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## The Effects of Administrative Factors on Police Officer Job Performance

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THE EFFECTS OF ADMINISTRATIVE FACTORS ON  
POLICE OFFICER JOB PERFORMANCE

by

Trick Anthony Geary Jr.

Bachelor of Science  
University of South Carolina, 2001

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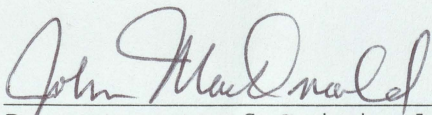
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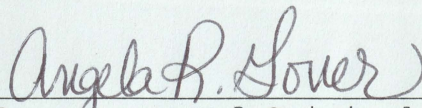
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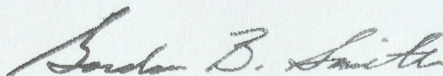
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## A Dedication

To my parents Tony and Renita Geary for making my education possible. Knowledge, advice, and tireless assistance throughout this thesis process. I would also like to thank Dr. Angela Gover for her input and proofreading on this thesis.

More importantly, I would like to thank John and Angela for being my mentors, for giving me the opportunity to work on the Lexington County Domestic Violence Court grant, for pushing me to excel both in and out of school, and for all the guidance and support they have given me throughout my graduate education.

Finally, I would like to thank my wife Shannon for her encouragement and understanding, without which I could not have done this.

## Acknowledgements

First, I would like to thank Dr. John MacDonald for all of his knowledge, advice, and tireless assistance throughout this thesis process. I would also like to thank Dr. Angela Gover for her input and proofreading on this thesis.

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The topic of police management and its effect on officer arrest rates is an important issue that has not received the level of attention it deserves. There is an abundance of available training and a push for better trained police executives. In the present study the relationship between police administrative factors and officer arrest rates are addressed using data from a national probability sample of police departments.

The study uses ordinary least squares regression to analyze the independent relationship between police administrative factors, as measured by the Law Enforcement Management and Administrative Statistics, and officer arrest rates, as measured by the Uniform Crime Reports.

Findings indicate that there are several administrative factors that significantly affect officer arrest rates. Officers from agencies that use problem-oriented policing strategies have significantly higher rates of arrest for overall crime and specifically violent crime only. Officers who are issued marked take-home patrol cars have significantly higher rates of arrest for overall crime. However, officers that are allowed personal use of their patrol cars while off-duty have significantly lower rates of arrest for overall crime. Violent arrests



rates were also positively affected by the presence of a union for sworn personnel.

This study advances knowledge of effectiveness of police management on actual job performance. Findings suggest that police administrators should continue to focus efforts at problem-solving to maximize job performance within their respective agencies.

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INTRODUCTION

It is assumed by police executives that various administrative factors influence police officer job performance. Agencies, for example, seek highly educated and better trained officers with the idea that education and training will produce more effective policing. Principal among these factors is the policing philosophy or strategy employed by a particular agency. In the past three decades there has been a shift in the focus of policing. Traditionally, the primary focus of modern police has been law enforcement through preventive patrol, efficient service, and fast response time. However, research suggested that response time and preventive patrol were not effective crime control strategies (Kelling, Pate, Dieckman, & Brow, 1974; Pate, 1987). The recent shift in policing has broadened the scope of police activity and now centers on quality of life issues. The new quality of life focus has taken many forms including community-oriented policing (COP), problem-oriented policing (POP), and "zero tolerance" aggressive enforcement policing (Cordner, 2001; Goldstein, 1990; Smith, 2001; Katz, Webb, & Schaefer, 2001). Many jurisdictions develop their own unique



response by combining some or all of these methods. Considerations such as the crime, politics, and priorities specific to the area will determine which methods are most appropriate.

Other administrative factors that may influence mapping, arrests are traffic enforcement, drugs and vice, the use of computers and other technology for administrative and operational purposes, issuing marked take-home patrol cars, whether or not the department is unionized, and residency and educational requirements. The use of computer technology can range from the use of in-field computers to computer-aided dispatch to mapping and analysis in the form of a COMPSTAT program.

The purpose of this study was to examine whether police administrative factors affect officer job performance. Police administration is generally viewed as key to police performance. However, very little research has been conducted empirically to examine the relationship between police administration and police officer job performance.

The study measured this relationship by linking police administration data from the Law Enforcement Management and Administrative Statistics report collected by the Bureau of Justice Statistics with the Uniform Crime Reports compiled



by the Federal Bureau of Investigation. Several factors were used to measure various aspects of police administration. Operational factors that were measured include: an index of the use of in-field computers and the use of computers in areas such as crime analysis, mapping, and dispatching, the rates of male versus female officers, and the rates of administrative versus field officers. Enforcement factors that were measured include the enforcement of traffic, vice, and drug offenses. Quality of life policing strategies were measured by the use of community policing and problem solving strategies (such as the SARA model), the amount of training offered in these areas, and the allocation of agency resources in support of these strategies. Other factors included residency requirements, educational requirements, and collective bargaining for sworn personnel.

The study used ordinary least squares regression to analyze the independent relationship between police administrative factors and the rate of arrests made by police officers. The implications of this study could be far reaching. This study advances knowledge of the effectiveness of police management on actual job performance. In addition, findings should help police



administrators understand where to maximize efforts within their respective agencies.

The foundation of the theory of collective efficacy is based on two theories: group efficacy (Bandura, 1982) and the theory of collective efficacy (Bandura, 1999). Group efficacy is the belief that a group is capable of performing a task. Collective efficacy is the belief that a group is capable of performing a task that requires the coordinated effort of all group members (Bandura, 1999). The theory of collective efficacy is based on the idea that people are more likely to engage in collective action when they believe that their group is capable of performing the task. This theory has been used to explain a variety of social behaviors, including collective action, social movements, and community development. The theory of collective efficacy has been used to explain the success of community development projects in which residents are encouraged to take ownership of their community and to work together to improve it. The theory of collective efficacy has also been used to explain the success of social movements in which people are encouraged to work together to achieve their goals. The theory of collective efficacy is a powerful tool for understanding and promoting collective action.

The theory was developed by Albert Bandura and John E. Meeus (1982) and was later refined by Bandura (1999).



## CHAPTER 2

### REVIEW OF THE LITERATURE

The foundation of quality of life policing is based in two theories: broken windows theory and the theory of collective efficacy (Wilson and Kelling, 1982; Sampson and Raudenbush, 1999). Broken windows theory was first studied as a psychological phenomenon by Philip Zimbardo. Zimbardo arranged to have an "abandoned" vehicle parked on the side of the road in The Bronx, New York. Within ten minutes, the car was vandalized and pillaged. After a short time, anything of value had been taken and the remaining vehicle was destroyed. Another vehicle was left in Palo Alto, California. This vehicle was not harmed for more than a week. At that point, Zimbardo hit part of the vehicle with a sledgehammer; within a few hours the car had been destroyed by passersby. The theory is that property, when left untended, is more subject to destruction or theft. The idea that something has been abandoned makes it easier for people to justify disregarding norms that prohibit the theft or destruction of someone else's property (Wilson & Kelling, 1982).

The theory was adapted for criminal justice by James Q. Wilson and George Kelling. "Broken Windows" was



comprised of three main theses. The first was that neighborhood disorder, personified by drunks, vagrants, and other disorderly people, increases citizen fear of crime. The second argument was that, in much the same way that an unfixed broken window, signaling abandonment of a building, can lead to further vandalism, disorderly behavior in a community can lead to citizen fear and an increase in predatory behavior by criminals. The third argument was that police can effectively reduce fear and crime and confront disorder only with assistance from the public (Wilson & Kelling, 1982). The broken window theory is the primary justification for zero tolerance quality of life policing initiatives. It also explains the "abandonment" that community oriented policing attempts to prevent. Just as when a window is broken and left unrepaired the destruction of other windows follows, if disorder and other low level offenses are allowed to occur unchecked, additional, and potentially more serious, crime will follow. Community policing stresses "ownership" in officers and residents to show that their community has not been abandoned or left to be taken over by crime.

Related to broken windows theory is the concept of collective efficacy. Collective efficacy can be defined as "cohesion among neighborhood residents combined with shared



expectations for informal social control of public space" (Sampson & Raudenbush, 1999, p. 603). