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The Effects of Problem-Oriented Policing on Crime and Disorder

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The Campbell Collaboration Crime and Justice Group (www.campbellcollaboration.org/ccjg) is an international network of researchers that prepares, updates, and rapidly disseminates systematic reviews of high-quality research conducted worldwide on effective methods to reduce crime and delinquency and improve the quality of justice.

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Summary

We conducted a systematic review to examine the effectiveness of problem-oriented policing (POP) in reducing crime and disorder. Eligible studies had to meet three criteria: (1) the SARA model was used; (2) a comparison group was included; (3) at least one crime or disorder outcome was reported. Units of analysis could be places or people. After an exhaustive search strategy that identified over 5,500 articles and reports, we found only 10 studies that met our main inclusion criteria. This result is particularly surprising given the strong support that has been voiced for POP by both scholars and practitioners. Using meta-analytic techniques, we find an overall modest but statistically significant impact of POP on crime and disorder. We also report on our analysis of pre/post comparison studies. While these studies are less methodologically rigorous, they are more numerous, and our search identified 45 studies that met our other criteria, but did not have a comparison group. Results of these studies indicate an overwhelmingly positive impact of POP. Overall, our results suggest problem-oriented policing has a modest impact on reducing crime and disorder, but we urge caution in interpreting these findings, because of the small number of eligible studies we located in our main analysis, and the diverse group of problems and responses these studies included.

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A note regarding the Crime Prevention Research Review Series

The research included in this Crime Prevention Research Review is limited to studies that meet the criteria for rigor as laid out in the Campbell Collaboration Crime and Justice Group review criteria (see Farrington and Petrosino 2001). The popular series of *Problem-Oriented Guides for Police* (POP Guides) published by the Office of Community Oriented Policing Services (COPS Office) differs from this review because of the standards for inclusion of evidence.

The Effects of Problem-Oriented Policing on Crime and Disorder is the fourth in the *Crime Prevention Research Review Series*. The previous publications in the series *(No. 1: Disrupting Street-Level Drug Markets; No. 2: Police Enforcement Strategies to Prevent Crime in Hot Spot Areas; and No. 3: Does Neighborhood Watch Reduce Crime?)* are available from the COPS Office, www.cops.usdoj.gov.

> There is a growing body of research evidence that problem-oriented policing is an effective approach (to reducing crime).

Introduction

Introduction

In an article in *Crime & Delinquency* in 1979, Herman Goldstein critiqued police practices of the time by noting that they were more focused on the "means" of policing than its "ends." He drew from a series of recently completed studies that suggested that such standard policing practices as "preventive patrol" (Kelling et al. 1974) or "rapid patrol car response to calls for service" (Kansas City Police Department 1977) had little impact on crime. Goldstein suggested that the research evidence reflected a serious crisis in policing. Goldstein argued that the police had become so focused on such issues as the staffing and management of policing that they had begun to ignore the problems policing was meant to solve. Goldstein saw this dysfunction as at the heart of the inability of policing to be effective in solving community problems.

Goldstein called for a paradigm shift in policing that would replace the primarily reactive, incident driven "standard model of policing" (National Research Council [NRC] 2004; Weisburd & Eck 2004) with a model that required the police to be proactive in identifying underlying problems that could be targeted to alleviate crime and disorder at their roots. He termed this new approach "problem-oriented policing" to accentuate its call for police to focus on problems instead of single calls or incidents as the unit of analysis. Goldstein also expanded the traditional mandate of policing beyond crime and law enforcement. He argued that the police had to deal with an array of problems in the community, including not only crime but also social and physical disorders. He also called for police to expand the tools of policing much beyond the law enforcement powers that were seen as the predominant tools of the standard model of policing. In Goldstein's view the police needed to draw upon not only the criminal law but also civil statutes and rely on other municipal and community resources if they were to successfully ameliorate crime and disorder problems.

John Eck and William Spelman (1987) drew upon Goldstein's idea to create a straightforward model for implementing POP. In an application of problem solving in Newport News, Virginia they developed the SARA model for problem solving. SARA is an acronym representing four steps they suggest police should follow when implementing problem-oriented policing. "Scanning" is

the first step, and involves the police identifying and prioritizing problems in their jurisdictions. After potential problems have been identified, the next step is "Analysis." This involves the police thoroughly analyzing the identified problem(s) so that appropriate responses can be developed. The third step, "Response," has the police developing and implementing interventions designed to solve the problem(s). Finally, once the response has been administered, the final step is "Assessment" which involves assessing the impact of the response on the targeted problem(s). The SARA process has become widely accepted and adopted by police agencies implemented problem-oriented policing. Indeed, the approach is featured prominently in the "Model POP Curriculum" and the "What is POP?" sections of the web site for the Center for Problem-Oriented Policing (www.popcenter.org) and using the SARA approach is required for police department submissions to the Herman Goldstein Award for Excellence in Problem-Oriented Policing.[1]

