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Evaluating a Researcher-Practitioner Partnership and Field Experiment

National Institute of Justice (2012-IJ-CX-0042)¹

Project Summary

Richard Rosenfeld, Principal Investigator²

The two central objectives of this project were (1) to evaluate the effect on crime of a targeted patrol strategy mounted by the St. Louis Metropolitan Police Department (SLMPD) and (2) to evaluate the researcher-practitioner partnership that underlay the policing intervention. Both objectives were successfully achieved. The project spanned the period beginning January 1, 2013, and ending December 31, 2014. This report summarizes the major activities performed during the project period and the results of those activities.

The Hot Spots Field Experiment

Richard Rosenfeld and his graduate research assistant, Michael Deckard, worked with the Crime Analysis Unit and command staff of the SLMPD to devise and carry out a field experiment to evaluate the effects on crime of targeted “hot spot” police patrols and related enforcement activities in areas of the city of St. Louis characterized by high levels of firearm violence. The primary research objective was to determine whether intensified police patrols and enforcement in these areas resulted in larger reductions in firearm assaults and robberies than in similar areas subject to routine police activity. A secondary objective was to investigate whether the intervention produced crime displacement to adjacent areas, other crime types, or to times of the day when the intervention was not in force.

Geospatial mapping tools were used to identify hot spots of firearm violence on the basis of citywide crime patterns during the year prior to the intervention. Thirty-two hot spots were identified in this manner, four hot spots in each of the eight participating police districts. The hot spots ranged in size from a single intersection to a few square blocks. Two of the hot spots in each district were randomly chosen as areas for intensified police activity. Police patrols were increased over normal levels in one of these “treatment” areas. In the other treatment area, patrol strength was increased and officers were instructed to engage in heightened enforcement activity (e.g., arrests, building checks, pedestrian checks, vehicle checks, foot patrols). The remaining two hot spots in each district were designated as control areas subject to normal police activity.

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The intervention was carried out over a nine-month period. A high level of fidelity with experimental protocol was achieved. The data analysis consisted of comparing firearm assault and robbery levels in the treatment and control areas during the intervention period with baseline levels during the nine months prior to the intervention. Statistically significant and sizable reductions in firearm assaults were found in the treatment areas subject to enhanced patrols and enforcement tactics compared with the control areas. No significant reductions were found for firearm robberies, which decreased at about the same rate in both the treatment and control hot spots. The analysis revealed no crime displacement to adjoining areas, to other crime types, or to times of the day when the intervention was not in force. Less definitive results revealed that two of the enforcement activities, arrests and occupied vehicle checks, contributed to crime reductions in the treatment hot spots.

Interim and final results of the evaluation of the hot spots field experiment were reported at meetings of the police command staff, at community meetings, and at the 2013 meeting of the American Society of Criminology. The study results were also published in the journal *Criminology* (Rosenfeld, Deckard, and Blackburn 2014).

The hot spots evaluation was successful but, like all research requiring the cooperation of practitioner partners, it departed somewhat from ideal methodological standards. We would have preferred to include a larger number of crime hot spots in the study, randomly allocated to treatment and control groups regardless of the police district in which they were located. The police command staff, however, insisted that each of the eight participating districts have the same number of experimental areas so that some districts would not be burdened more than others by the additional resources needed to carry out the research. This requirement meant that fewer cases were available for analysis, because crime hot spots were not equally distributed across districts. We also had to use a “block randomized” experimental design, meaning that randomization occurred within each district. The power of the design to detect significant differences between treatment and control areas was reduced as a result. Nonetheless, using multilevel statistical models to account for possible district effects on the outcomes, we were able to detect significant effects on levels of firearm assaults attributable to the experimental treatment (see Rosenfeld et al. 2014). Moreover, in return for permitting equal participation in the experiment, police commanders agreed to extend the experimental period from three months to nine months, which greatly enhanced the reliability of the study.

The Partnership

The hot spots evaluation – the first randomized controlled study of enforcement practices in the history of the SLMPD – was made possible by the St. Louis Public Safety Partnership. The Partnership is a formal agreement among the St. Louis Mayor’s Office, the SLMPD, and the University of Missouri – St. Louis to share data and expertise to improve public safety in the city. Since its inception in January of 2012, the criminal justice agencies involved in the Partnership have extended beyond the SLMPD and encompass the Office of the Circuit Attorney, the 22nd Circuit Court of Missouri, and the

Division of Probation and Parole of the Missouri Department of Corrections. The researchers have engaged in numerous activities with their criminal justice partners, a few of which are described below. An assessment of the Partnership was published in the journal *Translational Criminology* (Rosenfeld 2014).

