

An Evaluation of the Problem-Oriented Policing Program in Attleboro, MA

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Abstract

In recent years, there has been a shift in police focus from one of reactivity to proactivity (Maguire, Uchida, & Hassell, 2015). Police are no longer trying to focus on response times to citizen calls for service, but are trying to look at the heart of the problem and attempting to address the root cause of a problem rather than just reacting to it (Ozkan, 2016). This approach, called problem-oriented policing, or POP, was first described by Goldstein in 1979, and involves the use of the SARA model to identify overarching problems in a jurisdiction using data driven methods. A key component to this model is to evaluate whether or not these employed strategies are working to address the identified problems. There have been many agencies that have used this approach since its onset, and Attleboro Police Department, of Attleboro, Massachusetts is one of them. However, since its official inception in 2014, there has been no evaluation of the POP efforts. Therefore the purpose of this research is to fill this gap by evaluating the strategies of the Attleboro POP Unit to determine the outcomes. As there were many data limitations, this was an exploratory study, and it was found that the POP Unit has met the objectives outlined by the Chief, has shown a decrease in calls for service in problem locations, and has increased trust within the community of Attleboro. The paper concludes with recommendations to further enhance the success of this unit for future endeavors.

Introduction

A common misconception of policing agencies stems from the very method of control used to effectively carry out the work they do- which is to enforce the law (Goldstein, 1990). However, the overall goal of the police department, as reported by Eck (2014), is to reduce problems in an area that have arisen based on the fact that some individuals or institutions have failed to do what they should have been doing. This can become a large burden to bear on the police department as it is the only government agency with a twenty-four hour a day, seven-day a week responsibility to the public. Thus, the array of duties of a police department can take the majority of time and resources, leaving little left towards dealing with actual criminal behaviors (Scott, Eck, Knutsson & Goldstein, 2008). In addition, as urban population centers and suburban areas expand, so does the need for police services by a wider array of individuals, groups, and businesses. Unfortunately, dwindling or level-funded police department budgets over the same time frame have left departments across the nation limited in manpower and resources while attempting to provide a higher level of protection and services. This predicament is one of many factors that has sparked a change in focus from reactive policing to proactive policing. Officers could no longer afford to run from location to location, applying temporary fixes to a situation then only to respond back to the original location for the same problem(s) days, weeks, or possibly months later. Permanent solutions were needed rather than focusing on temporary ones. In addition, the police role itself has started to be dissected out and unraveled in order to explore other options for handling ongoing problems in communities. Rather than focusing solely on the law, one of the roles of policing agencies is to develop the most effective means to handle the problem in conjunction with the law (Goldstein, 1990).

In response to this shift, there have been multiple strategies developed that use data analysis, crime theory, and sociological theory to address these on-going issues. These different strategies include Community-Oriented Policing (COP), Problem-Oriented Policing (POP), Hot Spot Policing, Intelligence-Led Policing (ILP), and Computer Statistics (Compstat). These strategies allow policing agencies to shift their focus from being reactive, predominantly responding to calls for service, to being more proactive, using different strategies to reduce the frequent problems, thus reducing the calls for service. The Attleboro Police Department, of Attleboro, Massachusetts, is one such police agency that has engaged in one of these proactive

strategies, specifically POP, in order to maximize the effects of their limited manpower and resources.

Overview of Attleboro

The city of Attleboro is located in the south east of the state of Massachusetts, near the border of Rhode Island. Its land area covers 26.81 square miles, and, based on the United States Census for 2010, the estimated population of Attleboro is 43,593, making the population per square mile 1,626.1. The demographic breakdown of Attleboro as of 2010 was 84% White, 3% Black or African American, 6.3% Hispanic or Latina, and 2.2% mixed races (2 races or more). The economy of Attleboro is strong, and has a socio-economic status of middle class families with a mean household income of \$67,736 reported in 2015, and the per cent of persons living below the poverty line is 10.1% (US Census Bureau, 2016).

The predominant crime in the city of Attleboro from 2008-2016 is simple assault, disorderly conduct, domestic incidents, vandalism, breaking and entering, shoplifting, and other forms of larceny. Table 1 consists of general crime categories in order to demonstrate an overview of the crime in Attleboro. These categories are broken down by the FBI's UCR definitions of crimes against the person, property, and society (NIBRS, 2012). The majority of crime in Attleboro is property crime as reflected in the higher rates of crimes against property than against the person or society as shown in Table 1 below.

Table 1: Overview of Calls for Service for Attleboro

Crime Type	2008	2009	2010	2011	2012	2013	2014	2015	2016
Persons	591	471	561	691	600	476	529	546	520
Property	1618	1327	1427	1617	1795	1537	1382	1410	1286
Society	1357	1122	1124	1136	1082	998	945	950	1035
All Other	336	346	244	290	379	694	718	614	225
Total	3902	3266	3356	3734	3856	3705	3574	3520	3066

POP in Attleboro

POP was unofficially initiated in the city of Attleboro in 2011 with the initial goal of addressing the top 10 locations and the top 10 persons for calls for service in order to reduce calls for service, improve community relations, and use the fixed man power of the agency more effectively and efficiently. At this time, the POP officers were plain clothes officers who were focused on the POP initiative, but were still counted towards the minimum man power per shift, and therefore were responsible for responding for calls for service. In 2014, the POP Unit was officially created, taking these officers out of the minimum man power count per shift, thus allowing these officers to focus on POP 100% of their time. It was at this time with the official creation of the POP Unit that the unit began to keep and update case notes. There have been four distinct POP Unit commanders since the official start of the unit in 2014, one of whom has served in this position twice since the unit was officially formed. The POP Unit was primarily staffed with three officers between January 2014 and September 2015. From October 2015 through June 2016, there were only 2 officers assigned to the unit. There was only one officer, a Unit Sergeant between July 2016 and January 2017. The unit was brought back up to a full complement of 3 officers by February 2017. It should be noted that there were no notes kept for the POP Unit activity during this period of time. In addition to the notes kept by the POP Unit, Compstat was introduced to the city of Attleboro Police Department in 2013, and the POP Unit also kept notes for and contributed to this process.

Since the onset of the POP strategy, however, there has not been any evaluation or analysis as to whether or not this unit has met its specified goals. Therefore, the purpose of the present study is to fill this gap, to determine whether or not the POP Unit has been effective since its onset, and to determine if the strategy is working towards reducing calls for service, reducing crime, and identifying what further contributions this unit has made to the city of Attleboro.

Literature Review

Problem-Oriented Policing

Problem-Oriented Policing (POP) is an approach to policing that was introduced in the late 1970's in order to improve the overall effectiveness of policing (History of Problem-Oriented Policing, 2017). The POP approach was first outlined by Goldstein (1979) and Wilson and Kelling (1982) (Maguire, Uchida & Hassell, 2015), and marked a shift from policing that was focused on reactivity to policing that is focused on proactivity. In other words, according to POP, rather than focusing on response times and police reaction to citizen calls for service, police agencies should be "identifying and solving the problems that generate excessive calls" (Goldstein, 1990; *as cited in* Maguire, Uchida & Hassell, 2015; p.3). By identifying these problems, police agencies can then address these problems using different strategies, rather than just reacting to them repeatedly (Ozkan, 2016). By focusing on the problem rather than the calls for service, the root cause of the issue is addressed, and the repeated calls for service around this problem should no longer be a drain on the manpower of the police agency. This will allow for department's manpower and other resources to be used more efficiently and effectively across the police jurisdiction to better deal with more acute issues.

The main method of implementing POP is through the use of the SARA model (Eck & Spelman, 1987; Gill, Weisburd, Telep, Vitter, & Bennett, 2012). This model outlines how problems are to be identified and addressed through the use of scanning, analysis, response, and assessment (SARA). Officers employing this model work diligently through all four of its stages with the goal of reaching a successful resolution to the problem that has been identified.

Officers would first begin the problem solving process by scanning the data and environment in order to identify a problem in their jurisdiction. Officers not only need to identify the problem, but they also have to determine the nature and scope of the issue at hand along with establishing what should be a baseline measurement for the identified problem (Braga, 2002). Problems can be brought to the department's attention through a variety of means such as anonymous citizen complaints, officer observations, data analysis, and frequent calls for service.

Once it has been established that a problem exists, officers can then move on to the second stage of SARA, which is referred to as the analysis phase. Analysis is considered the very

heart of the problem solving process with the set objective of understanding the dynamics of the problem being presented before them. This also requires a good understanding of the nature of the problem as well as crime theory so that officers can see how the two come together to facilitate the crime itself (Ozkan, 2016). The Center for Problem-Oriented Policing (The SARA Model, 2017) recommends that the analysis phase should include identifying the conditions that led up to the problem. Officers should perform research from various sources on what is known about the identified problem, and they should have a good understanding of how the department is currently addressing the issue in terms of what is working and what is not. When narrowing down the scope of the selected problem, officers need to be as specific as possible, and, in addition, officers should identify resources that may be helpful in understanding and remedying the situation. When all of the above has been completed, officers should complete this phase by developing a working hypothesis about why the problem is present (The SARA Model, 2017), thus allowing them to provide a strong platform for the next stage of the SARA model.

The third stage of the SARA model is the response phase. Many academics consider this to be the most challenging phase of the SARA process for police officers as it tests the resourcefulness, ingenuity, and determination of those officers assigned to POP tasks (Bullock, Errol, & Tilley, 2006; Clarke, 2002; Scott, 2000; Weisburd, Telep, Hinkle, & Eck, 2010). POP procedure explains how officers need to reshape their thought processes and think beyond the bounds of the traditional standard policing model using non-traditional policing methods to problem solve. In fact, Goldstein (2003) suggests that POP is dependent on new, original strategies that are more preventative, that involves multiple agencies, and are not centered around the criminal justice system. Officers, therefore, should cultivate and implement strategies that follow up on the initial analysis and are tailored to the specific and unique problem at hand (Eck & Spelman, 1987). The overall goals of the response can range from totally eliminating the problem to reducing the amount of harm that it causes.

The fourth and final phase of the SARA model is the assessment phase, and is considered the most crucial step in the POP process (Braga & Bond, 2008). The purpose of this assessment phase is to measure the success (or failure) of the response strategy that was implemented for a particular problem. It provides the department with the feedback of what works (or does not work) with a particular problem in their jurisdiction. This knowledge can then be used again in the future for similar problems. If the applied response is determined to be ineffective in

achieving its desired result, then it is the duty of the POP Unit to go back into the analysis phase of the SARA model and reassess the data and the information present to propose new strategies for addressing the problem successfully. The POP Unit will then continue on through the response and analysis phases of the SARA model again until they have reached a desired solution to the identified problem. Sidebottom, Tilley, & Eck (2012) advocate the use of checklists during the different stages of the SARA process in order to help streamline these steps and keep officers from straying from the original goal and focus.

Definition of a POP Problem

A general lack of agreement has plagued the academic community for several decades on what exactly constitutes a problem worthy of police attention. Ozkan (2016) defines a problem as "...the collections of incidents that form the underlying conditions which create or increase crime and disorder" (p. 2033). Cordner & Biebel (2005) claim that "[p]roblems are defined either as collections of incidents related in some way (if they occur at the same location, for example) or as underlying conditions that give rise to incidents, crimes, disorder, and other substantive community issues that people expect the police to handle" (p.156). Conversely, Goldstein (1979) describes numerous ways in which using crimes to define problems can fail to capture to nature of the problem itself. Instead, he suggests that problems need to be very clearly and precisely defined. This is supported by Scott (2000) who finds that precision and clear focus are paramount to defining problems, otherwise the police run the risk of adopting broad, ineffective responses.

Another suggested method used to assist in problem identification is the CHEERS test, which draws attention to the six elements believed to be part of a problem: Community, Harm, Expectation, Events, Recurring, and Similarity (Clarke & Eck, 2005). This test requires the user to ask six basic questions in order to complete the scanning phase of the SARA model. First, who in the community is affected by the problem? Second, what are the harms created by the problem? Third, what are the expectations for the police response? Fourth, what types of events contribute to the problem? Fifth, how often do these events recur? And finally, how are these events similar? (Clarke & Eck, 2005). Not everything that the police are asked to rectify is

considered a problem, and the CHEERS test can help identify demands on the police department's resources that are not actual problems.

Some researchers would argue that Goldstein's original POP concept has become diluted over time (Clarke, 2002; Clarke, 1998; *as cited in* Cordner & Biebel, 2005; Cordner, 1998; *as cited in* Cordner & Biebel, 2005; Eck, 2003; Goldstein, 2003; Scott, 2000). While the initial concept of POP as described by Goldstein in 1979 was to focus on citywide problems, the POP model has continually morphed over the last three decades as police departments across the United States have adapted it to fit their needs (Clarke, 2002; Goldstein, 2003; Groff et. al, 2015; Maguire, Uchida, & Hassell, 2015; Weisburd, Telep, Hinkle, & Eck, 2010). Police departments employing the POP approach have not only used POP to tackle broad categories of problems such as underage drinking, domestic violence, or overdose-related incidents, but have also utilized the POP approach more precisely to address problems at a single problem residence. It is here that the academic community has stressed that policing agencies using POP should find some middle ground instead of tackling problems at either extreme (Cordner & Biebel, 2005; Eck, 2014; Scott, 2000).

Problems with POP Implementation

Throughout the academic literature that has been published since the introduction of the POP program, researchers have begun to highlight some common problems observed with the implementation of this program. In general terms, Maguire, Uchinda, & Hassell (2010) state that the two biggest issues with POP implementation are what are referred to as dosage and fidelity. Dosage, according to Maguire, Uchinda, & Hassell (2010), refers to the intensity with which the reform is implemented, whereas the fidelity refers to how the reform matches what was originally put into place at the onset.

On a more specific level, Eck (2010; *as cited in* Sidebottom, Tilley, & Eck, 2012) highlights common issues that can happen at each phase of the SARA process. Problems in the scanning phase include the failure to detect a problem, calling something a problem when it is not a problem, and giving an inaccurate definition of the problem. It is important to note that two of the three issues focus around the ability to define what a problem is, something, as mentioned above, that does not yet have a concrete, solid definition. Issues with the analysis phase include

not conducting analysis, or not conducting sufficient analysis, failure to consult with experts and outside agencies in the problem arena, and not using theoretical framework. Issues in the response phase include failing to address critical aspects of the problem, poor implementation, lack of proper authority based on a lack of multiagency involvement, and having an inappropriate solution as it has not been based on analysis. Finally, issues with the assessment phase include measuring the wrong outcome, experiencing displacement rather than problem solving, having a weak design so the impact cannot be determined, and having a knowledge gap as officers are addressing a new problem that has not yet been experienced (Eck, 2010; *as cited in Sidebottom, Tilley, & Eck, 2012*).

What can further complicate things is that problems can very complex in nature (Eck, 2003), and can therefore be very difficult to address successfully. It is argued that to successfully resolve a problem that was identified, officers would have to move beyond their traditional tools of enforcement and seek out alternative resources and methods in their fight with crime and disorder in their jurisdictions (Goldstein, 1979; Goldstein, Goldstein, & Hill, 1990). In moving beyond the confines of traditional policing methods and engaging with multiple agencies, the complexity of the problem can start to be untangled, allowing for a more successful resolution.

Measuring Effectiveness of a POP Program

There is a wide range of research that has been conducted since the introduction of the POP strategy measuring and testing POP's effectiveness. A review of 97 police evaluation studies conducted by Lum, Koper, &Telep (2011) found that "police strategies are more effective when they are place-based, proactive, and focused" (p.5), all of which are central tenants to the POP strategy. In this study, a strategy was considered effective if it reduces rates of crime and/or calls for service. One of the most convincing studies was published by White & Katz, whom, in 2013, used a random control study to focus specifically on convenience stores that had a disproportionate rate of calls for service in Glendale, Arizona. After identifying these problematic convenience stores, officers worked with management staff to improve the safety and security of the identified locations. This led to a statistically significant reduction in calls for service in these locations compared to the control locations, thus supporting the effectiveness of the POP strategy. Braga et. al (1999) also used a random control design in Jersey City, New

Jersey to evaluate the effectiveness of POP. This group looked at 12 places with high volumes of violent crime, and compared to their 12 matched control areas, found that the focused police intervention of POP successfully reduced the levels of crime and disorder in these areas. Furthermore, it is important to note that they also found that there was no displacement of the violent crime with this focused deterrence method (Braga et. al, 1999). Therefore, not only did POP reduce violent crime and disorder, it did not do so by simply moving it to another location. It can therefore be concluded from this study that when successfully identifying and addressing the actual root cause of the problem, this problem can be diminished and potentially even removed. Conversely, in their RCT experiment in Philadelphia, Groff et. al (2015) found that offender focused sites reflected a decrease of violent crime, whereas POP and foot patrol did not. Although these results are in the minority of studies not supporting the efficacy of the POP program, they should still be taken into consideration.

As mentioned in the above studies, the success of the POP program was measured by calls for service and rates of crime. However, there is no concrete methodology for how to measure the success of a police agency. In fact, there is a disagreement in the definition of “police success” as well as how to measure it. Kennedy & Moore (1995) suggest that crime should not be the sole indicator of success for community policing. Rather, one should look at learning, the involvement of different agencies, and what other contributions the police agency makes to the city (Kennedy & Moore, 1995). It is the current authors’ opinion, that all of the above should be taken into consideration when evaluating the effectiveness of the POP strategy. One of the key facets of the POP strategy is that it will be unique to each individual problem, based on the unique set of variables present in the city and on the city itself. Therefore, to focus in on one standard of measure would be in direct contradiction to the POP philosophy of creating solutions that are custom tailored to each problem. By visualizing the bigger picture and incorporating strategies that involve multiple agencies in order to address problems, officers go beyond the scope of simply using crime rates and calls for service as a measure for success. It is for these reasons that a wide range of measures should be used in order to determine success or failure of a POP program. The goals for which the POP Unit was created should be taken into consideration, as well as the impact on the community, including the involvement of outside agencies and the trust built between the police agency and the community whom it is policing.

As previously stated, there has not yet been any analysis conducted as to whether or not the Attleboro POP Unit has been effective, or has met its goals as outlined at the Unit's inception by the chief of Attleboro Police. Therefore, the aims of the present study are to assess the outcomes of the POP program that was put into effect in 2011 in the city of Attleboro, MA, and to create a set of recommendations to further strengthen this program. As this study is exploratory in nature, there are no hypotheses at this time.

Methods

In order to assess the outcomes of the Attleboro POP program, quantitative methods were used in conjunction with semi-structured interviews conducted with some of the officers who were involved in the POP Unit. Due to data limitations, the current study is exploratory in design, and used content analysis of archival electronic documents that were retained by POP Unit officers between 2014 and 2016 to examine POP Unit activity. Calls for service using archival data obtained from Attleboro's records management system were also examined using descriptive quantitative analyses, and focused on specific people, locations, and overall trends in the city of Attleboro. Although this is not the optimal research design for measuring the outcomes of POP programs (Braga, Papachristos, & Hureau, 2010), the current researchers were not present at the onset of the program, and therefore could not structure a more suitable research design.

Data

Researchers interviewed officers of various ranks within the organization who had involvement with the POP Unit over a six year timespan. These interviews provided researchers with information about how the unit functioned on a daily basis, how targets were identified, the use of data, any challenges that were encountered, and how a problem was considered solved. Researchers also interviewed the chief of Attleboro in order to understand the purpose behind the POP Unit's conception in 2011.

POP Unit officers kept daily logs of activity for the POP projects that they initiated or of the duties to which they were assigned. Officers in the unit compiled more than 215 different

electronic documents, which were comprised of more than 650 pages of notes summarizing the details of 1,059 cases handled by the POP Unit between 2014 and 2016. Further records detailing monthly Compstat meetings were also evaluated as they contained supplementary materials to the monthly logs.

Calls for service were obtained from the Attleboro crime management system. Calls for service data was pulled from QED, the department's record management system (RMS) and computer-aided dispatch system, with the use of Microsoft Access. An open database connectivity interface (ODBC) was initially set up by the original crime analyst and was utilized to access data from the system. Once the data was exported from the RMS into MS Access, calls for service data was filtered by date, selecting all calls between January 2008 and December 2016. The selected information was then exported into multiple Microsoft Excel spreadsheets by year for analysis. Officer initiated calls for service (building checks, EMD, follow ups, field interviews, location monitoring, monitoring, and motor vehicle stops) were removed from this log in order to determine calls for service for each year.

Data Coding

All notes and records from the POP Unit were read and analyzed for content. Each document was read by the data coder, and each person and place that was visited by the POP Unit was recorded into an MS Excel file. A coding dictionary was developed in order to standardize the coding procedure. The coding dictionary was divided into five different sections that examined the scope and type of the problem, how the problem was nominated, what agencies were involved in the process, and how the problem was resolved. Each document was then read again by the data coder, and each person and place that was encountered and/or visited by the POP Unit was recorded. The coder logged into this database how many months during the three year study timeframe that the POP Unit encountered each person and location, the reason for the visit (drug use, shoplifting, high calls for service, frequent offender, etc.), what person or agency brought the problem to the POP Unit's attention, and finally, how the problem solving approach was used to resolve the issue. There were days in the POP Unit notes that were omitted, or very sparse in detail, therefore, in order to control for data coding inconsistencies,

months of contact made with people and locations were recorded rather than each individual contact made.

For the purposes of the present study, records were broken down into 3 groups; 2008-2010 for pre-pop initiation, 2011-2013 for the plain clothes POP officers in patrol, and 2014-2016 for the official POP Unit. The last group, 2014-2016, was the only group where notes were kept for the POP Units activities, as this is the only time period where there was an official POP Unit. It should be noted, however, that there were records kept for only the first 6 months of 2016, and so the time period is only 2.5 years compared to the 3 year span of the other two groups. However, for simplicity, this period will be referred to as 2014-2016.

