of the program, such as Boston Ceasefire and Project Safe Neighborhood (Makarios & Pratt, 2012). It might not come as a shock when considering that these types of programs rely heavily on the strength of law enforcement strategies such as federal prosecution, directed patrol, supply-side strategies, and community-level strategies that solve issues through community organization and mobilization (Makarios & Pratt, 2012).

Getting the community's input into program implementation can help in deterring the actual impact of each gun violence program. Sampson, Raudenbush, and Earls (1997) state that the community must have the capacity to realize its own values and to control their behavior by forming partnerships and building trust with one another in order for the initiative to be considered successful. This is what we call a need for "collective efficacy." In order for a program to work effectively when being implemented, practitioners should give community partners and members all the details and facts needed in order to come together and prosper. As long as a community can come together through a culture of anti-violence advocacy and action, then there is the chance that efforts to reduce violence within neighborhoods will be much more noticeable.

Conclusion:

Overall, the findings from this systematic review show that the literature surrounding evidence based policing positive benefits in implementing evidence-based policing strategies in eliminating the prevalence of gun violence within cities and neighborhoods. The existing research on evidence based policing strategies/programs against gun violence indicates that it varies on whether they reduce the number of gun-related shootings incidents within a given time frame. The limitations that are noted in this review involve the small sample size of studies collected and some of the studies either being outdated or having no further studies being performed. Implementation issues are also of concern for this review based on whether the evaluations were able to determine whether programs were properly implemented during the first year that they began and if guidelines were followed through by practitioners and official stakeholders (Mazmanian & Sabatier, 1989).

However, this should not deter others from further evaluating how it might be utilized to improve on certain elements of each program as they are potentially useful in identifying efficient use of resources and utility. These evidence-based programs show much promise in changing how officers and the community interact and engage with how to go after high-risk offenders related to gun violence while looking ahead towards how to curb further firearm shootings from occurring in the first place. Police officer and community leaders should work to be observant a critical of the effectiveness of their program even if it might not serve their best interests or it might go against bureaucratic influential pressures (Mazmanian & Sabatier, 1989). Firearm-related violence can be prevented through a comprehensive analysis of neighborhood characteristics and communication with local partners and law enforcement to create a mobilization effort around limiting these issues.

Chapter 4: Data Analysis Section and Results

There is plenty of evidence throughout the years that've supported the use of evidence-based strategies in order to combat complicated criminal issues that involve more than just simple reactive policing tactics, especially when it comes to gun violence being centered within concentric zones (Braga, Papachristos, & Hureau, 2010). This is why it is no surprise that GIVE is still thought to be a complete success for most New York counties who have implemented these initiative plans and strategies within their local communities. The Department of Criminal Justice Service (DCJS) of New York Reports of continued decreases in firearm-related violent crimes appears to be a particular norm within yearly analysis of county estimates of violent crimes and firearm-related crimes (DCJS, 2018).

This project attempts to evaluate and analyze the overall impact of this one local gun violence prevention program implemented within the city of Rochester, NY. To go back to what was referred to in my first working paper, the GIVE initiative was officially implemented in within the city of Rochester around July of 2014. Starting from this date of implementation, the basic idea is to observe whether there has been any significant impact based on the strategies implemented by the GIVE initiative based on the reported level of firearm violence incidents recorded by locally obtained data collected by law enforcement personnel.

The main concern of this project was to understand whether the implementation of GIVE within the city of Rochester has had any impact on the reported number of shootings that are both fatal and/or non-fatal. Some of the questions surrounding this objective will be:

- Is there a significant difference between the pre and post implementation periods of shootings in the city of Rochester?

EVALUATING THE IMPACT OF GIVE INITIATIVE WITHIN THE CITY OF ROCHESTER

- Does the number of shootings that are classified as fatal and/or non-fatal experience decrease or increase before or after implementation of GIVE?
- Have the efforts of RPD within “hot spot” POP areas contributed to a decrease in gun violence incidents?

In order to answer these questions, I collected shooting incident report data from the Rochester Police Department’s (RPD) Open Data Portal in order to help me better interpret the evidence of whether an actual decrease in gun violence is present before and after the GIVE initiative was implemented. In order to conduct data analysis through the use of the RPD Data Portal, I planned on conducting an impact evaluation study on the Gun Involved Violence Elimination Program within the city of Rochester in order to determine if the initiative has had any significant impact on the reported number of firearm violence incidents based on a comparison of incidents reported before implementation of the program and incidents reported afterwards.

Analysis of the Gun Involved Violence Elimination (GIVE) Program:

For the data analysis section of my capstone, I conducted an impact evaluation study on the Gun Involved Violence Elimination Program within the city of Rochester in order to determine if the initiative has had any significant impact on the reported number of overall firearm violence incidents that can be considered fatal and non-fatal. To review, this program incorporates a problem-oriented approach to the issue of gun violence while also featuring a focused deterrence and public health-related activities in order to reduce the incident of gun violence within the city of Rochester while providing alternative for high risk youths and young adults to help steer them away from gun-related violent activities (DCJS, 2018). The reported

EVALUATING THE IMPACT OF GIVE INITIATIVE WITHIN THE CITY OF ROCHESTER

amount of gun violence has mainly centered within the northeast and southwest quadrants in the city of Rochester, where data is collected from these areas in order to better understand the situational factors and individual factors that help in creating potential solutions to firearm-related violence (see Figure 1).

Originally implemented in July 2014, the GIVE Initiative was implemented within the city of Rochester after being funded by the Division of Criminal Justice Services (DCJS) of New York in an effort to implement new and innovative tactics that would help the Rochester Police Department tackle the ever growing issues of gun violence within certain streets and neighborhoods (DCJS, 2018). The program was originally called Operation Impact and was designed to measure Part I violent crimes that occurred outside New York City from 2004 to 2014. These Part I violent crimes are typically categorized as murder, aggravated assault, and robbery, based on the FBI Uniform Crime Report Coding Scheme guidelines (DCJS, 2018).

The GIVE initiative incorporates the problem-oriented approach that is implemented by law enforcement officials in order to deal with the issue of gun violence. It also features a focused deterrence and public health-related activities in order to reduce the incident of gun violence within the city of Rochester while providing alternative for high risk youths and young adults to help steer them away from gun-related violent activities (DCJS, 2018). Some of the strategies that the GIVE initiative incorporates include identifying and working with these high-risk individuals/youths in case management, conducts youth outreach and conflict mediation sessions, supplies referrals to local agencies, and help improve police-community relationships (DCJS, 2018).

My objective is to identify if there is a significant decrease in gun violence-related crimes within the city of Rochester by measuring the amount of recorded violent crimes in the city

EVALUATING THE IMPACT OF GIVE INITIATIVE WITHIN THE CITY OF ROCHESTER

before and after the GIVE initiative was first implemented. For the purpose of answering the question of whether an overall impact of the GIVE initiative on specific types of firearm-related crimes can be measured within the city of Rochester, I utilize multiple time series analysis models in order to observe statistical trends in gun violence before the program was implemented and then after it was implemented. A multiple time series analysis utilizes more than one time-dependent variable and measuring them through various points in time to help forecast possible future outcomes of policy implementation. This method is also helpful in dealing with more complex issues that cannot be ascertained with a comparison of just a single variable during a specific time period.

Specifically, I used this model for observing crimes related to murder, aggravated assault, and robbery that are defined by the FBI Uniform Report Coding scheme used by the RPD open data portal the recorded incidents of fatal and nonfatal incidents within the Rochester city district before (3-4 years before GIVE was implemented in 2014) and after implementation (2-2 ½ years after GIVE was implemented on July 2014). I also created a matrix count of the number of shootings reported within the six POP areas in order to observe reported shootings within these areas since they are designated as spots where gun crime is most likely to be clustered. These hot spot areas were created through GIS mapping software in order to characterize and implement tactics and problem-oriented strategies within these areas that are the site of most reported gun violence activity and crime in the city of Rochester (GIVE Story Map, n.d.).