By any reasonable standard, the Partnership is alive and well. But the researchers realized early on that its strength and endurance could not be taken for granted. The Partnership has to be replenished regularly. We learned this lesson the hard way after a presentation to the SLMPD commanders at a Compstat meeting in February of 2012. The presentation, which outlined the proposed design of the hot spots field experiment, was met with chilly silence. Months later, after the experiment had ended, we presented the results at another Compstat meeting. This time, a lively and friendly discussion ensued that went well beyond the time allotted (see Rosenfeld 2014).

What had changed in the interim? In a word, trust. We regularly attended the weekly Compstat meetings and made ourselves available to the commanders to discuss evaluations of specific strategies they wanted to try in their districts. We attended district roll calls and Michael Deckard went on multiple ride-alongs with officers. The commanders trusted that the Partnership, as one put it, was “for real,” and that we were in it for the long term and were not simply going to publish our research and take off. In the same way, we have established enduring relationships with other criminal justice agencies in the city, which have resulted in several research projects. Five of those projects are briefly described here.

(1) Assessment of Police Self-Initiated Activity

The hot spots evaluation found that the *combination* of heightened directed patrols and “self-initiated” enforcement tactics contributed to crime reductions. The SLMPD Chief asked the researchers to conduct additional research to disclose the effects of specific tactics on specific types of crime. We analyzed the impact of seven types of self-initiated enforcement³ on violent and property crime levels across the 79 locally defined St. Louis neighborhoods over the period January, 2012 – October 2013. The analysis revealed that, on average, occupied vehicle checks resulted in the largest crime reductions, followed by pedestrian checks and foot patrols. Results varied, however, according to the specific crime type under consideration.

The study results were presented at a special meeting of SLMPD command staff and supervisors with rank of lieutenant and above held in February of 2014 (see Attachment 1). Based on the results, we recommended that supervisors direct officers to engage in specific types of enforcement activity depending on the particular offense(s) of concern at particular times and places. Just as random patrol has been largely replaced by directed patrol, we suggested that “self-initiated” activity should give way to *directed enforcement*. The command staff has since adopted this recommendation.

³ The tactics included arrests, unoccupied vehicle checks, occupied vehicle checks, pedestrian checks, building checks, foot patrols, and problem solving. Directed patrols were also examined.

(2) Assessment of Video Surveillance

In the late summer of 2012, the Mayor's Office asked the researchers to evaluate the impact on crime of video surveillance cameras installed in one of the Aldermanic wards of the city. The cameras were costly and the Mayor wanted to know whether they produced comparable benefits. We examined crime levels in the areas where the cameras were located, before and after the cameras were installed, and compared the results with crime trends during the same period in other areas in the ward without cameras. The results revealed larger crime drops in the areas with video surveillance for the first few months after the cameras were installed. After the initial declines, however, crime levels returned to the baseline levels that preceded video surveillance. (Results are summarized in Attachment 2.)

Based on the results, we recommended that the city undertake cost-benefit studies to determine the efficacy of video surveillance compared with heightened police patrols and enforcement activity. Those studies are ongoing. The study results were presented at meetings of the Mayor's staff and the Public Safety Committee of the Board of Aldermen. We also shared the findings with several community organizations interested in the impact of video surveillance on crime, and the results were featured in a report by the Missouri ACLU that is sharply critical of the spread of video surveillance in St. Louis (Chasnoff 2014).

(3) Monitoring Firearm-Related Crime

Like most municipalities, St. Louis does not have the capacity to systematically evaluate the criminal justice response to firearm crime or, for that matter, any other type of criminal offense. It is possible, of course, to monitor the progress of individual cases through the criminal justice system; that is done routinely for adjudication and sentencing purposes. What is far more difficult, but no less important for policy and performance evaluation, is to follow a cohort of cases through the system from apprehension through sentencing and post-sentencing outcomes. As a result, for all practical purposes, some very basic questions about the behavior of the local criminal justice system cannot be answered. Policymakers and the public often ask questions such as "How likely is it that someone picked up for a gun crime goes to court or is sentenced to probation or commits a new crime while under community supervision? The answers given are typically in the form of anecdotes, which satisfies no one.

The reason such questions are difficult to answer is that the requisite data do not exist in a form that would enable researchers or policymakers to track the progress of large numbers of cases through the multiple stages of criminal justice processing. The data exist, but they are located in separate silos housed in the various agencies. What is needed is an *integrated* database in which elements from each of the separate information systems are combined through common case identifiers. To develop such an integrated system, Richard Rosenfeld met regularly throughout the project period with representatives of the SLMPD, the Office of the Mayor, the Circuit Attorney's office, the circuit court, and the Division of Probation and Parole. These meetings have also

included staff members of the Regional Justice Information Service (REJIS), which provides information technology support for local criminal justice agencies. The meetings culminated in an agreed upon design for the integrated system. The next step is to secure external funding to implement the system so that the separate data elements are regularly and automatically (through web based extraction) merged for analysis. A proposal to that end is currently under review by the National Science Foundation.