Analysis

The present research is a content analysis, and therefore descriptive statistics have been used to reflect the patterns and trends within. The top ten individuals and locations were identified by tallying the number of contacts with the Attleboro Police Department from 2014-2016 from RMS data exports. Where possible, in order to determine statistical significance the repeated measures t-test was employed. The repeated measures t-test, or paired t-test, was used as the same population (Attleboro residents) was being tested before and after the onset of the POP Unit. However, statistical methods were limited based on the time points and data that were available. It was not possible to test for significance using the 3 year average for each group 1, 2, and 3, as this violated testing principles rendering them inadequate. When this was the case, trends were explored in relation to the data and the POP Unit's activities. As the data is based on the entire city of Attleboro, it can therefore be generalized to other cities similar in population, area, geography, and socio-economic status.

Results

Overview of Cases Addressed by POP Unit

From 2014-2016 1,059 cases were addressed by the POP Unit. A breakdown of these can be seen in Table 2 below. Case categories ranged from frequent offenders, jail releases, high calls for service, problem locations, and drug activity/addiction. The highest number of cases

addressed by the POP Unit was those that involved drug activity/intoxication/overdoses, representing 20.0% (n=212) of the total cases for 2014-2016. Jail releases were second highest with 18.6% (n=197), followed by frequent offenders (9.0%, n=95), and numerous calls for service and unknown cases both at 7.0% (n=75).

Table 2: Cases Addressed by POP Unit

Cases Addressed	2014	2015	2016	Total
Drug Activity / Intoxication / Overdoses	69	96	47	212
Jail Releases	81	102	14	197
Other	40	40	16	96
Frequent Offender	52	42	1	95
Numerous Calls for Service	18	46	11	75
Unknown / Undefined	44	26	5	75
Domestic Events	32	16	13	61
Noise Disturbances / Parties	28	9	7	44
Traffic Violations / Accidents / Issues	7	7	10	24
Fighting / Assaults	12	8	3	23
Transients / Homeless / Panhandling	4	9	5	18
Parking Congestion / Issues	6	6	2	14
Frequent Reporting Party	4	9	0	13
Neighbor Dispute	3	7	3	13
Abandoned Motor Vehicles	7	3	2	12
Code Violations	11	0	0	11
Shoplifting / Theft	8	3	0	11
Weapon Violations / Shots Fired	3	5	2	10
Loitering / Violation of Park Hours	4	3	1	8
Harassment / Threats	3	3	1	7
Graffiti / Damaged Property	5	1	0	6
Burglarized Motor Vehicles	2	1	2	5
False Alarms	4	1	0	5
Trespassing	4	1	0	5
Fraud	3	1	0	4
Metal Theft	4	0	0	4
Littering / Garbage	2	1	0	3
Unfounded Calls for Service / 911 Hangups	2	1	0	3
Residential / Business Robberies	2	0	0	2
Gang Activity	1	0	0	1
Speeding / Cruising	0	1	0	1
Underage Drinking	0	1	0	1
Grand Total	465	449	145	1,059

However, it should be noted that these trends are not always consistently high in each year. For example, cases involving frequent offenders had 52 and 42 in 2014 and 2015, respectively, but there was only 1 case in 2016. The same trend can be seen for jail releases and unknown cases. Those found at the lower end of the case load tended to be more consistent across all three years, however, this could be a result of the rarity of these cases in the city of Attleboro, and would require further exploration. The “other” category includes cases that were grouped together as they were typically one-time events. Approximately half of these cases involved a patrol assist, when officers would support a responding patrol officer to a service call location for a variety of matters that were outside the realm of the already existing categories. Therefore, the third highest number of cases is frequent offender cases with a total of 95 cases.

Table 3 below displays the scope of the problems that were addressed by the POP Unit from 2014-2016. From this table, it is clear that problems focusing on one person make up the majority of the cases addressed by the POP Unit. With 630 total cases, this makes up 61.0% of the cases for this time period. Groups of two or more people made up 17.9%, and one house made up 6.8% of the total cases of the POP Unit.

Table 3: Scope of Problems Addressed by POP Unit

Problem Scope	2014	2015	2016	Total
One Person	265	300	65	630
Two or More People / Group of People	88	62	35	185
One House	30	31	9	70
One Business	22	24	10	56
Unknown/Undefined	9	11	4	24
One Street / Roadway / Highway	6	2	11	19
Other	9	4	0	13
One Neighborhood	7	3	1	11
One Apartment Complex / Mobile Home Park	8	2	0	10
One Park / Area within Park	5	3	1	9
Multiple Businesses	4	1	1	6
One Intersection	3	0	3	6
Shopping Mall / Strip Mall	3	2	1	6
Citywide	3	2	0	5
One School	3	1	0	4
Parking Lot	0	1	3	4
Weapon Violations / Shots Fired	0	0	1	1
Grand Total	465	449	145	1,059

How Cases/Targets were Nominated for Attention

Table 4 below shows the breakdown of how problems were brought to the attention of the POP Unit. Police data is used by the POP Unit in 55.6% of the cases. However, this can mean a wide variety of sources including calls for overdoses, calls for service for people and locations, and crime analysis reports. The role the crime analyst played in the POP Unit's activities is unclear as there were conflicting reports from different sources. However, officers reported that they used weekly reports put out by the crime analyst for Attleboro PD. Officers also responded to calls for all overdoses, reaching out to the victims whether or not they had overdosed previously. Both of these practices could potentially inflate the use of police data numbers giving the impression of a strong analytic component when this may not have been the case. Police personnel nominated 18.6% (n= 196) of problems addressed by the POP Unit.

Table 4: Breakdown of Case Nomination from 2014-2016

Case Nomination	2014	2015	2016	Grand Total
Police Data	210	292	87	589
Police Personnel	115	56	25	196
Unknown / Unclear	53	23	9	85
Neighbors / Residents	36	14	5	55
Police Command	28	25	2	55
MyPD App / Tip	2	16	12	30
City Department	4	6	1	11
Apartment / Mobile Park Managers	5	3	2	10
Other	3	6	1	10
Information from Elected Officials	5	4	0	9
Business Owners / Employees	3	3	1	7
School Officials / Employees	0	1	0	1
Weekly Reports / Statistics	1	0	0	1
Grand Total	465	449	145	1,059

How Problems Were Addressed

Table 5 below shows the different strategies used to address each problem from 2014-2016. There are 570 cases where two strategies were used, 177 used three, and 57 used four different strategies to address the problem. Therefore, it is important to note that the numbers in

Table 5 reflect this use of multiple strategies, and will therefore be greater than the total number of cases for each year.

Table 5: Case Strategies Employed by POP Unit from 2014-2016

Case Strategy	2014	2015	2016	Total
Make Contact w/Complainants / Problem Persons	178	193	67	438
Checks on Probationers / Parolees	88	106	23	217
Provide Crisis / MH Transport / Service	136	68	7	211
Field Interview Reports / Monitoring	111	44	16	171
Assist Patrol	94	49	25	168
Verbal Warnings	55	58	9	122
Eviction / Removal of Problem Tenant	23	77	15	115
Attempted / Executed Warrants / Arrests	55	35	6	96
Targeting Known Offenders	29	26	1	56
Enforce City Codes	21	14	6	41
Increased / Stricter Enforcement / Zero Tolerance	23	5	8	36
Environmental Changes / Eradication	12	12	3	27
Surveillance	16	6	3	25
Provide Education to Businesses / Schools / Citizens	18	3	1	22
Attend / Organize Monthly Meetings	12	2	0	14
Other	5	6	1	12
Trespass from Business	0	11	1	12
Implemented New Procedure / Changed Routine	6	4	1	11
Directed Patrol	7	2	1	10
Decoy Cruiser	2	5	1	8
Foot / Bike Patrol / Knock and Talk	6	1	0	7
Use of Technology (Cameras, etc.)	4	3	0	7
Increase Number of Signs	6	0	0	6
No Response/Resolution	0	5	1	6
Prosecution / Enforcement Authorization Letter	2	1	0	3
Intended Response Never Implemented	0	0	0	0
Mark / Tow / Impound Abandoned Vehicles	0	0	0	0
Provide Information to Officers	0	0	0	0
Total	909	736	196	1,841

From Table 5 above, the most frequently used strategy by the POP Unit was to make contact with complainants and/or problem persons. This strategy was used 23.8% (438 times) in the time period between 2014 and 2016. The second most used strategy was checking on

probationers and parolees used 11.8% (n=217) followed by providing crisis/transport/service 11.5% (n=211). It should also be noted that the POP Unit never provided information to fellow officers during this time span, which can call into question the communication between the POP Units and the rest of Attleboro PD. If the POP Unit did engage with follow officers, then this was not recorded on paper.

Further, from this table it becomes clear that the POP Unit also relied heavily on traditional policing strategies to problem solve, with very little involvement of outside agencies used within these problem solving strategies. Exploring this further, Table 6 shows the breakdown of the agencies that were used to facilitate the POP Unit response.

Table 6: Agencies Involved in POP Responses

Agencies Involved in POP Response	Total
Police Department Specialized Units	1,015
BC Sheriff's Office	197
City Department (Fire Department, Elder Services, Code Enforcement)	60
Landlord	37
Other	37
Business Owners / Managers	29
Courts - Judges / Prosecutors City Attorneys	28
Apartment Complex / Mobile Home Managers	27
Home Owners / Residents	25
Business Employs	7
School Faculty / Staff	2
Total	1,464

The most commonly used agency in the POP Unit's problem solving response was the Attleboro Police Department specialized units. This was used 1,015 times, and was used more often than all other agencies combined. The Bristol County Sheriff's Office was the agency used the next highest, which is also a policing agency, at 197 times. This is a very large gap between the first and second highest used agencies, also reinforcing the sole dependency on the Attleboro PD throughout these cases. Further, only 183 cases of the 1,059 (17.7%) used more than one agency in problem solving.

Overall Calls for Service

In order to further explore the activity of the Attleboro POP Unit, calls for service were examined in relation to problem locations, problem individuals, and problem types. Table 7 shows the overall calls for service in Attleboro from 2008-2016.

Table 7: Calls for Service in Attleboro

	Pre-POP Group 1			POP in Patrol Group 2			POP Unit Group 3		
	2008	2009	2010	2011	2012	2013	2014	2015	2016
*Calls for Service	23,917	21,452	21,734	23,028	23,386	21,101	20,642	22,553	20,790
Average	22,368			22,505			21,328		

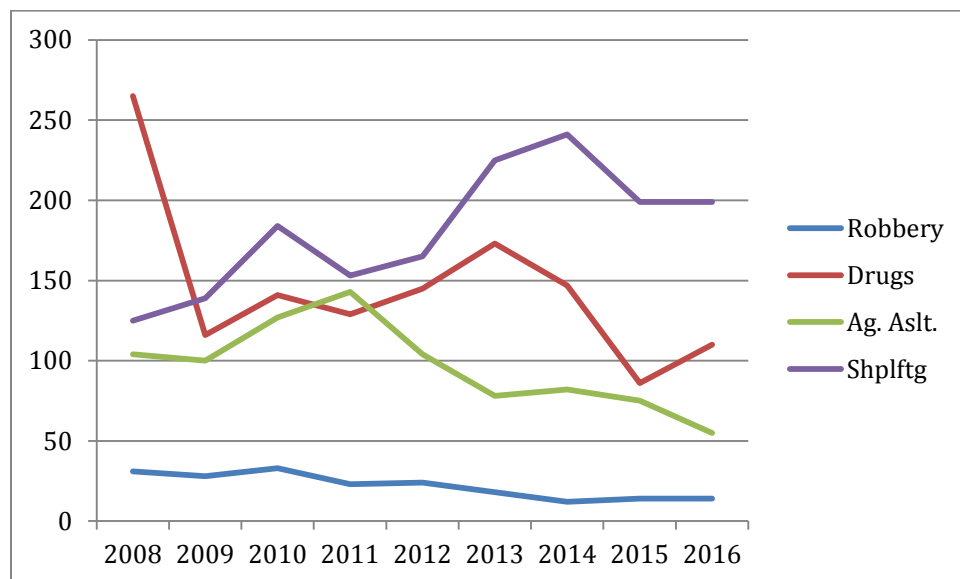
*Calls for service does not include officer initiated calls

From Table 7, the calls for service in Attleboro since the onset of the POP program has remained consistent. Although the data does not allow for statistical testing, it is being hypothesized that there would not be a statistical difference between the three groups of time periods, and any fluctuations are negligible. However, it is important to note that there are many other factors that influence the calls for service in Attleboro. Therefore, regardless of whether or not there is an observed statistical significance in calls for service trends, further regression analysis would be required in order to determine if these results were a direct result of the POP Unit *only*.

POP Focused Crime

As reflected by the POP Unit's notes from 2014-2016, the POP Unit focused heavily on drug offenses (overdose victims, drug distribution and sales), shoplifting, and releases from correctional facilities. While drug and shoplifting crimes are straightforward in terms of measurement, people who are released from correctional facilities can engage in a wide range of crime. Therefore, robbery and aggravated assault were chosen to be represented in this data set below in order to focus on the most violent types of crimes against the person. Figure 1 below represents the trends of these four types of crime from 2008-2016 and is based on the NIBRS reported crimes for the respective years.

Figure 1: POP Focused Crime Patterns from 2008-2016.



From Figure 1 above, it is shown that there is a decrease in drug crime, aggravated assaults, and robbery; whereas there is an increase of shoplifting offenses. As stated previously, these results should be interpreted with caution, as there are many factors beyond the POP Unit that can contribute to these trends. The increase in shoplifting, for example, could be a result of an increase in reporting of these types of crime by retailers or by the adoption of a zero tolerance arrest policy.

Calls for Service for POP Targeted Individuals

In order to examine the trends in calls for service for persons identified by the POP Unit, each individual was ranked by the number of months the POP Unit had contact with them. The top 30 of these individuals were included in this current analysis in order to best capture the effects of the POP Unit. Because the range of months for all contacts was so wide (3-27), it was thought that the influence of the POP Unit on the individuals at the lower end of the range would be minimal, and may potentially mask any patterns or trends that might be apparent in the data. Therefore, only the top 30 individuals were used in this analysis. The range for the analyzed sample (n=30) was 10-27 months, with an average of 13.27 months, and a median of 13 months. Table 8 below reflects the reasons why the sample was in contact with the POP Unit.

Table 8: POP Unit Contact with Top 30 Individuals

Reason for POP Contact	Frequency
Drug User	10
Frequent Offender	8
Release	5
Recent Activity	4
Frequent reporting party	2
Overdose	1
Grand Total	30

As indicated by Table 8, there were 10 drug users among the top 30 individuals, 8 frequent offenders, and 5 releases. This is consistent with and accurately reflects the focus of the POP Unit. Using a two tailed, paired sample t-test to explore any differences between calls for service for these individuals both before and after the onset of POP (comparing groups 1 and 3), it was found that there were significantly higher calls for service after POP initiation ($t=2.06$, $df=29$, $p=0.00$), contrary to what one would expect if the POP efforts were successful. However, it should be noted that these CAD involvements include this person as a victim, involved party, reporting party, and offender, and may therefore not reflect criminal activity per se. Only group 3 was compared to group 1 in order to capture the differences between not having a POP Unit and having a fully independent POP Unit.

Calls for Service for POP Targeted Locations

The same analysis was then conducted on the top 30 problem locations that were addressed by the POP Unit. The range for this group was 6-22 months, with average of 10.6, and a median of 8. Again, using a two tailed, paired sample t-test, it was found that there was no significant difference between calls for service before and after the initiation of POP ($t=2.05$, $df=29$, $p>0.05$). However, although these results did not reach statistical significance, there is a trend of decreasing calls for service for these locations with the p value being 0.059. Consistent with the problem persons, only group 3 was compared to group 1 in order to capture the differences between not having a POP Unit and having a fully independent POP Unit.

Discussion

General Overview of Trends

From the results obtained from the exploratory analysis of the 1,059 cases at present, it is clear that the POP Unit was very active, and had an overall impact on the City of Attleboro. Looking at the general picture of the data as a whole, it is hypothesized that the POP Unit is having a positive impact on the community, the calls for service at the top 10 locations, and in the crimes that were specifically focused on by this unit.

Overview of Cases Addressed by POP Unit

After the initial interview with POP Unit members, it was hypothesized that the top problem category addressed by the POP Unit would be high calls for service. However, the analysis of POP case files revealed that the most common problem type in the city of Attleboro centered around drug use, which accounted for 20% of all POP cases. The cases involving drug abuse and distribution were submitted both by anonymous tips and 911 calls. This helped place drug abuse as the number one POP focus over the three year period analyzed at present. It is highly likely that the high number of cases is a result of the recent heroin epidemic facing the state of Massachusetts. In fact, the CDC recently released a report detailing Bristol County as having one of the highest opioid overdose death rates in the United States (Somerville et. al, 2017). Visits with overdose victims and their families was very time intensive, although some might argue that this focus may be more an exercise in futility as police departments are not equipped to handle such an overbearing social responsibility for resolving drug addiction issues (Clarke, 2002; Scott, 2000).

Cordner & Biebel (2005) reviewed a POP project in San Diego and found that POP officers tended to respond more to drug, public disorder, and transient issues more than to traffic, property crime, or personal crime problems. This is consistent with present findings as the vast majority of common problem (crime) types in Table 2 are neither serious nor violent in nature. However, this is also consistent with the overall crime rates and types in Attleboro, so it is

unclear if this is a reflection of the POP Unit's focus, or if it is resulting from the type of crime and disorder present in Attleboro.

The second largest category of POP cases involved contact with recent jail releases. Although the idea behind these visits was a good one, there appears to be something lacking as CAD data indicates that multiple chronic, high at-risk offenders were still offending in the city years after their jail release and initial POP contact was made. As Dickey & Klingele (2004) highlight, this initial contact does not suffice, and should only be one step of many in what they refer to as problem-oriented approaches to prisoner re-entry. What Dickey & Klingele suggest is that police and probation officers work together to closely monitor these individuals, and that their environments should be manipulated to minimize the temptation to engage in criminal behaviors (2004). This strategy can be thought of as POP within POP, and is an area that might benefit greatly from the use of non-traditional, more creative policing strategies, and the involvement of multiple agencies.

Consistent with the types of cases addressed by the POP Unit, the scope of the cases is also focused mainly on one person or one location as reflected in Table 3. The top problem scope for persons is the one person category with 630 cases, with two or more people coming in second with 185 cases; displaying a very large gap between the two groups. The highest number of locations for a business is the one house category with 70 cases followed by the one business category with 56 cases. It is clear from both the cases themselves and the scope of the cases that officers are focusing on a more micro level than on a macro level with the problems they are addressing. The problems are focusing on one or two individuals and single locations rather than on an overarching problem that is affecting the city on a greater scale. One is left wondering if this is a reflection of the types of problems that exist in Attleboro, or if POP officers should redefine what they identify as problems in their city. Officers might also try using the CHEERS test in order to determine if these are problems which they should in fact be focusing on. Both Cordner & Biebel (2005) and Clarke (2002) argue that departments seeking to employ a problem-oriented approach must make the distinction between problem-oriented policing and every day problem solving. Clarke (2002) in particular notes that there is widespread confusion about the nature of POP and that problem-oriented policing often becomes confused with the notions of community policing and ordinary problem solving, the latter which is considered a lower level activity that does not necessarily require analysis or evaluation.

Regardless, such micro level precision for individual persons was found to be successful in a Philadelphia policing experiment (Groff et. al, 2015). This group found that offender focused initiatives produced a 42% decrease in violence as well as a 50% decrease in violent felonies. Even though they used traditional policing methods, it was determined that part of its success was due to having a clear mission (analysis), a dedicated analyst and a team of officers who were exempt from answering calls for service (Groff et. al, 2015). However, in Attleboro, this result is not supported based on the significant increase in calls for service observed for the top ten individuals focused on by the POP Unit. It can be concluded from this discrepancy that either the nature of the problems are different in Philadelphia than they are in Attleboro, or the problems in Attleboro are not being assessed and therefore not addressed correctly by the POP Unit. As there are vast differences between Philadelphia and Attleboro in terms of population density, geographical size, socio-economic status, and topography, it is hypothesized that it would be the latter, and that the POP Unit should re-assess the micro level problems using the SARA model and develop alternative plans of action for successfully addressing them.

How Cases/Targets Nominated for Attention

As dictated by the SARA model, the POP process is initiated by exploring data in order to identify what problems exist based on high volumes of calls for service to a problem location or by numerous calls being placed about a problem individual (Braga et. al, 1999; Plant & Scott, 2009). Cases nominated just by the analysis of police data contained within either the RMS or computer aided dispatch systems was the largest category but only represented 38% of all POP cases across the study period. Additional cases submitted by police and/or command personnel bring this total percentage of POP cases to 61%.

In many police departments that use the POP program, a large number of POP cases are brought to the department's attention by other city and community agencies, such as the fire department and code enforcement (Braga & Bond, 2008; Eck, 2002; Plant & Scott, 2009; Taylor, Koper, & Woods, 2011). Eck (2014) emphasized that in order for POP to work, the police must have the active participation of external agencies including community groups, other government agencies, and non-government organizations. However, the present analysis indicated that less than 2% of the problems analyzed in Attleboro were nominated by a city department, and less

than 10% were nominated to the police agency by a resident or community agency. In addition, 8% of cases did not specify who nominated the case for submission.

This lack of involvement of external agencies is also reflected in the resolution developed to solve the identified problem, and is contrary to what is considered crucial to the success of POP (Eck, 2014). The Attleboro Police Department was the primary agency that both developed and instituted the appropriate actions in 69% (n=1,015) of POP cases. Although the unit commander also worked with other outside agencies such as the Fire Department, Council on Ageing, and the Building Department to create problem solving strategies, the involvement of these outside agencies needs to be much greater than it is at present. Moreover, while not listed in Table 6, it should also be noted that there were cases where problem individuals took ownership of their issues and, after some discussion with POP personnel, chose to be part of the solution in reforming the situation. While this reflects negatively on the POP Unit in terms of reported statistics, this is actually a positive scenario in that the POP Unit is providing these individuals with the tools, the confidence, and the support needed in order to succeed by themselves, and should be considered a POP Unit success.