A number of studies going back to the mid-1980s demonstrate that problem solving can reduce fear of crime (Cordner 1986), violent and property crime (Eck & Spelman 1987), firearm-related youth homicide (Kennedy et al. 2001) and various forms of disorder, including prostitution and drug dealing (Capowich & Roehl 1994; Eck & Spelman 1987; Hope 1994). For example, a study in Jersey City, New Jersey, public housing complexes (Mazerolle et al. 2000a) found that police problem-solving activities caused measurable declines in reported violent and property crime, although the results varied across the six housing complexes studied. In another example, Clarke and Goldstein (2002) report a reduction in thefts of appliances from new home construction sites following careful analysis of this problem by the Charlotte-Mecklenburg (North Carolina) Police Department and the implementation of changes in building practices by construction firms.

Two experimental evaluations of applications of problem solving in crime hot spots (Braga et al. 1999; Weisburd & Green 1995) have been cited often in support of problem-oriented policing approaches (e.g., see NRC 2004). Both are included in this review and will be described more in the sections that follow.

[1] See www.popcenter.org/about/?p=sara for a description of the SARA model on the site and www.popcenter.org/learning/model_curriculum/?p=syllabus for the detailed syllabus for the Model POP Curriculum. The criteria for the Herman Goldstein Award are available at www.popcenter.org/goldstein.

[2] We should note that while problem solving is a key aspect of both problem-oriented policing and community policing, it is important to distinguish POP from community policing programs. As Knutsson (2003, 7) notes problem solving, without the elements of SARA… cannot be regarded as problem-oriented policing. Problem-oriented policing and problem solving go well together; they should both be encouraged, but should not be confused with each other.

Past narrative reviews have concluded that research is supportive of the capability of problem solving to reduce crime and disorder (e.g., NRC 2004; Weisburd & Eck 2004). The National Research Council panel on police practices and policies concluded for example that, "There is a growing body of research evidence that problem-oriented policing is an effective approach" (NRC 2004, 243). In turn, evidence of the effectiveness of situational and opportunity-blocking strategies, while not necessarily police based, provides indirect support for the effectiveness of problem solving in reducing crime and disorder as problem-oriented policing has been linked to routine activity theory, crime pattern theory, rational choice perspectives, and situational crime prevention (Brantingham & Brantingham 1984; Clarke 1992a 1992b; Eck & Spelman 1987). Recent reviews of prevention programs designed to block crime and disorder opportunities in small places find that most of the studies report reductions in target crime and disorder events (Eck 2002a; Poyner 1981; Weisburd 1997). Furthermore, many of these efforts were the result of police problem-solving strategies.[2] We note that many of the studies reviewed employed relatively weak designs (Clarke 1997; Weisburd 1997; Eck 2002a).

POP has emerged as one of the most widely accepted and widely used strategies in American policing. This is indicated both by the adoption of POP by major federal agencies and national policing groups, the creation of national awards for effective problem-oriented policing programs, and the widespread adoption of the approach in American policing and throughout the world. For example, the U.S. federal agency, the Office of Community Oriented Policing Services (COPS Office) adopted POP as a key strategy, funding the Center for Problem-Oriented Policing, and developing over 50 problem-specific guides for police. The Police Executive Research Forum adopted POP as a "powerful tool in the policing arsenal," in the 1980s and began to run a yearly national conference to promulgate and advance POP strategies (Solé Brito & Allan 1999, xiii). In 1993 the Herman Goldstein Award was created and since its inception there have been over 800 submissions from around the world. In the UK, the Tilley Award for POP was created in 1999, and has since received almost 600 submissions. Reflecting the wide-scale adoption of POP by American police agencies, the 2003 Law Enforcement Management and Administrative Statistics (LEMAS) survey reported that 66 percent of local police agencies over 100 officers claimed to be using POP tactics (Bureau of Justice Statistics 2006).

> Our main research question is whether problem-oriented policing is effective in reducing crime and disorder.

Objectives

Objectives

The objective of our systematic review was to synthesize the extant empirical evidence (published and unpublished) on the effects of problem-oriented policing on crime and disorder. We seek to go beyond prior studies in two ways. First, our review takes a much more comprehensive approach to identifying problem-oriented policing studies than prior narrative reviews. We also summarize prior studies using meta-analysis, and do not simply rely on counting the number of studies that reach a specific threshold of evidence (the "vote counting approach"). The statistical summary approach has important implications for coming to conclusions regarding the effects of problem-oriented policing.

