

The Receptivity of Officers to Empirical Research and Evidence-Based Policing: An Examination of Survey Data From Three Agencies Cody W. Telep and Cynthia Lum

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What is This?

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Abstract

Police officer receptivity to empirical research and evidence-based policing is important to consider because officers are responsible for implementing approaches validated by research on the street. Officer survey data from Sacramento, California; Richmond, Virginia; and Roanoke County, Virginia suggest prospects and challenges for advancing evidence-based policing. Generally, officers use few tools to learn about research, but their views are in line with the evidence for some strategies. Officers typically value experience more than research to guide practice, but they also tend to recognize the importance of working with researchers to address crime. Officers show some willingness to conduct evaluations but are most interested in using less rigorous methodologies. The findings across agencies are fairly similar, although some differences do emerge.

Keywords

evidence-based policing, receptivity to research, officer survey

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Introduction

The evidence-based framework has played a major role in policing in the past 15 years, since the publication of Sherman's (1998) seminal article advocating for evidence-based policing. Sherman began by arguing that "Of all the ideas in policing, one stands out as the most powerful force for change: police practices should be based on scientific evidence about what works best" (p. 2). As Weisburd and Neyroud (2011) described, much progress has been made on efforts to make the police more focused on effective strategies: "The police, who were once considered conservative and resistant to change, have become a model for criminal justice systems experimentation and innovation" (p. 2). They point to evidence-based innovations such as hot spots policing and problem-oriented policing (POP) that have diffused widely in recent decades (see Reaves, 2010; Weisburd & Braga, 2006). Lum (2009), however, noted that "[d]espite its potential, . . . evidence-based policing has not rapidly diffused into American policing. There is little indication that most American police leaders and their agencies systematically or regularly use tactics that are evidence-based" (p. 3), a point also emphasized by Weisburd and Neyroud. These and other scholars argue that much still needs to be done to bring empirical research into the forefront of policing and make evidence-based policing more of a reality (see Bayley, 1998; Mastrofski, 1999; Willis, 2013). Although support for evidence-based policing has not been universal (see Moore, 2006; Sparrow, 2011), there is a widespread belief that research evidence should be an important tool for guiding police (and criminal justice) policy and practice (see Clear, 2010).

Evidence-based policing is not simply about generating more or better research on police organizations and their practices, but practitioners and scholars within this area are also concerned with how research is received, interpreted, understood, translated, and implemented in everyday policing practice (Lum, 2009; Lum & Koper, 2014). Thus, one important step in moving forward with evidence-based policing is to better understand the views of practitioners and frontline officers and their receptivity to empirical research. Little attention has been given to the views of the street-level bureaucrats, who ultimately are the implementers of evidence-based policy and other reforms (see Lipsky, 1980). Any effort to make scientific evidence a more important part of police policy and practice will require extensive cooperation and investment from officers in the field. As Wood, Fleming, and Marks (2008) argue, "If all police officers are to be considered as change agents, the challenge before us is to identify and then to establish the conditions that build this capacity, not exclusively from the 'top', but also 'from the bottom up'" (p. 75). Therefore, it is important to assess the extent to which officers understand and apply concepts from empirical research (see Lum, Telep, Koper, & Grieco, 2012). Do police officers know what evidence-based policing is? Are they familiar with what the research evidence suggests regarding effective programs for addressing crime and disorder? Are

police officers willing to incorporate research findings and evaluation into their day-to-day work?

We report here on an effort to assess police officer receptivity to empirical research and evidence-based policing using a survey of officers in three police agencies, the Sacramento, California Police Department (SPD) the Richmond, Virginia Police Department (RPD) and the Roanoke County, Virginia Police Department (RCPD). The focus on two agencies of similar sizes, both serving state capitals on opposite sides of the country, and a third much smaller agency, serving a largely rural and suburban county, also allows for comparisons across agencies. We first discuss prior literature focused on receptivity to empirical research in policing before turning to a description of the officer survey. We then present results for the three agencies and conclude by discussing the importance of officer receptivity in efforts to move forward with evidence-based policing.

Receptivity to Empirical Research in Policing: A Review of the Literature

Prior research on police officer receptivity to empirical research and evidencebased policing is limited. But as Lum et al. (2012) note,

These types of studies may prove just as useful as research that generates evaluations or reviews that synthesize knowledge. Understanding what makes police officers and their supervisors willing to look at and incorporate scientific knowledge and processes into their decision making may better inform both researchers and practitioners about how to apply the results of evaluations. (p. 70)

We focus on research examining issues related to receptivity in policing, but note that receptivity has been researched more extensively in other fields, beginning with the seminal work by Weiss and Bucuvalas (1980) in the area of mental health. Limited research has also examined issues of receptivity in other subfields of criminal justice, including the courts (e.g., Farole, Rempel, Byrne, & Chen, 2008) and corrections (e.g., Light & Newman, 1992). Lum et al. provide a more extensive overview of the research receptivity literature. We summarize here existing research on officer receptivity and related topics our survey addresses.

Officer Knowledge Base

An important first question in assessing receptivity to evidence-based policing is do officers know what evidence-based policing is? The phrase *evidence-based* has become common in academic circles, and although there is debate on exactly how to define it,¹ there is a general consensus that evidence-based policing

involves using high-quality research to guide practice. No research we are aware of has asked officers whether they have heard of evidence-based policing. Aarons (2004) found very low familiarity with the term *evidence-based practice* in his survey of mental health providers.

Receptivity to empirical research also involves police officers being exposed to research on the effectiveness of various strategies and programs. Nutley, Walter, and Davies (2007) note that it is rare for practitioners to read peer-reviewed academic journals, and instead police would be expected to be more likely to read professional journals, such as The Police Chief published by the International Association of Chiefs of Police (IACP). Rojek, Alpert, and Smith (2012), in a national survey of police executives, found that among the 93.2% of agencies that reported using research at least occasionally, the majority (84.7%) used professional publications as a way to learn about research findings. Other frequent responses included publications and guides from the IACP (71.3%), National Institute of Justice publications (58.7%), research conducted by other agencies (58.7%), and Police Executive Research Forum reports (40.2%). Academic journals were less commonly consulted, but more than one third of agencies (34.1%) reported using them to learn about research. It should be noted that this was a survey of agency leaders, so we might expect rates of exposure to research to be higher than among lower ranking officers.