As part of the proposal, we included a proof-of-concept study of over two hundred arrests for firearm-related crimes committed in St. Louis during the first quarter of 2011 and tracked through the criminal justice process for approximately two years. The results of that study were reported to the agency stakeholders and revealed several important aspects of the processing of firearm suspects and offenders of which they had not been aware. (The results are summarized in Attachment 3.)

The analysis revealed that the Circuit Attorney's office refused to issue charges on fully 40% of the arrests for firearm-related crimes in St. Louis made in early 2011, primarily "felon in possession" cases. This was news to the Circuit Attorney and the SLMPD Chief. Upon inspection, the Circuit Attorney's office discovered that many of the refusals involved unlawful possession cases in which the police discovered a firearm in a motor vehicle and one or more of the occupants had a prior felony conviction, but none claimed ownership of the firearm. Meanwhile, the Missouri legislature had recently passed a statute allowing the open carrying of a firearm in a motor vehicle without a permit. Because the police could not link the weapon to a felon, and the law did not prohibit open carry without a permit, requests for warrants in such instances were refused. Nor were the refusals primarily for the law-abiding citizens the legislators presumably had in mind when they passed the new law. The individuals arrested, but not prosecuted, averaged six prior felony arrests, about the same number as those for whom charges were issued.

A second notable result from the proof-of-concept exercise concerned the impact of a new bail program for individuals arrested for firearm-related crimes. A 22nd Circuit Court judge responsible for setting initial bond amounts and conditions instituted a policy in early 2011 of \$30,000 minimum cash-only bonds in gun-related cases. He did not know, however, whether the policy had the desired effect of reducing subsequent firearm crimes committed by those subject to the higher bonds. We found that the higher bond amounts were associated with significantly lower recidivism rates in this group compared with others subject to lower bonds, controlling for other factors related to arrests for gun-related felonies. In general, the results of our analysis of a sample of arrests for firearm-related crimes underscore the utility of developing a single database that merges elements from the separate information systems of criminal justice agencies for evaluating the criminal justice response to serious crime.

(4) Assessment of "Notification Meetings" for Probationers and Parolees

Prior research has shown that so-called focused deterrence is a promising way to reduce gang violence and other serious crimes (Braga and Weisburd 2012). The crux of the

strategy is to deliver a strong message to offenders that their behavior is being carefully monitored by the police, prosecutors, and the courts, and that future offending will be met with swift and certain sanctions. At the same time, education, training, counseling, treatment, and other support services are offered as a way out of criminal activity. These dual messages are typically delivered by criminal justice officials and service providers to offenders who have been brought together in “notification meetings.”

The St. Louis office of the state Division of Probation and Parole had held such meetings for several years but had not evaluated their impact on recidivism. The researchers were asked to carry out an evaluation of the effects of two notification meetings held in late 2013. The meetings were hosted by Probation and Parole and included police officers, prosecutors, judges, and service providers who conveyed the dual focused deterrence message to the probationers and parolees in attendance. Family members also were invited to the meetings.

We identified approximately 200 recent probationers and parolees who had been convicted of firearm-related felonies. Half of the group was randomly assigned to attend one of the notification meetings and the other half was designated as a control group who did not attend a meeting. The two groups were then followed for the next nine months and their officers used an instrument developed by the researchers to record any violations or new crimes committed (see Attachment 4). Extensive background information, including criminal histories, was also collected on each client. In addition, the officers noted whether the individuals who attended a meeting had enrolled in school or a training program, sought employment, or received counseling or treatment. The results of the experiment are currently being analyzed.

(5) Is There a “Ferguson Effect” on Crime in St. Louis?

After declining for several years, crime rates in St. Louis begin to rise in 2014. A particularly sharp increase occurred in homicides. Many public officials, including the St. Louis Mayor and SLMPD Chief, attributed the crime increase to the protests that occurred in the aftermath of the controversial police killing in Ferguson, MO, a St. Louis suburb. They believed that the community unrest may have resulted in “de-policing” on the part of law enforcement or from criminals emboldened by the events. If these assumptions are correct, crime rates should have started to rise, or earlier increases should have accelerated, after the killing occurred and the protests began. To find out, we compared monthly crime levels in St. Louis during 2014 with those during the previous year. (The results are summarized in Attachment 5.)

The results are mixed and depend on the type of crime under investigation. The monthly ratio of property crimes in 2014 to those in 2013, which had been fairly stable through mid-2014, did begin to increase after the Ferguson killing. The monthly ratio of violent crimes, however, had been increasing prior to the Ferguson events, although the increase accelerated after August. Homicides, by contrast, exhibit little evidence of a “Ferguson effect.” They began to rise over the 2013 levels in June of 2014, and the increase did not accelerate after the Ferguson events. Homicide levels in 2014 also exceeded those during

2013 earlier in the year.

These results were reported at an SLMPD Compstat meeting in early December. Richard Rosenfeld also discussed the study in interviews with local media.

These examples of the Partnership in action constitute strong evidence of its utility and scope. A common theme runs through all of them. A question arises: Which enforcement tactics are most effective? Does video surveillance reduce crime? How does the criminal justice system respond to firearm crime? Do notification meetings reduce recidivism? Does community unrest increase crime? A study is done to suggest answers. The results are shared with criminal justice partners and, on occasion, the broader public. Sometimes the results lead to new initiatives or the reformulation of existing policy or practice; sometimes they merely serve to inform discussion and debate. And often they raise additional questions requiring more research. That is exactly as it should be in a researcher-practitioner partnership that treats real-world problems as opportunities to devise and evaluate evidence-based solutions. We are frankly proud of what we have been able to accomplish in this Partnership.

But how do our partners view the Partnership? To find out, we conducted interviews with 37 individuals involved in the Partnership, including the Mayor, the Director of Public Safety, the Chief of Police, police commanders, and patrol officers. A total of 56 interviews were conducted; 19 of the individuals were interviewed early in the project period and again during the second year. We asked whether they were aware of the Partnership, how they learned about it, whether they thought it was valuable, and what could keep it alive and effective over time. We also asked specific questions regarding the hot spots field experiment and the role of such research in local law enforcement. (The interview protocols are appended to the project proposal.)

We had originally intended to conduct three rounds of interviews with each participant. As noted in interim project reports, however, that proved impractical and unnecessary. It proved difficult to conduct a second interview with some participants, in part because their assignments changed during the project period. What proved most difficult and frustrating, however, was recruiting line officers to interview. We sent several requests for interviews through the SLMPD list serve, attended roll calls to recruit participants, and finally asked supervisors to nominate officers to be interviewed. In all, we were able to interview only five patrol officers for the study. The graduate research assistant, however, conducted less formal interviews in several ride-alongs with patrol officers.

The interview results are enlightening and in some ways disconcerting. The early interviews with police commanders and patrol officers revealed mistakes on our part. We did not spend the time we should have in meetings with police officers explaining the purpose and specific objectives of the field experiment. Even though we sent memos about the research to the participating supervisors and discussed the research in several presentations to the commanders, several of the line officers knew nothing of the study except what they were told by their sergeants or lieutenants, and many of them said they were not adequately informed. In retrospect, we should have attended each of the roll

calls that included the participating officers to address their questions and concerns about what they were being asked to do. We learned from the interviews that memos and discussions with police commanders do not guarantee that the information will make it down the line to the officers who actually do the work. The high level of fidelity to research procedures is testimony to the line officers' sense of duty; they did what their supervisors told them to do. But it is far from evident that the patrol officers, or even many of their supervisors, saw themselves as vital members of an ongoing "partnership."

The interviews with public officials and police command staff offer a different view of the Partnership. The Mayor, his Chief of Staff, the Director of Public Safety, and the two SLMPD Chiefs who served during the project period⁴ were uniformly positive about the progress and prospects of the Partnership. They valued the role of the University in public service and the research expertise brought to the operations of the SLMPD and other criminal justice agencies. SLMPD commanders were also generally positive in their assessment of the field experiment and partnership with the university researchers. As noted previously, however, their trust in the researchers' commitment and value of the partnership grew over time.

Perhaps the best way to assess the Partnership, at least in retrospect, is to ask what we would do differently if we could start over. The answer is clear. We would devote much more time and energy up front introducing ourselves to officers at all ranks in the department, explaining the purpose and objectives of the field experiment, describing the partnership in which the field research was embedded, and soliciting their views of how best to carry out reliable research in their work environment. Fortunately, the St. Louis Public Safety Partnership will outlive the period of NIJ support, affording the opportunity to correct past mistakes and build on our achievements.

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⁴ Daniel Isom was the SLMPD Chief during the first year of the Partnership. He subsequently joined the faculty of the Department of Criminology and Criminal Justice at the University of Missouri – St. Louis. Sam Dotson became Chief in January, 2013.