Our main research question is whether problem-oriented policing is effective in reducing crime and disorder. As our review of the literature makes clear, departments using problem-oriented policing have applied a diverse group of tactics to ameliorate a variety of problems. As such, it is important to note that we are examining the effectiveness of a process used by the police to develop tactics, not a particular police tactic. The studies examined below differ greatly in the problems addressed and the solutions implemented, but they share the common thread of using a problem-oriented approach.

…a review which ignores pre-post studies without control groups would miss a large number of problem-oriented policing evaluations.

Eligibility Criteria

Eligibility Criteria

The scope of our main review is experimental and quasi-experimental studies that include comparison groups. The preliminary eligibility criteria were as follows:

1. The study must be an evaluation of a problem-oriented policing intervention. For this review only police interventions following the basic tenets of the SARA model were included.[3]

2. The study must include a comparison group which did not receive the treatment condition (problem-oriented policing).

3. The study must report on at least one crime/disorder outcome including sufficient quantitative data to calculate an effect size.

4. The study may deal with problem areas or problem people.

While the main focus of our review follows these criteria, a number of problem-oriented policing experts who were contacted in the study identification stage of our research suggested that a review which ignores pre-post studies without control groups would miss a large number of problem-oriented policing evaluations. Although these studies do not use as strong a research design, we collected these studies and analyzed them separately.

[3] We did not require that a study specifically note that it used the SARA model, but rather that it followed these steps more generally.

Problem-oriented policing represents a broad array of strategies applied to a broad array of problems.

Selection of Studies

Selection of Studies

We used several strategies to perform an exhaustive search for literature fitting the eligibility criteria including a keyword search of online databases, a review of bibliographies of past reviews of problem-oriented policing, hand searches of major academic journals, and searches of the publications of research and professional agencies involved in problem-oriented policing. Our initial searches were conducted during the fall of 2006, and we continued searches through the summer of 2007.

A broad search strategy ensured that we identified all relevant publications that met our inclusion criteria. As a result, the initial search produced a large number of hits in the databases searched (that is, citations). We identified 5,564 studies through searches of online databases and agency publications. We narrowed the list considerably by reviewing titles and abstracts and removing studies that were either not related to problem-oriented policing or that we were certain did not meet our methodological criteria, leaving us with 177 citations. We reviewed the full text of the 177 studies to make final eligibility determinations. After reviewing the studies and consulting with policing experts to ensure we did not leave out any relevant studies, we identified 10 studies that met all inclusion criteria.

While it is not uncommon in Campbell reviews to find only a small number of studies regarding a specific practice, the absence of a wide body of evidence in the area of problem-oriented policing is concerning. Problem-oriented policing represents a broad array of strategies applied to a broad array of problems. The development of systematic knowledge for policing accordingly requires that there be an equally broad array of studies that would allow us to assess what kinds of strategies are effective in what kinds of circumstances and for what kinds of crime.

One explanation for the relatively small number of studies that met the methodological criteria of the review may be that much evaluation of problem-oriented policing has used weaker research designs. In communications with problem-oriented policing scholars, some argued that it was particularly difficult to identify comparison groups for problem-oriented policing programs because problems by their nature often were unique. Accordingly, many problem-oriented policing programs are evaluated using before and after research designs. We identified 45 such studies in our search and included them in a separate analysis. While we wanted to examine such studies, it is important to note at the outset that such designs are generally excluded from Campbell reviews because the absence of a control group makes it difficult

to differentiate between general trends in crime and trends produced by the intervention. A decline over a period of time, for example, may reflect a general crime trend in a city rather than the direct impact of treatment.

The 10 eligible studies included in the main analysis of experimental and quasi-experimental studies are as follows:

1. Problem-oriented policing in a suburban Pennsylvania park (Baker and Wolfer 2003).
2. Problem-oriented policing in Jersey City (New Jersey) violent crime places (Braga, Weisburd, Waring, Green Mazerolle, Spelman, and Gajewski 1999).
3. Knoxville (Tennessee) Public Safety Collaborative (Knoxville Police Department 2002).
4. Oakland (California) Beat Health program (Mazerolle, Price, and Roehl 2000).
5. Minneapolis (Minnesota) Repeat Call Address Policing (RECAP) (Sherman, Buerger, and Gartin 1989).
6. Philadelphia (Pennsylvania) Safe Travel to and from School (Stokes, Donahue, Caron, and Greene 1996).
7. Atlanta (Georgia) Problem-Oriented Policing Approach to Drug Enforcement Project (Stone 1993).
8. San Diego (California) Coordinated Agency Network (C.A.N.) project (Thomas 1998).
9. United Kingdom National Reassurance Policing Programme (Tuffin, Morris, and Poole 2006).
10. Jersey City Drug Market Analysis Project (Weisburd and Green 1995).