In one of the few studies of police receptivity to empirical research, Palmer (2011) surveyed inspectors and chief inspectors in the Greater Manchester Police in the United Kingdom on the research resources they used. These higher ranking officers read government publications fairly frequently. Two thirds of chief inspectors (67%) read materials from the Home Office, and a majority (54%) read publications from the National Policing Improvement Agency (NPIA). Lower ranking supervisors (inspectors) read research less frequently, although almost half read publications from the Home Office (44%) or the NPIA (48%).

Although exposure to empirical research is important, another key related question is what are officers learning from research and other publications? For example, do they gain adequate knowledge about effective policing strategies from the research (and, in turn, implement those findings in practice)? At the agency level, we can only surmise (from assessments such as the Law Enforcement Management and Administrative Statistics [LEMAS] survey) that the strategies departments report using are ones they believe are effective in addressing crime. In the latest LEMAS survey (Reaves, 2010), for example, agencies frequently reported adopting community policing and elements of POP, and larger agencies, in particular, reported using hot spots policing. But LEMAS and other agency-level surveys are limited in that only one individual per agency completes the survey. The research on individual officer views toward particular strategies has focused largely on community policing. Studies asking officers whether they believe community policing is or will be effective in reducing crime have shown mixed results (see Adams, Rohe, &

Arcury, 2002; Lurigio & Skogan, 1994; Pelfrey, 2004). We know little about officer views on other police innovations or on receptivity to empirical research findings more generally.

Officer Views Toward Crime Analysts

The role of crime analysis in policing may provide clues to better understand officer receptivity to empirical research and evidence-based policing. Not only is crime analysis essential to the implementation and adoption of many evidencebased approaches (Lum, 2009, 2013), but also analysts may be more exposed to research findings and processes and are likely more supportive of the use of research in practice. Thus, active use of the products of crime analysts could also be an important component of receptivity toward evidence-based policing. Little research has examined officers' views toward crime analysis. Cope's (2004) assessment of the integration of crime analysis into daily policing work suggested that a divide can exist between officers and civilian analysts. This is due in part to a lack of communication and a lack of understanding by officers of what analysts do and a failure of analysts to understand what officers need to best do their jobs. There is also a cultural divide between the groups. As Cope explains, "Police knowledge is contextual and subjective, while crime analysis is conducted out of context to develop overviews of problems. Negotiating these differences is crucial to generate legitimacy and respect for the knowledge produced by crime analysts" (p. 202).

Taylor, Kowalyk, and Boba (2007) surveyed 238 crime analysts to examine their views about how well they were integrated into their organizations. They found overall that crime analysts believed they were supported by top administrators, but they expressed lower levels of perceived support from patrol officers. Respondents also noted limited interactions with patrol officers and a belief that these officers rarely used their products. Research to date has not examined whether these analyst perceptions mirror the views of officers toward analysts. If they do, such views could more generally hinder officer receptivity to the use of research in policing.

Openness to Using and Conducting Empirical Research

An additional key question in understanding receptivity is the extent to which officers are open to both using empirical research and being involved in research projects. Rojek et al. (2012) found in an agency-level survey of police leaders that only about 7% of responding agencies said they never use research to inform policy decisions, with more than half of agencies (53.4%) responding that they sometimes use research and about a quarter (24.3%) saying they use research often. Larger agencies were more likely to respond that they use research sometimes or often than smaller ones. This suggests that most agencies

are at least occasionally using research, although, like LEMAS, an agency survey tells us little about the views of individual officers.

Police—researcher partnerships are one way to encourage the use of research in agencies (Nutley et al., 2007). Rojek, Smith, and Alpert (2012) assessed the extent to which police agencies are involved in these partnerships. Among agencies responding to their survey, 32% had participated in a partnership with a researcher within the past 5 years. Larger agencies were more likely to participate in partnerships; 48% of agencies with more than 100 officers had recent experience with an academic partner. When non-partner agencies were asked why they had not participated in a research partnership, the most common response (56%) was insufficient funding or staff resources. Only 15% of agencies said they did not think a researcher partnership would be of much use. Agencies also tended to view the partnerships as beneficial, with 83% of agencies with a partnership rating that partnership as successful or somewhat successful.

One reason these partnerships are not more common may be, as Buerger (2010) notes, that police and researchers have varying definitions of evidence (see also Tseng, 2012). Whereas researchers tend to be much more concerned about measurement issues and designing studies with high internal validity, officers focus more on personal experiences. While researchers exclude outliers and focus on averages, police tend to dedicate even greater attention to outliers, as these are the most memorable experiences. Thus, research can be viewed as too abstract and not relevant to the actual experiences of a particular officer (Buerger, 2010).

Sherman (1984) provides an example in describing the reaction of officers following the completion of the Minneapolis domestic violence experiment. The officers were reluctant to let the results guide day-to-day practice because "Every case is different. You can't generalize," went the familiar refrain. This was not so much an antipositivist sentiment as an assertion of the right to retain discretion to vary their actions for reasons other than crime control" (Sherman, 1984, p. 75). Officers expressed skepticism about the generalizability of research findings to specific cases. This also suggests that crime control may not be the only goal of officers as they respond to calls. This is a challenge for evidence-based policing because science can provide answers based on statistical averages (i.e., does arrest generally reduce recidivism in domestic violence cases?), but officers are seeking the right answer in a specific case (i.e., will arrest stop this offender from abusing again?; see Buerger, 2010; Sherman, 2013).

Additionally, not all officers in Minneapolis completely bought in to the importance of following protocols in a randomized experiment. At times, there were efforts to override the randomization procedures or unnecessarily disqualify a case from the experiment because officers were reluctant to let randomization rather than their experience guide treatment (Sherman, 1984, 1992). It is important to understand the extent to which officers are willing to conduct empirical research (including experiments) to evaluate the effectiveness of their tactics.