Study Setting (Rochester, New York):

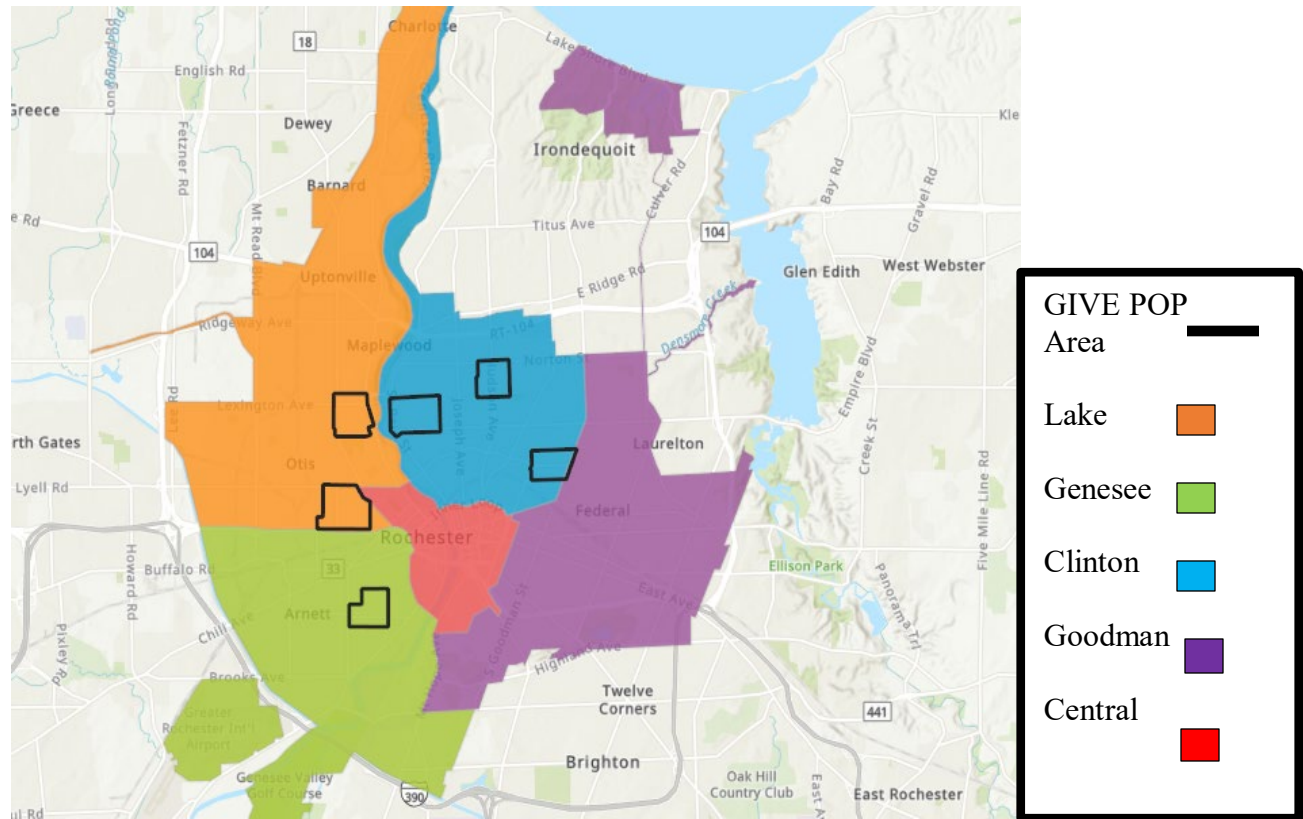
Monroe County has an estimated population of around 747,000. The recent estimated population within the city of Rochester is about 206,284 people (US Census, 2018). When

EVALUATING THE IMPACT OF GIVE INITIATIVE WITHIN THE CITY OF ROCHESTER

observing the population based on gender within Rochester, females encompass 51.7% of the city population while males represents about 48.7% of the population. Race and ethnicity descriptions show that whites are found to represent 46.6% of the population, blacks/African Americans represent 40.7%, and Hispanics/Latinos represent 17.8%. People living in poverty has been estimated to be around 33.1% (US Census, 2018).