We did not include any evaluations of "pulling levers policing" in our main analysis because none of the existing studies include control conditions that met our study requirements. We note that we did not include Hope's (1994) problem-oriented policing in St. Louis project and the Beenleigh Calls for Service Project (Criminal Justice Commission 1998). Although both studies report on problem-oriented policing interventions with a comparison group, neither includes sufficient data to calculate effect size coefficients.

The interventions covered a variety of problems, demonstrating the wide applicability of problem-oriented policing.

Characteristics of Studies

Characteristics of Studies

The 10 eligible studies come from eight U.S. cities (Jersey City was the site for two studies) and six wards in the United Kingdom. Four studies were randomized experiments and six were quasi-experiments with a comparison group. The randomized experiments were all place-based interventions as were four of the six quasi-experiments. The two-person-based interventions focused on probationers and parolees in Knoxville and San Diego.

The interventions covered a variety of problems, demonstrating the wide applicability of problem-oriented policing. Two interventions dealt with reducing probationer/parolee recidivism, two targeted drug markets, one responded to vandalism and drinking in a park, one combated crime in hot spots of violence, one addressed school victimization, two tackled problem addresses, and one targeted overall crime. These interventions also used a variety of approaches to address crime and disorder.

Table 1 on page 42 contains brief descriptions of the problem and the SARA response for each eligible study. For more detailed information on each study, see Weisburd et al. 2008.

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Impact of Problem-Oriented Policing Interventions on Crime and Disorder

Impact of Problem-Oriented Policing Interventions on Crime and Disorder

Of the 10 eligible studies, eight reported findings in favor of problem-oriented policing, though those effects vary widely. Table 2 on page 43 provides a summary of results for each eligible study.

All randomized experiments reported findings suggesting the effectiveness of problem-oriented policing compared to the control conditions. These experimental studies used, at least to some extent, a hot spots approach to problem-oriented policing (Weisburd and Braga 2006), suggesting that problem-oriented policing may be particularly effective when used in combination with hot spots policing.

In the Jersey City problem-oriented policing in violent crime places experiment (Braga et al. 1999), there was a statistically significant decline in total calls for service and total crime incidents when comparing 6 months before and after the intervention. Social and physical observation data showed improvement in visible disorder in 10 of the 11 treatment areas compared with the control sites after the intervention. The Oakland Beat Health study (Mazerolle et al. 2000) showed a significant decrease in drug calls for service in the experimental sites compared with the control sites using data from 12 months before and after the intervention. There was no significant difference between the two groups for disorder calls for service. The Minneapolis RECAP study (Sherman et al. 1989) exhibited a slightly larger decline in calls for service at target residential sites compared with control sites, but little or no difference in commercial sites when comparing 1986 and 1987 data. The residential call decline was more dramatic in the first 6 months of the experiment.

While these studies tested problem-solving approaches, it is important to note that focused police attention was brought only to the experimental locations. Accordingly, it is difficult to distinguish between the effects of bringing focused attention to hot spots and that of such focused efforts being developed using a problem-oriented approach. The Jersey City Drug Market Analysis Experiment (Weisburd and Green 1995) provides a more direct test of the application of problem-solving approaches because experimental and treatment conditions received similar levels of police attention (but a SARA approach was used only in the treatment hot spots). The experimental sites had significantly smaller increases in disorder calls compared with the control sites using 7 months of before and after data.

The experiment had no significant impact on property crime or violent crime calls for service. Drug-related calls for service were not analyzed because the experimental treatment likely had an impact on drug-related calls for service (that is, residents were encouraged to report drug activity to police) and because the distribution of events made statistical analyses unreliable.

Both probationer/parolee quasi-experiments reported significant findings in favor of the problem-oriented policing protocols. In the San Diego Coordinated Agency Network project (Thomas 1998), the recidivism rate for program participants was only 6 percent. A random group of similar juveniles not chosen for the program had a 22 percent recidivism rate. In the Knoxville project (Knoxville Police Department 2002), 29 percent of program participants completed the terms of their parole successfully, while only 11 percent of those in a historical comparison group did not have their parole revoked.

In the Baker and Wolfer (2003) study, the residents living near the park were significantly more likely than comparison group residents to report being the victims of vandalism or seeing public drinking. After the intervention, however, the victimization rates for the target area had declined to the point where there was not a statistically significant difference between the two groups.