Palmer (2011) also examined officers' willingness to engage in empirical research. He found, as Buerger (2010) would predict, that officers tend to rely more on experience than research to guide day-to-day decision making. Chief inspectors and inspectors who read research publications were more likely to be willing to conduct a small randomized trial. Respondents tended to be fairly unwilling to stop a tactic as part of a randomized trial, but they did show a general willingness to examine crime data before and after an intervention. Palmer also found that officers focused more on their own experiences and the views of the community rather than results from experiments and evaluations when deciding on strategies, again suggesting the preference for experience over research in decision making (see Lum et al., 2012).

Koehle, Six, and Hanrahan (2010) also suggest that police officers may be more receptive to the results of qualitative rather than quantitative research. Although officers may dismiss statistical analyses as too complicated or too far removed from the day-to-day work of policing, "the nature of qualitative findings—in the words of real people, in response to questions familiar in police work—may increase the receptivity of police officers" (Koehle et al., 2010, p. 20).

The Receptivity Survey

Guided by this prior research, this study seeks to examine individual officer receptivity to empirical research to both provide an initial assessment of officer beliefs and examine potential variation across agencies. Toward this goal, Lum and Telep developed a receptivity survey with five sections to gauge officer receptivity.² The first section assesses officers' knowledge about evidence-based policing and policing evaluation research. Officers are asked if they have heard of evidence-based policing and what sources, if any, they consult to learn about the effectiveness of tactics. Officers are also asked if they have read anything produced by their agency or other organizations regarding policing research. The first section then asks officers whether they believe a series of police innovations are effective for reducing crime.

The second section examines officers' perceptions and views of science. It includes questions on how useful officers believe the work of crime analysts is and how often they make use of the materials produced by analysts in their daily work. Officers are also asked about the usefulness of police research. The goal of this section is to better understand officers' general views toward research and the analysts working within the department.

In the third section, officers are asked questions regarding their views of innovation, new ideas, and outsiders. Questions assess whether officers would be willing to try new strategies and collaborate with researchers on new approaches. Officers are also asked about their willingness to try various approaches to evaluate whether tactics are effective. These range in rigor from

before/after designs to small randomized trials. The fourth section focuses on officer views about higher education in policing. Finally, officers are asked to provide demographic and departmental information in the fifth section.

We consider this research exploratory and had no specific hypotheses regarding officer receptivity to empirical research and evidence-based policing and what variation, if any, would exist across agencies. Because police culture has generally been resistant to research and institutionalizing evidence-based approaches (Lum, 2009), we expect to see similarities across agencies in certain aspects of receptivity. It also seems likely, however, that some level of variation will exist across departments. It is difficult to know at the outset what might be driving these differences (if indeed differences do emerge), but certain factors are potential candidates. Departments vary in the resources devoted to crime analysis and their efforts to embed analysis in agency practices, and these differences may be important in understanding variation in officer views about crime analysis. Departmental experience with research and prior innovative strategies that reduced crime could impact officer views about the importance of research and the effectiveness of certain strategies. Leadership could also play a key role; the extent to which executives emphasize evidence-based policing may affect officer receptivity. Although we cannot definitively address these issues in this study, we revisit these areas after presenting our results.

Methods and Agency Descriptions

The survey took officers about 15 min to complete and was administered in a pilot agency in January 2010 and then in the three agencies discussed here. In Sacramento, the survey was administered to officers during a required in-service training course beginning in March 2011. A total of 523 officers out of about 675 officers in the department completed the survey. In Richmond, the administration process began in April 2012 and included surveying officers and civilian staff either online or at roll calls. The total sample in Richmond is 343 surveys out of about 730 sworn officers and 230 civilians in the department. In Roanoke County, officers and civilians were e-mailed a link to the survey in November 2012. A total of 94 respondents out of about 140 officers and 16 civilians in the department completed the survey.

These three agencies were chosen because of their similarities and differences. The SPD serves the capital of California, which according to the 2010 U.S. Census had a population of 466,488. Like Sacramento, the RPD serves the capital of Virginia, which had a population of 204,214 in 2010. The RCPD serves Roanoke County, VA, which had a population of 92,376 in 2010. The RCPD represents a smaller agency with a more suburban and rural population. Although the RCPD is new to partnering with researchers, the two larger agencies have been involved in prior projects with academics. Both agencies appear only once in the Evidence-Based Policing Matrix (Lum, Koper, & Telep, 2011),

suggesting that none of these agencies has a long history of participating in rigorous crime-control evaluations.

In comparing characteristics of our sample with departmental data, we find that our samples are fairly representative of all three departments. In the SPD, we sampled only officers and so have no coverage of civilian employees. Because of the small number of civilian respondents in the RPD and RCPD, our results below combine all respondents.⁴ Patrol officers are somewhat overrepresented in our SPD sample because the in-service class where the survey was administered was not required for high-ranking officials. In the RPD and RCPD, patrol officers are somewhat underrepresented. Below, we examine the results for all agencies, making comparisons between the three. These results build on initial findings discussed by Lum et al. (2012). Because research on officer receptivity is in its infancy, we focus on descriptive analyses. Our goal is to provide an initial portrait of receptivity to empirical research and evidence-based policing.

Results

Knowledge of and Exposure to Empirical Research and Evidence-Based Policing

Although evidence-based policing has become a common term in the academic world, it is not as well known among practitioners in our two larger agencies. About one quarter of officers had heard of the term (25.1%) in the SPD. In the RPD, a slightly higher percentage of employees responded that they had heard of the term (27.8%). In Roanoke County, 48.4% of respondents had heard of the term, somewhat surprisingly suggesting a greater familiarity with the term evidence-based policing in this smaller agency. We also found high levels of familiarity with the term in the small agency that we surveyed in the pilot phase of this study. Both agencies at the time of survey administration had progressive chiefs who actively advocated for crime analysis and evidence-based policing, which might help explain the variation across agencies.

When asking respondents what journals or magazines they had read in the past 6 months and which sources they consulted to read about the effectiveness of particular strategies, respondents in all three agencies typically had not read any of the journals or magazines provided (see Tables 1 and 2). In the SPD, more than three fourths of officers had not read any of the included publications. The percentage answering *none of the above* was smaller in both the RPD and RCPD but still greater than 60% of respondents. The results from Table 2 are somewhat similar. Respondents tended to not read any material related to effectiveness of strategies or read only materials provided internally. Although Sacramento officers infrequently read any outside materials, a smaller percentage of officers in Richmond and Roanoke County reported reading materials from the Federal Bureau of Investigation and the IACP, sources that may not

	SPD $(n=511)$		RPD	(n = 327)	RCPD (n = 89)		
Source	n	%	n	%	n	%	
None of the above	402	76.9	216	63.0	57	60.6	
Other	73	14.0	36	10.5	13	13.8	
FBI Law Enforcement Bulletin	32	6.1	52	15.2	16	17.0	
The Police Chief	18	3.4	52	15.2	18	19.1	
Criminology and Public Policy	5	1.0	2	0.6	0	0	
Police Quarterly	4	0.8	9	2.6	2	2.1	
Criminology	4	8.0	7	2.0	0	0	
The Criminologist	4	8.0	4	1.2	0	0	
Justice Quarterly	4	0.8	2	0.6	1	1.1	

Table 1. Officers' Responses to Which Journals or Magazines They Had Read in the Past 6 Months.

Note. SPD = Sacramento Police Department; RPD = Richmond Police Department; RCPD = Roanoke County Police Department; FBI = Federal Bureau of Investigation. Officers could choose as many answers as were applicable.

Table 2. Officers' Responses to Whether, in the Past 6 Months, They Had Read Any Information Provided by the Following Organizations About the Effectiveness of Particular Tactics or Strategies.

	$\overline{SPD\ (n=513)}$		RPD (n = 324)		RCPD (n = 87	
Source	n	%	n	%	n	%
Your own police agency	241	46. I	160	46.6	31	33.0
None of the above	236	45. I	133	38.8	42	44.7
Other	38	7.3	16	4.7	4	4.3
Office of Community Oriented Policing Services	22	4.2	25	7.3	4	4.3
International Association of Chiefs of Police	20	3.8	33	9.6	16	17.0
A university	13	2.5	28	5.8	5	5.3
Police Foundation	10	1.9	11	3.2	2	2.1
Police Executive Research Forum	9	1.7	10	2.9	9	9.6
National Institute of Justice	9	1.7	25	7.3	13	13.8
Bureau of Justice Assistance	8	1.5	13	3.8	9	9.6
Bureau of Justice Statistics	5	1.0	15	4.4	2	2.1
Office of Justice Programs	3	0.6	6	1.7	2	2.1
A library database	I	0.2	7	2.0	2	2.1

Note. SPD = Sacramento Police Department; RPD = Richmond Police Department; RCPD = Roanoke County Police Department. Officers could choose as many answers as were applicable.

provide extensive information on research findings and evidence-based approaches.⁵

We asked officers to assess the crime-control effectiveness of policing strategies that have been evaluated as an additional way to examine their exposure, knowledge, and receptivity to empirical research. The findings in all three agencies are mixed with officers' views more in line with the research evidence for some tactics than others (see Table 3). The results were generally more positive in Richmond and Roanoke County than in Sacramento. Respondent views in all three agencies were generally in line with the research evidence for the effectiveness of POP and Drug Abuse Resistance Education (D.A.R.E.), which suggests the effectiveness of POP in reducing crime (Weisburd, Telep, Hinkle, & Eck, 2010) and the ineffectiveness of D.A.R.E. in reducing adolescent drug use (West & O'Neal, 2004). Close to 90% of respondents in the SPD said that POP is very effective or effective in addressing crime, whereas more than 29% of SPD officers thought D.A.R.E. was ineffective and more than half rated it as only somewhat effective. Findings were similar in the RPD, where 65.2% of respondents viewed POP as very effective or effective and just 3.4% said the approach was ineffective. In the RCPD, close to 70% of respondents viewed POP as very effective or effective. For D.A.R.E., 28.6% of respondents said the program is not effective and almost 40% answered that D.A.R.E. was only somewhat effective.

Officers seem fairly convinced of the crime-control effectiveness of community policing in all three agencies, although the evidence for community policing reducing crime is not very strong. In a recent systematic review, Gill, Weisburd, Telep, Vitter, and Bennett (in press) found that community policing overall has little or no effect on crime. Thus, officer views may be overstating the effectiveness of the program. In the SPD and RCPD, more than 70% of officers called community policing very effective or effective for reducing crime. In the RPD, fewer respondents, but still a majority, viewed community policing as very effective or effective. It could be that officers were thinking more about other potential benefits of community policing, like improvements in citizen perceptions of police legitimacy. These other outcome measures may be related to crime control in the long term (see Tyler, 2004). Our findings suggest that the conventional wisdom that officers view community policing negatively may be overstated, as almost all officers in our sample view the approach as at least somewhat effective in reducing crime (see Lurigio & Skogan, 1994; Paoline, Myers, & Worden, 2000).

The results for hot spots policing and random preventive patrol present some more problematic results for moving forward with evidence-based policing, particularly in the SPD. Although preventive patrol has been a hallmark of policing since the invention of the automobile, there is little evidence to suggest that officers randomly driving through a beat is an effective deterrent (Kelling, Pate, Dieckman, & Brown, 1974; Weisburd & Eck, 2004). In contrast, there is a rigorous body of research suggesting that hot spots policing is an effective way

Table 3. SPD, RPD, and RCPD Views on the Effectiveness of Various Strategies for Reducing Crime and Disorder.

	Ver effect	•	Effective		Somewhat effective		Not effective	
Strategy	n	%	n	%	n	%	n	%
SPD								
Problem-oriented policing $(n = 505)$	171	33.9	277	54.9	49	9.7	7	1.4
D.A.R.E. (n = 504)	10	2.0	70	13.9	267	53.0	148	29.4
Community policing $(n = 506)$	123	24.3	268	53.0	109	21.5	6	1.2
Hot spots policing $(n=490)$	17	3.5	83	16.9	202	41.2	146	29.8
Random preventive patrol $(n = 502)$	44	8.8	167	33.3	201	40.0	41	8.2
Rapid response to 911 calls $(n = 507)$	112	22.1	214	42.2	139	27.4	34	6.7
RPD								
Problem-oriented policing $(n = 322)$	61	18.9	149	46.3	86	26.7	П	3.4
D.A.R.E. (n = 322)	18	5.6	65	20.2	153	47.5	76	23.6
Community policing $(n = 322)$	77	23.9	118	36.6	94	29.2	30	9.3
Hot spots policing $(n = 323)$	77	23.8	139	43.0	77	23.8	14	34.3
Random preventive patrol $(n = 323)$	43	13.3	100	31.0	121	37.5	22	6.8
Rapid response to 911 calls $(n=324)$	81	25.0	111	34.3	101	31.2	16	4.9
RCPD								
Problem-oriented policing $(n = 83)$	20	24.1	38	45.8	П	13.3	3	3.6
D.A.R.E. (n = 84)	6	7.1	21	25.0	33	39.3	24	28.6
Community policing $(n = 84)$	21	25.0	40	47.6	19	22.6	3	3.6
Hot spots policing $(n = 84)$	24	28.6	44	52.4	12	14.3	2	2.4
Random preventive patrol $(n = 84)$	7	8.3	17	18.1	42	50.0	13	15.5
Rapid response to 911 calls $(n = 84)$	21	25.0	31	36.9	20	23.8	9	10.7

Note. SPD = Sacramento Police Department; RPD = Richmond Police Department; RCPD = Roanoke County Police Department; D.A.R.E. = Drug Abuse Resistance Education.

for police to target crime and disorder (see Braga, Papachristos, & Hureau, 2012). In Sacramento, however, officer views about hot spots policing and random preventive patrol are largely opposite from what the research evidence shows. Officers in the SPD seem rather skeptical of hot spots policing and much more confident in traditional beat patrol. Just 3.5% of officers responded that hot spots policing was very effective and 29.8% responded that the tactic is ineffective. Only 8.2% of officers responded that random preventive patrol was not effective for reducing crime.

RPD and RCPD showed different results, particularly for hot spots policing, suggesting greater variation across departments than in prior questions. In the RPD, 66.8% of respondents thought hot spots policing was very effective or effective for reducing crime and just 4.3% thought hot spots policing was an ineffective tactic. In the RCPD, a sizable 81.0% of respondents said hot spots policing was very effective or effective. For random preventive patrol, the results in the RPD were fairly similar to the SPD. Just 6.8% of the RPD respondents thought random preventive patrol was not effective with 44.3% of respondents viewing the tactic as very effective or effective. The RCPD results were most in line with the research evidence, with 15.5% of respondents saying random patrol was not effective and 50.0% viewing the tactic as only somewhat effective.

Respondents in all three departments also tended to view rapid response to 911 calls as an effective way to address crime. This evidence, however, suggests that rapid response contributes to an arrest in a very small portion of cases (Spelman & Brown, 1984), and thus rapid response is viewed, along with random patrol, as an ineffective *standard model* tactic (Telep & Weisburd, 2012; Weisburd & Eck, 2004). About 60% of officers in all three agencies viewed rapid response as a very effective or effective tactic.

There were also some policing innovations that, while popular in academic circles, seem to be lesser known among police practitioners. For example, in the SPD, 55.2% of officers had not heard of pulling levers interventions and 65.2% of respondents had not heard of restorative justice. Results were similar in the RPD and RCPD. Both of these strategies often rely heavily on police involvement and have shown evidence of effectiveness in reducing crime or decreasing recidivism (see Braga & Weisburd, 2012; Sherman et al., 2005).

Views Toward Crime Analysts and Researchers

The second section of the survey focused on officer views on the usefulness of crime analysis and police research. Table 4 presents results on how often officers reported using materials produced by analysts in their daily work. The results suggest a greater use of these materials in the RPD, where 29.1% of respondents said they used such materials often versus just 7.2% in the SPD. In the SPD, the majority of officers (62.2%) reported using such materials rarely or not at all. The RCPD was in the process of hiring a crime analyst at the time of survey

	SPD	(n = 514)	RPD	(n = 323)	RCPD (n = 84		
Response	n	%	n	%	n	%	
Often	37	7.2	94	29.1	38	45.2	
Sometimes	157	30.5	97	30.0	30	35.7	
Rarely	212	41.2	83	25.7	12	14.3	
Not at all	108	21.0	49	15.2	4	4.8	

Table 4. Officers' Responses to How Often They Use (or Plan to Use) Materials Produced by Crime Analysts in Their Daily Work.

Note. SPD = Sacramento Police Department; RPD = Richmond Police Department; RCPD = Roanoke County Police Department.

administration, but officers there expected to use materials from this analyst, with 80.9% of respondents saying they planned to use such materials often or sometimes. These differences highlight the variability that can exist across agencies in the acceptance of crime analysis and use of materials from crime analysts (see O'Shea & Nicholls, 2003).

We asked officers about the usefulness of information from research regarding police tactics. Some differences emerged between agencies, with officers in the SPD generally finding research to be more useful than respondents from the RPD and RCPD. In the SPD, the percentage of officers saying information from research was very useful (21.5%) was substantially higher than in RPD and RCPD, where just 7.7% and 6.1% of respondents, respectively, found research to be very useful RPD respondents were also the most likely to say research was not at all useful (19.2%). These findings are particularly interesting because RPD officers are somewhat more likely than SPD officers to be exposed to research evidence (see Table 1). For academics, the results suggest that in all three agencies, there is much room for improvement in making research more useful to practitioners.

Openness to Using and Conducting Empirical Research

The third section of the survey assessed officers' views regarding the importance of conducting research and using scientific evidence to guide daily practice. We asked officers what should be the balance between scientific knowledge and personal experience in day-to-day decision making. Officers in all three agencies overwhelmingly believed experience should play a greater role than research (see Table 5). Although the results were nearly identical in Sacramento and Richmond, in Roanoke County, while the majority of officers believed experience should guide decision making more than science, a greater percentage of

Table 5. Officers' Responses to What They Think the Balance Should be Between the Use of Scientific Research and Personal Experience in Day-to-Day Decision Making.