Through the GIVE initiative, RPD works alongside criminal researchers who work for the Monroe Crime Analysis Center (MCAC) and RIT's Center for Public Safety Initiatives (CPSI) in order to create and pinpoint hot spot areas of where gun violence incidents and potential high-risk offenders might be located. These sites are used as reference spots for further data analysis that can be used to evaluate and improve police and community collaboration efforts and strategy effectiveness (GIVE Story Maps, n.d). Past research has shown the significant impact of "hot spot" mapping tactics within law enforcement tactics and how its benefits police in establishing relationships with criminal analysts to place-based policing strategies (Braga, Papachristos, & Hureau, 2012; Braga & Schenell, 2013). Figure 1 represents an GIS map created using ArcGIS of the city of Rochester which 6 different POP areas pinpointed within the city layout.

Figure 1: Map of the City of Rochester and POP areas



Methodology:

This analysis will be composed of implementing a pre/posttest quasi-experimental time series analysis method in order to determine the impact of the GIVE initiative within the city of Rochester based on a pre and posttest of basic trends. I also implemented count frequency table graphs in order to display the number of shooting incidents (shooting and/or homicide) within each POP area to determine if they increased or decreased. In order to conduct a time series analysis using single interrupted time series and multiple interrupted time series analysis, I used both Microsoft Excel and IBM SPSS in order to aggregate the number of criminal shootings and violent crimes that are performed using a firearm within the five Rochester city sections (Central, Clinton, Genesee, Lake, and Goodman). These methods have been used mainly to determine the

EVALUATING THE IMPACT OF GIVE INITIATIVE WITHIN THE CITY OF ROCHESTER

effectiveness of law enforcement and community prevention programs within a given time period while also taking in to account other causal factors that might explain a decrease or increase in certain outcomes of interest that might or might not be attributed to the activities performed by the program (Biglan, Ary, & Wagenaar, 2000). Utilizing time-series analysis allows researchers to pinpoint certain periods where the program may have had an even bigger effect on the number of violent incidents or violent offender behaviors to help estimate what other factors may have impacted an increase/decrease in trends of gun violence (Maxfield & Babbie, 2018).

Data:

Most of the data that was analyzed in this project was taken from the Rochester Police Department's Open Data Portal. The measures that are of interest in this study are the amount of counts in firearm-related homicide, aggravated assault with a firearm, and robberies committed through the use of a firearm. These outcome variables were taken from RPD's record of Part I crimes committed between January 2011 to December 2017 in order to determine which violent Part I crimes were committed while using a firearm to establish if GIVE had any effect on violent crime within the years after implementation. Other outcome variables also included fatal and non-fatal shooting incidents/victims. This data was collected in order to calculate the total number of shootings reported before implementation and afterwards to estimate a decrease or increase in crimes involving firearms.

The original goal of this project was to acquire a comparison group with similar features towards the treatment group (the city of Rochester) in order to establish if the program actually is effective or not. The problem that I faced, however, was that there wasn't an easily discernable county or city that I could use to compare with the city of Rochester due to other cities such as

EVALUATING THE IMPACT OF GIVE INITIATIVE WITHIN THE CITY OF ROCHESTER

Buffalo, Syracuse, and Albany already implementing the GIVE program within their jurisdiction, meaning it would be invalid to use them as comparisons (DCJS, 2018). Because of the focus of the GIVE initiative being centered within the city of Rochester and with the targets mainly focused in concentric zones that cannot be easily compared to other neighboring zones within the city or other New York counties, the only option was to provide a subjective overview of the firearm shooting trends within these areas within a given time period in order to determine if gun violence was impacted after the initiative was implemented. This can help with further explaining perhaps why gun violence went up or down after GIVE was initiated and whether other factors may have been influential on the perceived effectiveness of the program.

Analysis Strategy:

The first step of the analysis was to construct an interrupted time series graph displaying the total number of shootings reported between 2011 and 2017. The reason why I decided on this time frame is because the GIVE initiative wasn't officially implemented until July of 2014. With most time series analysis measuring the impact of social program/policy on crime, they provide a better efficient method of analyzing trends within violent crime in which it is easy to influence the independent variables and helps provide researchers the chance to measure the effect of an intervention repeatedly during certain points in time (Biglan et. al., 2000). The graph was constructed through the use of Microsoft Excel which dealt with recording reports of shooting incidents that were identified based on whether the victim(s) were killed or injured during each case. In order to discern incidents from the "multiple shooting" categories, I went through the data and counted each incident involving more than one victim and reported it as one singular incident.

EVALUATING THE IMPACT OF GIVE INITIATIVE WITHIN THE CITY OF ROCHESTER

The second step involves performing another time series analysis using IBM SPSS in order to compare sectional reports of gun violence (fatal/nonfatal) between the given timeframe of 2011 to 2017. This is important when observing whether the implementation of the GIVE initiative in July of 2014 had perhaps a noticeable impact on trends in firearm-violent related crimes. I measured for certain violent crime outcomes that were considered Part I violent crimes, which in this case was murder, aggravated assault, and robbery. An additional filter was used to discern if these incidents used a firearm during the commission of a crime. The indicator variables were based on the month and year of reported incidents, with dummy variables being implemented to distinguish dates that occurred before implementation (phase = "0") and after implementation (phase = "1"). Dummy variables are used to discern between incidents before and after GIVE was implemented to observe any significant variation between reported shooting incidents.

The final step of this project was to record the reported incidents of shootings within the six POP areas and determine whether the activities and strategies performed by law enforcement in the city of Rochester had any effect on individual propensity to commit firearm shootings in these areas. A matrix was created to determine the count of total number of shootings reported in each area between 2011 and 2017. The average means were then calculated for the 3 years before and the 3 years after implementation of the GIVE initiative in order to compare whether there were differences in shootings when officers started implemented problem-oriented policing strategies within these POP areas. This will demonstrate whether the initiative was able to have an impact within the designated areas based on the reported shootings that are counted and if the presence of police officers and/or the use of the GIVE-implemented strategies had any effect on gun-related incidents reported in these areas.

Findings/Results:

Figure 2: *Reported Number of Shootings in Rochester, NY (2011-2017)*

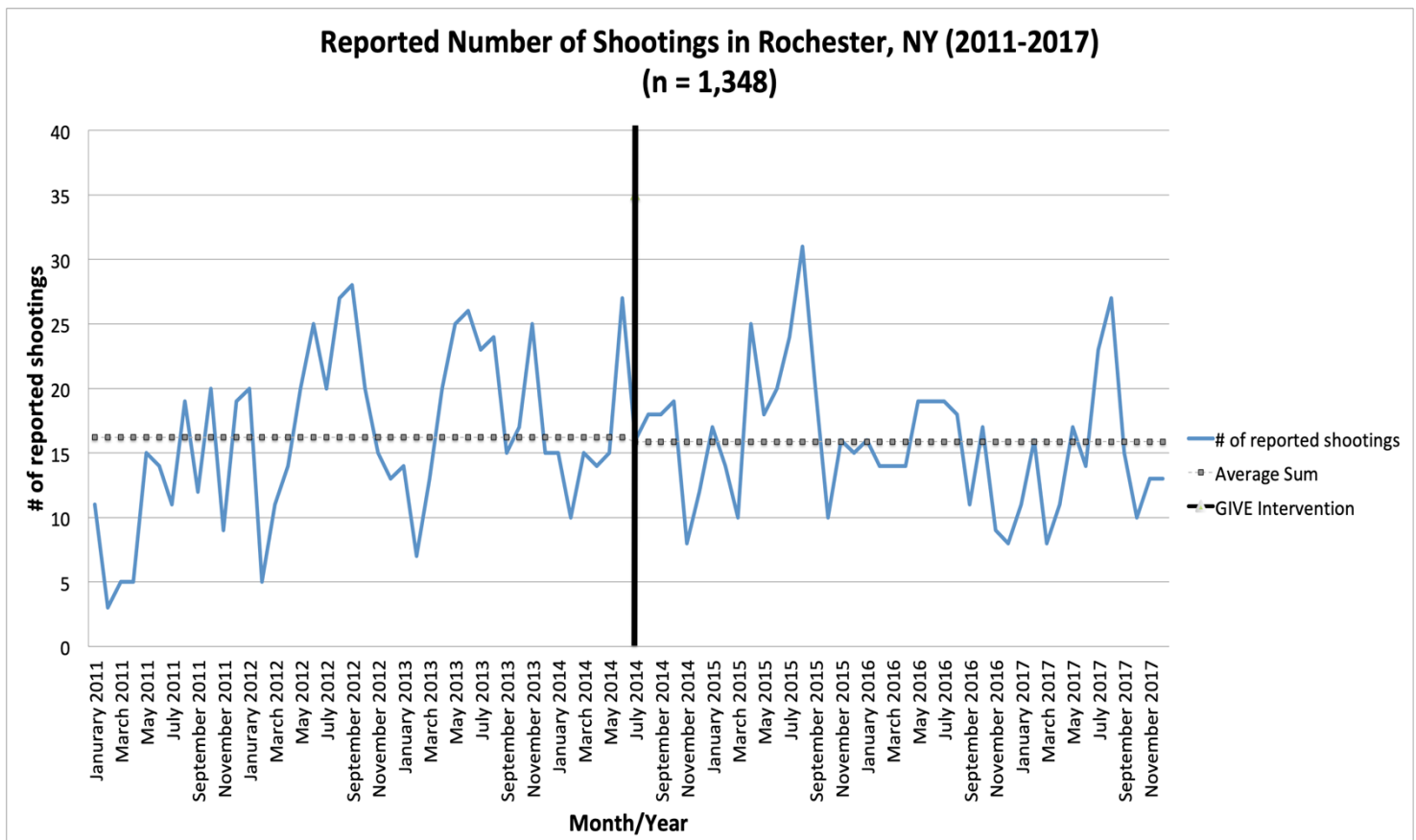


Figure 2 attempts to measure the number of reported firearm shootings that have been reported in the city of Rochester by the Rochester Police Department between the years 2011-2017. The data was taken from the Rochester Police Department open data portal which updates on a daily basis based on the annual reports that are sent by the RPD officer reports of firearm-related incidents involving a victim (fatal and non-fatal). The time series graph was constructed using Microsoft Excel in order to determine whether a trend in the data could be determined between the years of 2011 through 2017. In order to divide the incidents reported into before and after categories, I established that the intervention took place in the year 2014 in order to emphasize the distinction between the two time periods, with the first time period concerned

EVALUATING THE IMPACT OF GIVE INITIATIVE WITHIN THE CITY OF ROCHESTER

with January 2011 through June 2014 and then August 2014 to December 2017. An average sum line was also implemented in this analysis to better estimate whether the trend in gun violence actually increased or decreased after GIVE was implemented.

From this chart, it shows that the number of reported firearm shootings in Rochester decreased somewhat from an average of 16.21 shootings per month before implementation to 15.88 shootings per month after implementation. This represent a one percent decrease in average mean number of shootings before and after implementation. It should be noted that there was a robust increase in the number of shootings during August of 2015 where it was recorded to be around 31 shootings. This increase supports the theory of a rise in crime rates during 2015 being known as the “Ferguson effect”, where it is believed that after the events of Ferguson, police officers became less incline to partake in proactive policing activities which caused citizens and offenders to perceive police activity as illegitimate, causing an increase in crime in 2015 (James, 2015).

Figure 3: Time Series Charts of Firearm-Related Part I Crimes (Murder, Aggravated Assault, and Robbery)