The Tuffin et al. (2006) report on reassurance policing produced results favoring problem-oriented policing, although these were largely driven by major crime declines in two sites. Overall, crime dropped by 4 percent more in the target sites than the comparison sites. But in three sites, declines were similar to control sites, and in one site the target group showed an increase in crime while the comparison group experienced a crime decrease. Thus, there was an overall positive finding related to problem-oriented policing and crime-control effectiveness, but the impact varied greatly across the sites.

The two studies that did not report findings in favor of problem-oriented policing results were Stone (1993) and Stokes et al. (1996). In the Stone study, the rate of residents being asked to buy or sell drugs measured on a resident victimization survey increased in both the treatment and comparison housing projects, but the increase was substantially higher in the treatment area. In the Stokes et al. (1996) study, the safety corridor proved to be largely unsuccessful. The rate of student victimization actually increased in the target school, while decreasing significantly in the three comparison schools, indicating a backfire effect of the problem-oriented policing intervention.

Meta-Analysis Results

We completed a meta-analysis of the 10 eligible studies to examine the standardized effect size for each study and to calculate an overall effect for the impact of problem-oriented policing on crime and disorder. A meta-analysis is a technique for summarizing a group of studies statistically (Lipsey and Wilson 2001). For each study, the effect size indicates how large an impact the problem-oriented policing intervention had on crime. If crime went down more in the target area than the control area, the effect size would be positive. The average standardized effect size for the 10 studies is 0.126.[4] This effect is highly statistically significant, but is fairly modest in size (Cohen 1988). While this is not a large effect, it does indicate that problem-oriented policing is associated with a statistically significant decline in crime and disorder (see Table 3 on page 44).

We also completed a meta-analysis using the largest effect size for each study. Some of our studies included multiple primary outcomes, so we wanted to find out where problem-oriented policing programs that examined multiple outcomes could be most effective. The overall standardized effect of 0.297 was substantially larger than the mean combined effect size and this effect remains statistically significant. Among the five studies with more than one coded outcome, several of the largest effect sizes were substantially larger than the mean. For the Jersey City Drug Market Analysis Program, (Weisburd and Green 1995), the largest effect (disorder calls for service) was more than four times the size of the mean effect (0.696 versus 0.147). For RECAP (Sherman et al. 1989) the largest effect (residential calls for service) of 0.369 was nearly double the mean effect. The largest effect for the Beat Health Project (Mazerolle et al. 2000) (drugs calls for service) was more than double the mean effect. In the Jersey City problem-oriented policing in violent places study (Braga et al. 1999), the largest effect (total incidents) was not substantially larger than the mean, but it did reach statistical significance in this analysis (see Table 3).

[4] We used a random effects model because problem-oriented policing interventions are a heterogeneous treatment that can vary considerably between studies. The common factor is the process used by the police. Heterogeneity is also found in the types of problems addressed and outcomes examined.

Study Implementation

Overall, most of the studies report at least a moderate level of success in implementing treatment. Nonetheless, there were specific implementation problems in some of the studies, which provide a context for understanding differences in effects across the programs. These are briefly reported on here, but see Table 4 in Weisburd et al. 2008 for more detail.

Of the experimental studies, only Mazerolle et al. (2000) reported full implementation without any significant problems. The Braga et al. (1999) study was originally intended for officers to focus on 56 problem hot spots (in 28 matched pairs), but because of organizational changes in the Jersey City Police Department, the final project included only 12 hot spots (Braga 1997). After limited progress in the first 9 months of the experiment, Weisburd and Green (1995) extended the intervention period to achieve fuller implementation.

The Sherman et al. (1989) RECAP study presented more serious intervention problems (see Buerger 1993). There were multiple issues with the selection of hot spots for the intervention including duplicate calls and instability in the year-to-year trends of high-call addresses. In implementing the project, the team of five officers assigned to the intervention was overwhelmed by the number of hot spot locations. In turn, the 226 addresses with a multitude of different problems were difficult to respond to adequately in a year.

The most "successful" quasi-experiments, the two programs to reduce probationer/parolee recidivism, reported no major implementation difficulties. In turn, though these studies could not rely on the strong assumptions of a randomized experiment, they put significant effort in trying to identify valid comparison conditions. The Baker and Wolfer (2003) study also had no significant implementation failures, but the evaluation method was potentially problematic, because the resident survey sample sizes were fairly small

The other three quasi-experiments had more substantial problems, which may explain the weaker study outcomes that were observed. Stone (1993) reported that many officers in the Atlanta Police Department did not view problem solving as "real" police work, so effort was often limited. There was a lack of administrative support from top officials in the department and the problem-oriented policing training was poorly delivered and limited. During the intervention, officers frequently took time off, leaving the problem-oriented policing program chronically understaffed.