	_	PD : 517)		PD = 306)	RCPD (n = 79)	
Response	n	%	n	%	n	%
Experience 90%, scientific knowledge 10%	128	24.8	79	25.8	12	15.2
Experience 75%, scientific knowledge 25%	291	56.3	158	51.6	44	55.7
Experience 50%, scientific knowledge 50%	88	17.0	62	20.3	22	27.8
Scientific knowledge 75%, experience 25%	10	1.9	3	1.0	1	1.3
Scientific knowledge 90%, experience 10%	0	0	5	1.2	0	0

Note. SPD = Sacramento Police Department; RPD = Richmond Police Department; RCPD = Roanoke County Police Department.

officers (27.8%) answered that experience and scientific knowledge should both contribute 50% than in the SPD (17.0%) or the RPD (20.3%).

Despite generally viewing experience as more important than scientific research in decision making, officers also tended to recognize the necessity of collaboration with researchers to better address crime. More than 70% of officers in all three agencies agreed or strongly agreed that such collaboration is necessary for a police agency to improve its ability to reduce crime (73.7% in the SPD, 79.7% in the RPD, and 89.0% in the RCPD). Only about 3% of respondents in the SPD and RPD strongly disagreed that collaboration with researchers is important for helping an agency to reduce crime, and not a single respondent answered this way in the RCPD (although our sample in the RCPD was also much smaller). Officers in all three agencies also showed a strong willingness to try new things. The majority of officers either strongly agreed or agreed with the statement "I am willing to try new tactics or strategies, even if they are different from what I am currently doing" (95.2% in the SPD, 96.8% in the RPD, and 98.8% in the RCPD), suggesting that officers not only see the need to work with researchers but also are generally open minded about trying new strategies and tactics.

We also asked officers a series of questions about their willingness to take certain actions to test whether a particular tactic they were using was effective (see Table 6). Officers were asked if they would be willing to implement a small randomized experiment by selecting 20 areas and using a coin flip to assign 10 to a treatment group that receives the tactic and 10 to a control group. Just more than one quarter of officers in the SPD responded that they were unwilling to do this. About 36% of officers were either quite willing or very willing to try this evaluation method. Results were fairly similar in the RPD and RCPD, although officers were a bit more apprehensive about this method of evaluation, with

Table 6. SPD, RPD, and RCPD Responses to How Willing Officers Would Be to Take Various Actions to Test Whether a Particular Tactic the Police Were Currently Using Was Effective.

		ry ng	Qui willi			Somewhat willing		Not willing	
Action	n	%	n	%	n	%	n	%	
SPD									
Small randomized trial $(n = 515)$	45	8.7	143	27.8	183	35.5	144	28.0	
Use before/after data $(n = 513)$	109	21.2	216	42. I	161	31.4	27	5.3	
Approach a researcher to help $(n = 509)$	27	5.2	87	16.6	232	44.4	163	31.2	
Seek assistance in the organization $(n = 510)$	65	12.7	189	37.1	205	40.2	51	10.0	
RPD									
Small randomized trial $(n=311)$	24	7.7	65	20.9	89	28.6	133	42.8	
Use before/after data $(n=311)$	75	24.1	128	41.2	87	28.0	21	6.8	
Approach a researcher to help $(n = 308)$	23	7.5	77	25.0	138	44.8	70	22.7	
Seek assistance in the organization $(n = 307)$	49	16.0	145	47.2	90	29.3	23	7.5	
RCPD									
Small randomized trial $(n=78)$	6	7.7	18	23.1	24	30.8	30	38.5	
Use before/after data $(n=78)$	38	48.7	31	39.7	9	11.5	0	0	
Approach a researcher to help $(n=78)$	П	14.1	31	39.7	22	28.2	14	17.9	
Seek assistance in the organization $(n = 78)$	20	25.6	37	47.4	17	21.8	4	5.1	

 $\it Note. SPD = Sacramento Police Department; RPD = Richmond Police Department; RCPD = Roanoke County Police Department.$

42.8% of respondents answering they were not willing to try a small randomized trial in the RPD and 38.5% in the RCPD.

Officers in all three agencies were more willing to use a before/after design to evaluate a tactic. More than 63% of SPD officers were quite willing or very willing to use data from before the tactic was implemented and compare it with data from after the tactic was up and running. In the RPD, 65.3% of respondents were very willing or quite willing to use a before/after design. Respondents in the RCPD were the most open to a before/after design, with 88.4% of respondents saying they were very willing or quite willing to use this approach. Officers were overall less likely to be willing to implement a more

rigorous methodology to evaluate tactics, although a sizable proportion of officers showed some willingness to try a small randomized trial.

Finally, we also examined respondents' willingness to seek help from a researcher to evaluate a tactic and their willingness to ask someone within the organization for assistance in devising an evaluation method. Although respondents in all three agencies generally showed at least some level of willingness to use either method, officers were more likely to be willing to seek help from within their department than to ask for outside assistance. In the SPD, only 10.0% of officers were not at all willing to consult with someone in the agency compared with 31.2% who said they would not be willing to work with a researcher. The percentages for *not at all willing* in the RPD and RCPD were lower, but the pattern was very similar. Although respondents seemed to feel more comfortable working with individuals within their agency to evaluate tactics, the majority of respondents also showed at least some willingness to work with researchers from universities or research organizations.

Discussion and Conclusions

While the Bureau of Justice Assistance and National Institute of Justice, as well as some researchers and practitioners, are currently advocating for law enforcement to pay greater attention to research (see Lum & Koper, 2014), whether this can occur in practice depends on a number of factors, a major one being the receptivity of policing to research and analysis. Examining officer-level receptivity is an important step toward these goals and moves us beyond agency-level surveys, which can only speak to the receptivity of the individual answering those surveys (often the chief executive). Our findings on officer-level receptivity to empirical research and the variation and similarities we find across diverse agencies add to the growing knowledge base about how research becomes institutionalized into everyday policing practices.