Another facet to the lack of outside agencies engaged is the lack of creative problem solving techniques employed throughout the three year period. As demonstrated in Table 5, almost all of the strategies used by the POP Unit are based on traditional policing methods, which could be resulting from the fact that mostly the POP Unit, and only the POP Unit, were involved in designing and implementing them. With the involvement of external agencies, who are not police officers, it would therefore follow that their problem solving ideas would not be based on traditional policing methods. These non-traditional policing methods have been shown to yield the greatest success in POP problem solving (Eck, 2010; *as cited in* Sidebottom, Tilley, & Eck, 2012; Goldstein, 2003). Therefore, engaging external agencies would benefit the POP Unit twofold in that this would lessen the burden on manpower and resources on the POP Unit, and it would facilitate a more creative approach to problem solving that should, in turn, yield greater results for the same amount of effort.

Calls for Service

Looking at the overall calls for service for the city of Attleboro, these numbers remained the same from before the instatement of the POP Unit, both formally and informally, and in the three years since the formal formation of the POP Unit. However, one cannot definitively know if the calls for service would have increased without POP Unit's work without further analysis. Complex forecasting models would be needed to test this theory, however, this is beyond the scope of this paper.

One of the main objectives of the POP Unit as outlined by the chief of Attleboro at the Unit's inception was to focus on the individuals who had the ten highest calls for service. The POP Unit met this objective however, based on the data analysis at present, there were some problems with this focus as demonstrated by the statistically significant increase in calls for service for these individuals. There is a wide range of factors hypothesized to have contributed to this outcome, the most important of which is the dynamic nature of the problem itself. Outlining the top ten individuals is not a fixed entity that will remain constant over time, as the list will instead change with a person's individual activity and in relation to the activity of others in the city. It is difficult to know when the identified person should be removed from the list and/or when the problem is considered resolved because of this fluidity. This then requires a constant evaluation of the individuals to be focused on, as well as constant communication between the crime analyst and the POP Unit. It is unclear as to the role the crime analyst played in the POP Unit's activities, as there have been varying reports on this participation ranging from having constant communication to having none at all. Furthermore, there was a gap of employment between when the former crime analyst was employed through September or October of 2015 to March of 2016 when the present crime analyst was hired. This lack of analysis is also reflected in the calls for service data when compared to the frequency of contact with the POP Unit, as shown in Table 9 below. For confidentiality preservation, any identifying information has been removed, and individuals have been assigned a rank of 1-10 based on the number of interactions with the Attleboro PD between 2014 and 2016.

Table 9: POP Unit Contact versus Calls for Service for Top Ten People

Person	Date POP Contact Started	Months of POP Contacts (2014-2016)	Total Contacts With APD (2014-2016)
1	Jan-14	17	30
2	Feb-14	7	29
3	Jun-14	10	24
4	Feb-15	12	23
5	Sep-15	4	23
6	Sep-14	17	22
7	Jul-15	6	21
8	Apr-14	10	21
9	Oct-15	8	20
10	Mar-14	14	19

When examining the calls for service data for the persons targeted by the POP Unit, the ten people with the highest contacts with Attleboro PD are listed in Table 9 above. It should be noted that contacts with Attleboro PD include the person as reporting party, as victim, as witness, and as an involved party. However, these were included as they reflect an individual's involvement in illegal activity, whether or not they are a suspect, or have been charged with any criminal offense and should also be taken into consideration. Also listed are the number of months that the POP Unit had made contact with these same individuals, as well as when the contact was initiated based on the records and notes of the POP Unit. For some individuals, there appears to be a proportionate number of contacts with Attleboro PD and the POP Unit, for example persons 1, 6, and 10. But for others, there is a skewed contrast between these two figures. For example, person 2 had 29 contacts with Attleboro PD, but was only in contact with the POP Unit for 7 months since February of 2014. The same imbalance is present for persons 3, 5, 7, and 9, thus indicating that this focus on the top ten individuals in Attleboro has not been as data driven as initially thought. Furthermore, it could also be resulting from a lack of standardized record keeping. These factors could help explain why the calls for service for this group of people did not decrease as they should have with POP Unit intervention.

Another one of the main objectives of the POP Unit as outlined by the chief of Attleboro was to focus on the locations that had the ten highest calls for service. Consistent with the individuals who were focused on, the POP Unit met this objective, but contrarily to the individuals, the location focus had greater success. Although just outside statistical significance by 0.009, these results are extremely promising and indicate that the problems with these

locations have been correctly identified, and the solutions implemented have been successfully addressing those problems. POP Unit officers at the start of the POP program in Attleboro sought to design tailored interventions to unique city problems by employing the SARA model. As time progressed and different commanders controlled the POP Unit over the study timeframe, researchers noted that the use of the SARA model became less pronounced in their case notes, and that officers in the POP Unit appeared to tackle more short term, acute issues rather than focusing on more strategic crime and disorder issues facing the city. In assessing locations, a pattern emerged that the POP Unit transitioned over time from attempting to resolve problems at locations on a larger scale to working with more micro level problems in an attempt to provisionally fix an acute issue, mirroring the techniques that were used to address problem individuals. For example, the POP Unit at its onset worked on more global scale problems in the city such as shoplifting, metal theft, and disturbance events at trailer parks. Progress was noted when the POP Unit took initiative to increase theft deterrence signage at the most high risk theft locations, to debrief shoplifting offenders, to work with landlords to increase the overall quality of life for all residents of a complex through new environmental changes and residential policies, to organize multiple partners to combat metal theft in new construction and vacant properties by recommending changes to current practices, and by targeting known offenders. This could potentially explain why there was only a trend in decrease in calls for service, but statistical significance was never reached. Calls for service compared to POP Unit contact was also explored for the top ten locations, and is reported in Table 10 below.

Table 10: POP Unit Contact versus Calls for Service for Top Ten Locations

Location	Date POP Contact Started	Months of POP Contacts (2014-2016)	Total Contacts With APD (2014-2016)
1	Sep-14	19	673
2	Jan-15	19	260
3	Jan-14	18	254
4	Mar-14	17	235
5	Oct-14	6	198
6	Mar-14	9	187
7	Jul-14	8	187
8	Jan-15	7	145
9	May-14	6	145
10	Jan-14	11	144

As shown above in Table 10, the months of contact with the POP Unit are more regular in that they generally reflect the number of contacts with Attleboro PD. As the number of contacts with Attleboro PD decrease, so too do the number of months of POP Unit contact. Compared to the top ten individuals, this is much more regular and more predictable, and gives the impression of being more data driven which could explain the greater success with this objective.

Another factor that could have contributed to the success of this objective is that locations themselves are more consistent and stable over time, and that a small fraction of properties in a jurisdiction can be connected to a large volume of crime and police response (Andersen & Malleson, 2011; Braga, Papachristos, & Hureau, 2010; Groff, Weisburd & Yang, 2010; Weisburd, Bushway, Lum, & Yang, 2004). Furthermore, locations are easier to monitor as they don't move house, go on vacation, go to prison, get sick, etc. In addition, it might also be more straight forward to look at the bigger picture and figure out a solution that works to solve the problem for locations, whereas people are more complex and are more difficult to address.

Other Noteworthy Trends

Another topic of importance to note, but was not formerly analyzed at present, was that it was mentioned frequently in the POP Unit's notes that there were a lot of parties and family members who were very grateful to have the help and support of the POP Unit. Although this aspect could not actually be accurately analyzed at this time, either quantitatively or qualitatively, due to data and time limitations (see below for further explanation), the frequency with which this was recorded by the POP Unit has led the researchers to conclude that their involvement with the community has strengthened both the relationship and the trust between the citizens of Attleboro and Attleboro PD. This seemingly small step is one with large implications. With more trust and positive interactions with the police, there should follow easier de-escalations of conflict, less need for the use of force, and greater public cooperation (Rosenbaum et. al, 2017).

Limitations of the study

The present study is, however, not without its limitations that need to be taken into consideration. One of the biggest limitations was with the data that was used for the analysis. As archival data was used, this data was not originally intended for research purposes. Therefore, there were gaps and inconsistencies found within the data which is not unusual for archival data. However, there were added inconsistencies that are not usually observed with archival data that were also present in the current dataset. These inconsistencies manifested themselves twofold. Firstly, the notes that were kept by the POP Unit were kept by multiple officers who had different styles of note taking, and different levels of detail recording. A template was not used for record keeping, and furthermore record keeping wasn't always consistently practiced (i.e. there were days that had little details reported or were omitted from the notes entirely). Secondly, within the records management system of the Attleboro Police Department, the crime cases were also entered into the system by multiple users, and can only be considered as consistent as each case is coded. Although practices are in place to ensure data quality and veracity, errors can still exist, and could potentially skew the dataset.

Another limitation of the present study was a time constraint placed on the researchers. Researches only had five months to complete this project from start to finish. Therefore, although there were areas that warranted further exploration such as conducting a regression analysis, exploring qualitative analysis through the use of interviews with the public, and delving further into the quantitative data itself, unfortunately there was not enough time for the researchers to complete these tasks.

It is also important to note that the POP Unit was not originally set up for research purposes, but rather to address certain issues within the city of Attleboro. Therefore, target subjects and locations were not selected with matching controls to compare to at a later time. As previously discussed, there is not a gold standard for measuring the term "success." In fact, this term is very subjective in nature and can mean any number of things ranging from decreasing calls for service and/or crime rates, meeting objectives set out for the POP Unit, improving community relations, and so forth. In the present study, all of these factors were taken into consideration, however, it is very important to note that as there are many factors that can play a role in these identified outcomes. Further analysis would be required to isolate the effects of the

POP Unit from the effects of other factors such as environmental changes, overall crime trends, legal definitions, and so forth to determine if, in fact, it was the POP Unit alone that was responsible for these trends in the data. In other words, although there have been decreases in calls for service for the top ten locations, and increases in the calls for service for the top ten offenders, for example, one cannot definitively attribute these changes to the work of the POP Unit alone without conducting a regression analysis. Due to time and data limitations, this could not be conducted at this time, and therefore, it cannot be concretely concluded that whatever trends are present are based *solely* on the efforts of the POP Unit. Therefore, all results should be interpreted with caution.

Recommendations for Future Success

Although the results analyzed at present have shown promise for the POP Unit's efforts to date, research has shown strong support for techniques and practices that have not been used by the Attleboro POP Unit thus far. It is based on this body of research that the following suggestions for future success are made.

First and foremost, there needs to be a standardized method of record keeping for the POP Unit. This will allow the POP Unit and crime analyst to better monitor each individual, each problem, each location, and track the progress that is being made and what is being done to address the issues. This will allow for better monitoring of the problem to assess if the suggested resolution is working so it can be re-worked if necessary. This can be achieved by either partnering with the department's current records management vendor, QED, to create an electronic records keeping module as part of their existing records system, or a separate database can be created using either MS Access or Excel, both of which can be used by the POP Unit and the crime analyst.

Second, this process needs to be more data driven. This includes both the use of the SARA model and the consistent involvement of the crime analyst. The POP Unit and the analyst should meet on a weekly basis to discuss current trends in chronic offending, repeat victimization, and high service call locations in the city. This will also facilitate the better identification of problems, and therefore allow for a better understanding of when these are considered resolved so that the POP Unit can shift focus onto another more pressing problem in

the city. Strengthening the scanning and analysis portion of the process will allow POP officers to develop and implement fine-tuned solutions to a well-articulated problem only after they achieve a deeper understanding of the underlying cause(s) of specific problems. For example, there can be merit in offender-focused policing which utilizes a deterrence-based policing strategy to target high-risk offenders in the community (Groff et. al, 2015; Kennedy, 1996), yet POP visits to frequent offenders seemed to be more of a formality than a problem-solving response. While there were chronic offenders who chose to interact with the POP Unit to promote their self-growth and betterment, they were rare. In this instance, if POP continues to target high-risk individuals as part of their mission, the unit should research and discuss additional alternatives to current POP practices in regards to chronic offending for their local situation.

As previously stated, the role of the crime analyst is unclear from the interviews, however, it can be concluded that it was inconsistent throughout the three-year period of assessment. The analyst needs to be fully incorporated into all aspects of the decision making process as they can provide sound analysis that will lead to a multidimensional understanding of a particular problem. Regular meetings create an opportunity to explore more than just the numbers generated to provide an overview of strategic projects with a more long term focus. The exchange of data should also work in both directions, with the flow of information not only going from the analyst to the POP Unit but also from the POP Unit to the analyst so that the analyst can stay informed with current problem solving efforts and provide feedback for the POP Unit. It was found that the final and most important stage of the SARA model, the assessment phase, was absent in the majority of POP projects undertaken by the unit. Although officers did a good job of being proactive in their work, with consistent input from the analyst and data being a more powerful force to drive their target selection and monitor successes, it is hypothesized that results could be even stronger.

Thirdly, the POP Unit needs to necessitate greater collaboration with other city departments, public sector agencies, and privately owned companies in order to combat multifaceted problems. Although there is some engagement between the POP Unit and other agencies in resolving issues, the majority of problem solving is undertaken by the POP Unit. As Scott (2000) points out, this can be extremely demanding upon police resources, especially the POP Unit itself, and can be overwhelming if other agencies in the community do not help

problem solve the issue. The POP Unit should continue their collaborative outreach first by further establishing closer relationships with all city departments, which may require the support of both the Chief of Police and the Mayor. Additionally, the POP Unit could work with the analyst to establish a list of potential future external partners with whom to make contact. Furthermore, a list of these resources and the contacts within should be kept as a reference for all POP Unit members to consult. Most of the strategies employed by the POP Unit relied heavily on traditional policing methods rather than creative, non-traditional methods. This lack of creative problem solving techniques is believed to be a major flaw in the POP Unit's strategies, and could account for the limited success seen thus far with the POP Unit's efforts. With the engagement of external agencies, this issue could also be remedied as those who are not police, do not think like police, and therefore do not problem solve like police. It is the joined efforts, the marriage of different schools of thoughts from different agencies that helps to create the creative problem solving strategies leading to greater success.

Conclusions

It can be concluded from this assessment that the Attleboro POP Unit has met success with their first round of efforts in that they have met the objectives set out by the chief of Attleboro; they have decreased calls for service for the top ten locations with highest calls for service in Attleboro, and they have increased trust and have facilitated positive relations between the Attleboro PD and the citizens of Attleboro. These are all very positive first steps for the POP Unit to have made in such a short period of time. Fidelity, as defined by Maguire, Uchinda, & Hassell (2010) has generally been maintained throughout this time period. However, with some aspects of the POP initiative there has been evidence that both fidelity and dosage have been diluted somewhat at different stages of the SARA process. This is where the mixed results are observed and could be the result of many different factors.

With that said, however, that there were successes demonstrates the fact that this unit has the tools, the intelligence, and the drive to achieve positive results in all of their efforts. What needs to be done moving forward is to recognize that POP problems need to be more clearly identified, and the steps of the SARA model used more stringently and clearly. Most importantly, the term "success" needs to be clearly outlined and defined in terms of what it looks

like for the city of Attleboro. With a solid, clear definition of this concept, one moves from working towards an abstract concept and never knowing if and when it has been attained, to working towards something that has clear boundaries that can be attainable, and most importantly can be easily measured for future endeavors.

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