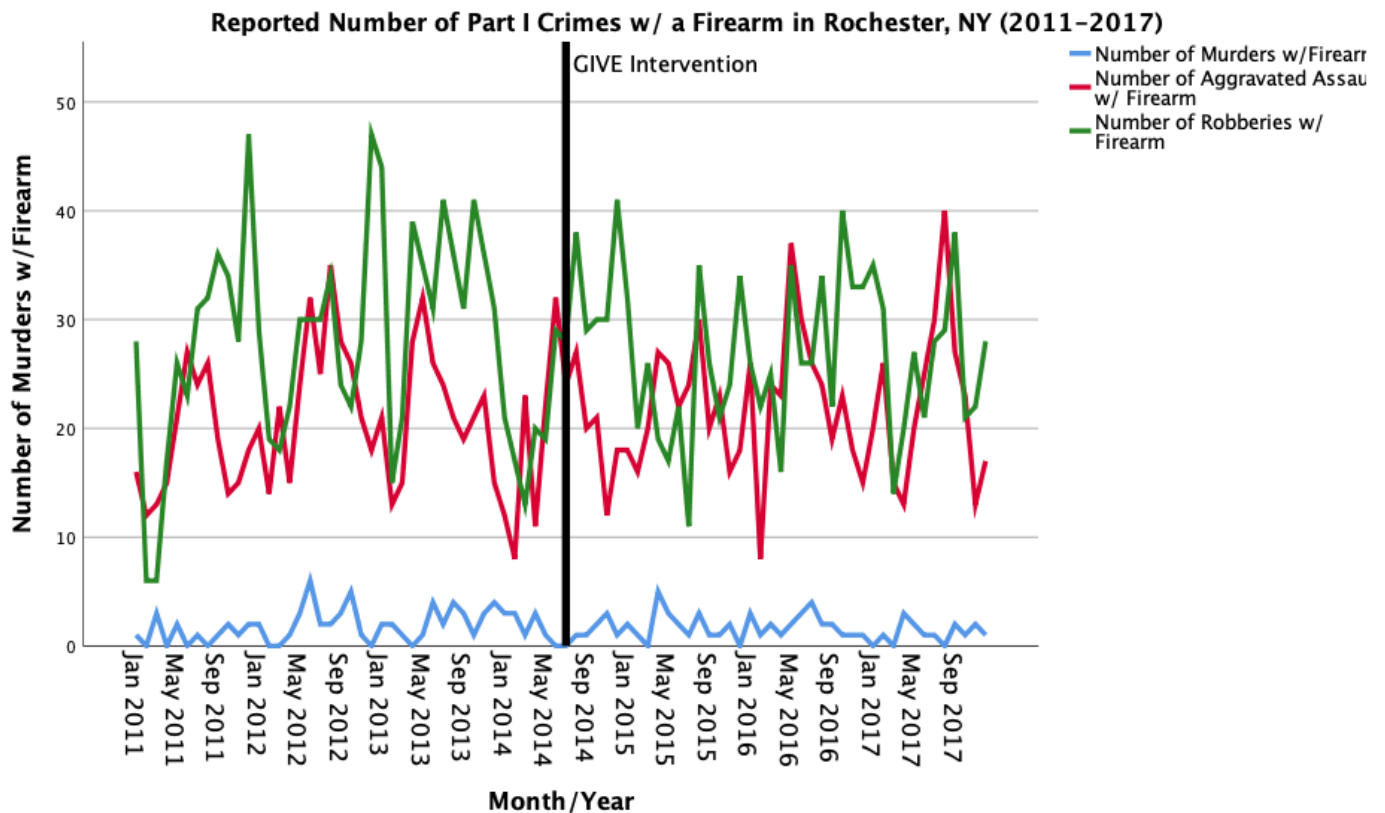


Figure 3 presents a multiple interrupted time series analysis graph of reported UCR Part I violent crimes reported by the Rochester police department between 2011 and 2017 involving the use of a firearm. Specifically, the Part I crimes that were of most interest for this study were murder, aggravated assault, and robbery. One thing to note is that the RPD’s Open Data Portal follows the same guidelines established by the FBI’s Uniform Code Reporting System for Part I violent felony crimes. The time series shows that non-fatal shooting incidents (aggravated assault and robbery) are much more common within the city of Rochester than fatal shooting incidents (murder). This graph also shows that while the count of robberies and murders involving firearms seemed to decrease after implementation, aggravated assaults continued to increase. This presents us with the issue that assaults with firearms are still being committed at higher rates even when RPD officers and stakeholders are implementing focused deterrent strategies to

EVALUATING THE IMPACT OF GIVE INITIATIVE WITHIN THE CITY OF ROCHESTER

make them not want to commit a violent crime. Other efforts such as street outreach and CPTED implementation could be underutilized or not as effective within some areas that witness most gun violence occurrences.