Moving agencies to a more evidence-based approach would require a greater knowledge about evidence-based policing itself, a term that we find is not familiar to the majority of our respondents. The first step in being receptive to research is actually knowing about the philosophy of evidence-based approaches, and what that philosophy is trying to convey to officers. Furthermore, the hope that academic discussions of the research evidence or evidence-based policing will make an impact in the field might be naïve. Officers are not typically reading either academic or professional journals to learn about research and the effectiveness of police tactics. Indeed, most of the information they are receiving comes from their own agencies and is likely policies, general orders, and procedures (or occasional legal updates about policies). This finding was remarkably similar in three different agencies. This suggests that researchers not only should be careful in how they present and advocate for evidence-based policing (see Innes & Everett, 2008) but also must think more about effective

dissemination channels for research. On the basis of prior research, we were not surprised that officers were not typically reading *Criminology*, but we did not expect the percentage of respondents answering *none of the above* to our list of sources to be so high. Clearly, even publishing pieces in *The Police Chief* or other similar outlets is insufficient to ensure officers are exposed to research.

One effective approach may be to use internal departmental distribution channels to disseminate information about evidence-based policing. This could include researchers working directly with departments to distribute information on effective practices during training or being consultants to policies written in general orders. As part of the Matrix Demonstration Project, Lum et al. (2012) have developed a four-part, freely available video training module on evidence-based policing that would be useful in exposing new recruits to effective practices and the concepts behind evidence-based policing. Lum et al. have also developed field training approaches that convert traditional field training materials into ones that reflect specific research evidence. Efforts such as this could be useful in ensuring that officer views on the effectiveness of particular strategies and tactics are in line with research.

Another key finding is that much work continues to be needed to integrate and make central the role of crime analysis in policing. Our findings on the relationship between officers and crime analysts suggest variation across the three agencies. Respondents in Richmond were more likely than those in Sacramento to use materials from crime analysis often; in the SPD, more than 60% of officers used materials from crime analysis rarely or never. While close to 30% of the RPD respondents were using such materials often, this still suggests the majority of officers are not. In Roanoke County, officers were very enthusiastic about using materials from crime analysis, suggesting perhaps the influence of the hiring of a new chief and his efforts to hire a crime analyst at the time of survey administration. Taylor and Boba (2011) note that getting officers to use the materials crime analysts are producing is a major challenge because of "a police culture that is perceived to question the legitimacy of analytical work, a hierarchy that may take little notice of non-police staff, organizational fragmentation, a reactionary stance on policing, and a failure to support innovation" (p. 6). Our results suggest these barriers may be more pronounced in the SPD than the other two agencies.

Educating officers about what crime analysts do and the usefulness of materials they can produce might be beneficial in increasing officer—analyst interaction and ensuring that officers are basing strategies and tactics on the best possible data and analysis (see Lum, 2013). This variability across agencies also highlights the importance of agency-level contextual factors in explaining officer responses. This variation suggests that organizational practices and policies can impact officer views toward receptivity. Further exploration of what the RPD has done differently than the SPD in terms of encouraging the use of crime analysis materials and how RCPD framed the need to hire an analyst to

officers could be useful in efforts to enhance officer exposure to crime analysis and crime analysts.

At the crux of evidence-based policing is the use of effective strategies in practice. Although respondents in all three agencies showed largely similar views that were in line with the research evidence for some strategies, there was a great divergence regarding the effectiveness of hot spots policing in particular. Officers in Sacramento generally had very negative views regarding the effectiveness of hot spots policing, despite the fact that the agency was involved in a hot spots experiment that showed significant crime declines in targeted hot spots (see Telep, Mitchell, & Weisburd, 2014). It is not clear what is driving these negative views, but one possibility is officer backlash to the experiment and the changes in officer routines that the experiment entailed. The SPD results suggest the difficulties departments can confront in institutionalizing evidence-based policing. One can imagine the hostile reaction supervisors could face in rolling out hot spots policing (or any other analysis-driven approach) when only one in five respondents rated such an approach as effective. This reinforces the importance of better informing, training, and instilling in officers what we now know from research about effective strategies. As Lum et al. (2011) have found, deployment tactics that are proactive, tailored to specific problems, and placebased are more likely to yield effects with regard to crime prevention than reactive, general, and individual-based strategies. Yet, if cultural mindsets and deployment emphases (such as arrest) focus on the latter (reactive, general, individual-based), officers will view alternative approaches with suspicion.

In terms of officer views on the usefulness and value of research, we see what at first might seem to be contradictory findings. Officers in all three agencies tend to believe that experience should play a greater role than scientific knowledge in guiding day-to-day decision making, but respondents also overwhelmingly believed that collaboration with researchers is necessary for a police agency to improve its ability to reduce crime. Although we did see variation across agencies, officers generally recognize the importance of research evidence to help make their department better at fighting crime. This also suggests an important lesson for academics: Police-practitioner collaborations are likely to be more successful when officer experience is valued and taken advantage of in the design and implementation of an intervention. If officers believe their experience and street-level knowledge are being put to good use, they are more likely to buy in and cooperate (see Toch, Grant, & Galvin, 1975). Officers value the expertise of researchers, but they value their own experience more, and researchers should be aware of this as they design and evaluate new approaches (see Wood, Sorg, Groff, Ratcliffe, & Taylor, 2014). Greater efforts to achieve officer buy-in at the outset of the SPD experiment may have led to more positive officer views about hot spots policing.

An especially exciting finding is how open officers seem to be to trying new things. Less than 5% of respondents said they would not be willing to try new

strategies. Although change is difficult for any organization, this open-minded attitude toward doing new things suggests a general receptivity to changing strategies in light of research evidence and openness to trying new things in partnerships with researchers. There is also, however, some skepticism from officers about innovation. In all three agencies, the majority of officers agreed or strongly agreed that when a new idea is presented from commanders, it is usually a fad, and things will eventually return to normal. This suggests officers are willing to try new things, but the burden is on commanders to show a long-term commitment to change.

We found overall that officers were at least somewhat willing to engage in a number of evaluation methods to assess the effectiveness of police tactics. Officers tended to show greater levels of willingness to engage in less rigorous approaches and more reluctance to engage in approaches with higher internal validity, such as randomized trials. Although any sort of evaluation would be more beneficial than not assessing the impact of strategies at all, we emphasize the importance of using the most rigorous approaches possible when examining effectiveness. More rigorous research methods will produce more believable findings that can be used to guide practice with greater confidence. As McCord (2003) has emphasized, only randomized experiments can help ensure that criminal justice treatments are doing more good than harm.

Finally, we were surprised that for certain questions, the RCPD seemed to be ahead of our two much larger agencies in terms of receptivity to evidence-based policing. Close to half of RCPD officers had heard of evidence-based policing, officer views on hot spots policing and random preventive patrol were more in line with research than in the SPD and RPD, and officers almost universally planned to make use of materials produced by the department's new crime analyst. Although the agency has little history of working with researchers, a new chief has stressed the importance of scientific evidence in guiding tactics. His efforts to change agency culture and practice may explain the results from the RCPD. It could also be the case that the chief has been successful in increasing officer receptivity more rapidly because he leads a smaller agency and has more direct contact with officers. Most importantly, the findings from Roanoke County suggest the need to further study receptivity in smaller, more rural and suburban agencies. The diffusion of new ideas may be faster in smaller agencies simply because the bureaucratic distance between higher command and officers and between units may be less in smaller agencies. However, we are cautious about drawing any conclusions; chiefs could have an easier or a harder time implementing reform efforts because of agency size. We cannot draw strong conclusions without a larger sample of smaller agencies.

Although our study adds to the limited literature on police officer receptivity to empirical research, our research is not without limitations. Our survey focuses primarily on officer attitudes about empirical research and evidence-based

policing, and, in an effort to carefully explore these issues, we chose not to focus on research utilization. We do not have data on how often officers are using evidence-based approaches in the field and to what extent they are using specific studies to guide their tactics. We did ask directly about the use of materials from crime analysts, although we recognize that we know little from officer responses about the quality of these materials or their exact link to evidence-based strategies. Better understanding the use of research in practice is an important area for future research. We also recognize that our questions on officer views about the effectiveness of particular strategies may reflect in part officer exposure to research on these strategies rather than a general receptivity to evidence-based policing. Still, these responses offer important insights into how officers view particular tactics, which are suggestive of how willing they might be to adopt evidence-based approaches.

Additionally, while we see no reason for officers to be dishonest in their responses to our questions, we do not know to what extent officers took the survey seriously. Indeed, the largely negative views on hot spots policing in the SPD could reflect officer dissatisfaction with having to take the survey and the involvement of the agency in a hot spots experiment. Missing data were also a problem, particularly on demographic questions. Officers were often reluctant to provide identifying information on the survey, which limits our ability to assess the representativeness of these samples. Still, in the SPD we sampled more than 75% of officers, in the RCPD we surveyed about 60% of employees, and in the RPD we surveyed about 40% of sworn officers, suggesting at least some level of representativeness.

Finally, while we think these findings provide new insight into issues of research receptivity in policing, our results are only statistically generalizable to our sample of officers. Our convenience sample of three agencies is not sufficient to make strong statements about receptivity in American policing. Just as we saw many similarities between these agencies but some differences also emerged, we suspect that findings in different agencies would echo these results in some ways while diverging in others. Better understanding and identifying these areas of divergence are important avenues for future research because they are suggestive of the importance of agency-level factors. In other words, identifying why officers in the RPD and RCPD recognize the effectiveness of hot spots policing to such a greater extent than officers in the SPD may be important in efforts to build officer receptivity to hot spots approaches. What are the RPD and the RCPD doing, or what is SPD not doing, that could explain these differing results? On the other hand, some of our results, such as the consistent finding that officers value experience more than scientific evidence, could be attributable to aspects of the policing profession and culture rather than agency-level factors, and thus for certain questions, we would expect greater similarity in findings across a larger sample of agencies.

Conclusions

Our study is among the first to examine issues of officer receptivity to empirical research and evidence-based approaches in policing and to do so at the officer level. We think our results help shed new light on issues of receptivity and suggest both prospects and challenges in efforts to move forward with evidence-based policing. Future research should continue to explore these issues with additional agencies. As our sample size increases, so will our ability to generalize. Future studies should more closely examine the effects of both individual officer-level factors and agency- or jurisdiction-level characteristics in multivariate models. This would shed further light on variation both within and across agencies (see Telep & Lum, 2014). Future studies should also attempt to assess change over time in receptivity at both the officer and agency level, particularly as a result of agency research projects or interventions designed to expose officers to policing research and evaluation.

Finally, we must devote more attention to the issue of theory in research on receptivity. Our findings here were not guided by a particular theoretical perspective, but in moving forward with understanding police receptivity to empirical research, theory should play an important role. The expansion of our sample should help in theory-building efforts. As Lum et al. (2012) noted in describing the receptivity survey, "For researchers, the survey provides more empirical data to develop theory in this area and to test factors contributing to (or inhibiting) the use of research in practice" (pp. 70–71). These issues are critical to examine because evidence-based policing cannot become a reality without support from officers in the field.

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Notes

1. See the different definitions of evidence-based crime policy offered in the January 2010 Center for Evidence-Based Crime Policy newsletter: http://cebcp.org/wp-content/newsletters/january-2010.pdf (pp. 6–7).

- 2. See http://cebcp.org/evidence-based-policing/the-matrix/matrix-demonstration-project/receptivity-to-research/, for a full version of the survey
- 3. We use the term *officers* while recognizing that some of the respondents in the RPD and RCPD were not sworn law enforcement officers.
- 4. Examining responses from only sworn officers did not greatly affect the results, and so we chose to maximize sample size by including all respondents. As McCarty and Skogan (2013) note, little recent survey research has assessed views of civilian employees, despite their increasing numbers in recent decades, so it is difficult to know how civilian employee views may differ from sworn officers. In their study, McCarty and Skogan found little difference between officers and civilians in levels of burnout and factors contributing to employee burnout.
- 5. The IACP does now include *Research in Brief* columns in *The Police Chief* that summarize research studies and highlight evidence-based approaches.
- 6. The percentages in Table 3do not sum to 100% because officers could also answer "I have not heard of this tactic."
- 7. These findings and the findings on the necessity of collaborating with researchers and willingness to try new things are not included in tabular form, but full results from these questions are available from the authors.
- 8. See http://cebcp.org/evidence-based-policing/the-matrix/matrix-demonstration-project/to-view-these-materials and learn more about the Matrix Demonstration Project

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