Stokes et al. (1996), which produced the only backfire effect in the review, also evidenced implementation difficulties, in this case with the school safety corridor. The largest problem seemed to be that, despite an awareness campaign, two-thirds of students at the target school reported they were unaware of the existence of the corridor. In addition, even though violence was more likely in the post-school afternoon hours, the corridor was more poorly staffed during this period because of police shift changes and more limited police resources.

Tuffin et al. (2006) reported a number of problems with full implementation of reassurance policing. The process evaluation found that only two of the six target sites fully implemented the program. The other four sites had difficulties in partnering effectively with the community and using targeted problem solving. The sites that fully implemented the response showed the strongest results in favor of problem-oriented policing.

Pre/Post Studies

As noted earlier, we also collected pre/post studies that did not have a control or comparison condition. These studies are weaker methodologically, but are more numerous in the problem-oriented policing literature. We found 45 pre/post or before/after design studies that typically examined official crime data before and after a problem-oriented policing intervention to determine how the problem-oriented policing project affected crime.

These studies covered a wide variety of problems ranging from neighborhood disorder to homicide. As with the studies in the main review, responses also varied greatly, but frequently included a combination of increased community involvement, targeted enforcement, and situational/environmental improvements. For more detailed information on each study, see Table 5 in Weisburd et al. 2008.

Thirty-two of the 45 studies come from Goldstein or Tilley Award submissions. Both awards are given to police departments for outstanding problem-oriented policing projects that are innovative, use effective problem solving, and show success in reducing crime. Because many of the pre/post studies were submissions for an award, they almost exclusively report on successful problem-oriented policing interventions.

Of the 45 pre/post studies, 43 report a decline in crime or disorder after the problem-oriented policing intervention. Thus, even though 32 of the studies were award submissions and 31 of these showed a positive impact, 12 of the 13 other studies also reported a beneficial impact of problem-oriented policing. Only one study reported an increase in crime after using problem-oriented policing. The average percent change in crime over all studies was a sizeable 44.45 percent decrease.

To account for variation in sample size (that is, crime incidents or calls for service) between studies, we calculated a weighted average percent change. After weighting each study based on sample size, the average decrease in crime was still 32.49 percent.

We also compared the percent change for all studies and then for published and unpublished studies separately. We were particularly concerned that the large number of award submissions in the latter group might bias the outcomes toward success. When we examined only award submissions, we saw a larger percent decrease of 47.79 percent. For the nonaward submissions, the percent decrease was smaller, but still substantial (35.55 percent).

Overall, these results reinforce the conclusions of our main analysis that showed a statistically significant improvement in the experimental conditions. Nonetheless, the very large size of the effects in the before/after designs, compared with the experimental and quasi-experimental designs, raises important questions about whether before/after designs provide a somewhat biased view of the magnitude of the effects of problem-oriented policing interventions.

…problem-oriented policing can be applied successfully to a diverse group of problems in a variety of situations.

Conclusions and Policy Implications

Conclusions and Policy Implications

This review began with a main research question regarding the effectiveness of problem-oriented policing in reducing crime and disorder. Overall, our review reinforces prior findings based on narrative reviews (NRC 2004; Sherman and Eck 2002; Weisburd and Eck 2004) and more general assumptions about the crime and disorder prevention benefits of problem-oriented policing approaches (Bullock and Tilley 2003; Eck and Spelman 1987; Goldstein 1990; Scott 2000). We found that problem-oriented policing approaches have a significant effect on the outcomes examined.

One surprise in the analysis, given prior discussion of problem-oriented policing, is the relatively modest effect sizes observed in the meta-analyses of experimental and quasi-experimental studies. The average mean effect size of between .10 and .20 for problem-oriented policing interventions, while meaningful and statistically significant, does not suggest the substantial impact on crime and disorder for the approach that some scholars may have assumed.

One explanation for this is suggested by the identification of implementation problems in some of the studies reviewed. We found that weaker program effects are often the result of a failure to fully implement problem-oriented policing interventions. This finding is consistent with other reviews in criminology that have identified treatment fidelity as a key issue in understanding the effects of weak programs (Farrington et al. 1986; Weisburd 1993).

Moreover, examination of the largest effects in the studies often led to much more robust outcomes. In turn, it is not always disingenuous to focus on such outcomes because they are sometimes the main concern of the intervention (e.g., see Weisburd and Green 1995). Additionally, when we examined pre/post studies we, in fact, found that problem-oriented policing approaches had a much stronger effect. Whether this is a result of the weakness of the methods used was not possible to examine fully in this review. Despite our concerns regarding pre/post studies without comparison groups, their consistency also adds weight to the conclusion that problem-oriented policing is an effective policing strategy.

What is most surprising in this review is that there was so small a group of studies that met our main inclusion threshold. As noted already, problem-oriented policing is one of the most important and widely implemented police innovations of the last 2 decades. The small group of studies in the review allowed us to come to a solid conclusion regarding the promise of problem-oriented policing, but did not allow statistical conclusions regarding the types of approaches that work best for specific types of problems. We think it a major public policy failure that the government and the police have not invested greater effort and resources in identifying the specific approaches and tactics that work best in combating specific types of crime problems. The portfolio of studies that exists is serendipitous, at best, and does not represent any concerted public effort to either assess the effectiveness of problem-oriented policing as an approach, or understand the mechanisms that would make it more successful.

Law enforcement agencies should implement more experimental and quasi-experimental problem-oriented policing evaluations. The use of a comparison group is instrumental in conducting a strong methodological evaluation. Agencies should develop this capacity within their analysis components or partner with universities and evaluators prior to implementing problem-orienting policing. Crime and problem analysts within agencies can be utilized to develop problem-oriented policing strategies using experimental and quasi-experimental designs. We recognize that experimental studies, and even quasi-experimental studies with comparison groups, may be difficult to implement in some problem-oriented policing interventions (Eck 2002b). In particular, specific problems addressed by the police may be unique and, therefore, it may be difficult to identify a reasonable comparison condition. Still, the assessments of many problem-oriented policing projects can be made much more rigorous through efforts to identify a reasonable comparison group for the subjects or places that receive treatment.

We can make some broad generalizations about how and when problem-oriented policing seems to work best from our narrative review of the studies. First, problem-oriented policing appears most effective when police departments are on board and fully committed to the tenets of problem-oriented policing. In Stone (1993) for example, the program suffered greatly because the Atlanta (Georgia) Police Department was not fully committed to problem-oriented policing. Second, program expectations must be realistic. Officer caseload must be kept to a manageable level and police should not be expected to tackle major problems in a short period of time. In the RECAP study (Sherman et al. 1989), for example, officers were overwhelmed by dealing with more than 200 problem addresses in 12-month period. Conversely, Braga and associates (1999) gave officers a more manageable 12 hot spot caseload, and officers were more effective in implementing the response. In general, we found larger effect sizes for studies that focused on particular types of crime (e.g., disorder), as opposed to total crime, providing further evidence of the importance of a more focused approach. Third, based on limited evidence, collaboration with outside criminal justice agencies appears to be an effective approach in problem-oriented policing. The two probationer-police partnerships were particularly successful in reducing recidivism.

One important conclusion from this review that can be drawn from the diversity of programs and problems addressed is that problem-oriented policing can be applied successfully to a diverse group of problems in a variety of situations. The most successful studies in this review covered problems ranging from parolee recidivism to violence in hot spots to drug markets. This diversity of programs and approaches should also bring caution to any conclusions drawn from this study. These studies often involve overlapping interventions such as hot spots policing or community policing. Indeed, many policing interventions are so multifaceted that it can be difficult to isolate the impact of any one aspect of the treatment.

With problem-oriented policing, it is important to remember that we were not evaluating a particular police strategy per se. Instead we were evaluating a process police use to develop strategies. Despite a small number of eligible studies, we found an overall positive impact of problem-oriented policing across different units of analysis, different types of problems, and different types of outcome measures.

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Tables

Table 1: SARA Characteristics and Research Design for Eligible Studies.