Table 1: POP Areas Reported Shootings Matrix (2011-2017) (n = 289)

Year	Central Park POP Area	Hudson Ave POP Area	Ave A POP Area	Lexington POP Area	Lyell Ave POP Area	Jefferson Ave POP Area	Total per Year
2011	9	8	6	4	5	3	35
2012	5	15	11	7	11	4	53
2013	5	6	7	6	13	11	48
2014	6	8	8	10	5	6	43
2015	7	8	8	10	13	7	53
2016	5	4	8	3	4	7	31
2017	6	2	4	1	7	6	26
Total Shootings	43	51	52	41	58	44	
<i>Mean # of Shootings (2011-2013)</i>	5.25	8.25	6.5	5.5	8.0	5.0	
<i>Mean # of Shootings (2014-2017)</i>	5.5	4.5	6.5	4.75	6.5	6.0	

Table 1 presents the reported count of firearm shootings reported within six given POP areas established by GIVE practitioners between 2011 and 2017. This is in order to determine

EVALUATING THE IMPACT OF GIVE INITIATIVE WITHIN THE CITY OF ROCHESTER

whether efforts and strategies implemented by law enforcement and community partners within the city of Rochester have actually had an impact in reducing firearm-related crimes within these constructed areas of interest due to their proximity to clusters of shootings. When comparing the means between pre-intervention and post-intervention periods, the POP area that seem to show a the most drastic decrease in shootings was in the Hudson Avenue POP area where it lowered from 8.25 shootings to 4.5 shootings after implementation of GIVE. While Lexington and Lyell Avenue POP areas also displayed a decrease in shootings before and after, the same can't be said for the Central Park and Jefferson Avenue POP areas due to the fact that the average mean of shootings actually increased after 2014 while Ave A remained stagnate (n (mean) = "6.5").

Discussion:

The purpose of this capstone was to determine whether the GIVE initiative has had any impact on reducing firearm shootings and violent crime involving the use of a gun within the city of Rochester. Particularly, the project was aimed at answering if trends in fatal and non-fatal shootings within the city of Rochester either increased, decreased, or remained within the mean after the program was implemented. From what these time series charts have shown, it would seem that the GIVE initiative varies in how much of an impact it has on certain violent crimes involving the use of a firearm. Time series analysis that were conducted on the reported number of total shootings within Rochester seem to demonstrate that some accounts of firearm incidents did decrease when the initiative was first initiated. However, the evidence does not present an overall positive impact of the GIVE initiative on gun violence rates. In fact, it might have had adverse effects on certain neighborhoods and could have caused crime to displace to other areas in the community.

EVALUATING THE IMPACT OF GIVE INITIATIVE WITHIN THE CITY OF ROCHESTER

It is important to take point of the limitations of this analysis, the first one being the threats of internal validity that come with using a single-group time series analysis. My question only revolved around deterring whether gun violence levels in the city of Rochester had decrease significantly after the GIVE initiative was implemented, and while the usual steps of avoiding threats to internal validity is to compare these results to a comparison/control group, it was impossible to do so in this case. This is because of the difficulty of determining an exact comparison of the city of Rochester to other cities that have almost the same population amount within a given year. While there were attempts to use comparison areas/cities to use with the treatment area of Rochester, New York between 2011 to 2017, issues with exact population estimates, racial demographics, and income levels prevented me from using such methods. There is also the issue of historical events such as the Boys and Girls clubs shooting perhaps exaggerating the actual shooting incident rates within each given year in Rochester (Biglan et. al., 2000; Craig & Lahman, 2017).

Conclusion:

While the results of this impact evaluation may be limited, it still helps us to understand more about what effects these police-community collaboration programs can have on actual violent crime being performed by high-risk offenders. While this quasi-experiment might not have been definitive in answering the question of if the program had a particular influence on gun violence incidents based on strategies and activities implemented, the evidence still leads to possible benefits of the GIVE initiative within the city of Rochester. This also supports the growing body of evidence that the more targeted and specific the strategies of the police are to certain individuals or areas of interest, the more effective the police will be able to control crime

EVALUATING THE IMPACT OF GIVE INITIATIVE WITHIN THE CITY OF ROCHESTER

and disorder (Weisburd & Eck, 2004). Further research should continue demonstrating if program activities such as call-in meetings, custom notification, and GIVE orientation meetings had any sort of significant impact on any reductions in gun violence that are reported. It is still worth law enforcement and community investment in implementing these evidence-based policing strategies while coming together in determining what factors need to be addressed in helping to establish effectiveness of the program.

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