Study	Problem	Scanning and Analysis	Treatment/Response	Research Design and Units
Baker and Wolfer (2003)	Park with alcohol use, drug use, and vandalism	Physical survey of the park, crime prevention surveys, crime mapping	Target hardening, Proactive patrol, curfew law, removed pay phone used for drug deals, crime newsletter	Quasi experiment: survey of 250 residents living near the park compared to sample of 670 town residents
Braga et al. (1999)	Hot spots of violent crime (e.g., street fighting, robbery, assault)	Computerized mapping used to create hot spots Officers completed report on problems	A tailored solution to meet the problems observed during analysis Responses varied, but all included aggressive order maintenance	Randomized experiment: 12 hot spots receiving POP compared to 12 matched hot spots receiving normal patrol
Knoxville Police Department. (2002)	Probationers frequently rearrested	Review of crime and probation revocation data with Tenn. Board of Probation & Parole	Collaboration of police, parole, and service providers to develop team supervision and treatment plan	Quasi experiment: 265 probationers in the program compared to a historical sample of 261 probationers
Mazerolle et al. (2000)	Drugs and disorder at nuisance locations	Beat Health team visited site, conducted physical survey and worked with place managers	Tried to develop working relationship with property owners and could use team of city inspectors and civil law	Randomized experiment: 50 Beat Health hot spots compared to 50 referred sites that received normal patrol
Sherman et al. (1989)	High numbers of calls at commercial and residential addresses	Call logs used to generate highest call addresses Officers diagnosed the problem and developed an action plan	Wide variation in strategies used by RECAP team Residential strategies often focused on helping landlords with problem tenants	Randomized experiment: Comparing commercial (119 pairs) and residential (107) addresses that received POP to control addresses
Stokes et al. (1996)	Student violent victimization occurring on the way to school	Student focus groups and initial victimization survey used to map student-identified problem areas	Creation of a Safe Corridor 7–9 police officers patrolled a 10x3 block area from 8–9 a.m. and 2:30–4 p.m. with bikes, cars, and on foot	Quasi experiment: Victim. survey 414 target school students compared to 1,681 students at nearby schools
Stone (1993)	Drugs in public housing projects	Management Team of police and housing authority conducted resident survey and meetings with police officers and investigators	Focused on improving lighting, abandoned cars, trash/litter, playground equipment, and poorly placed clotheslines to address problems associated with drugs	Quasi experiment: Victim. Survey—149 residents of 2 target housing projects compared to 135 residents of 2 similar housing projects
Thomas (1998)	High rearrest rates of juvenile probationers	Recognition that juvenile supervision was inadequate Examined crime and arrest data	Police/probation collaboration to increase community-based supervision, mentoring, and program referral	Quasi experiment: 80 program probationers compared to a historical sample of 80 probationers
Tuffin et al. (2006)	Varies by ward all included antisocial behavior	Planning stages: Research, engage, public preferences, investigation and analysis, public choices	Varied by site, but included increasing police presence, and developing a targeted response with community stakeholders	Quasi experiment: Six sites (neighborhoods in the U.K.) matched to comparison areas
Weisburd and Green (1995)	Drug and drug-related disorder	Stepwise process: "planning stage" collecting data on the characteristics of the place using crime maps, and community meeting	"implementation stage" coordinated crackdown and use of government resources "maintenance stage" ensured drug activity remained under control	Randomized experiment: 28 hot spots receiving treatment compared to 28 hot spots receiving normal drug area patrol

Table 2: Crime/disorder outcomes for eligible studies

Study	Crime/Disorder Outcomes	Other Outcomes
Baker & Wolfer (2003)	Reduction in perceptions of crime problem in target group compared to comparison area	Target group more likely to see officers on patrol and report a fear reduction
Braga et al. (1999)	Significant decline in total criminal incidents and calls for service in treatment compared to control hot spots	Social and physical disorder declined at 10 of the 11 treatment hot spots
Knoxville PD (2002)	29% in program succeeded (complete parole without revocation) compared to only 11% success in comparison group	None
Mazerolle et al. (2000b)	Significant decrease in experimental group drug calls compared to control group, but no difference for disorder, violence, or property calls	None
Sherman et al. (1989)	Small decrease in calls in treatment residential addresses compared to control, but no difference in commercial addresses	None
Stokes et al. (1996)	Victimization rate in target school increased, while significantly decreasing at the control schools	Percentage of students afraid of an attack increased at the test school and decreased at the control schools
Stone (1993)	Rate of being asked to buy or sell drugs increases more in the intervention than the comparison area	None
Thomas (1998)	Those in C.A.N. program had ¼ the recidivism rate of a random group of those not selected for the program	Those in C.A.N. were more likely to complete probation conditions
Tuffin et al. (2006)	Only two of six sites have a larger crime decline than the comparison area	Target sites had increased confidence in the police
Weisburd & Green (1995)	Experimental group has significantly smaller increases in disorder calls compared to control group but no impact on violent or property calls	None

Table 3: Mean and largest effect size from the meta-analyses of eligible studies

Study	Mean Effect	Largest Effect
Thomas (1998)	0.771*	0.771*
Knoxville PD (2002)	0.664*	0.664*
Baker & Wolfer (2003)	0.236	0.328
Sherman et al. (1989)	0.192	0.369*
Weisburd & Green (1995)	0.147*	0.696*
Braga et al. (1999)	0.143	0.198*
Mazerolle et al.(2000b)	0.137	0.280*
Tuffin et al. (2006)	0.028	0.028
Stone (1993)	-0.001	-0.001
Stokes et al. (1996)	-0.203*	-0.203*
Overall Effect	0.126*	0.296*

*Statistically significant at the $p < .05$ level.

Effect sizes based on a random effects model.

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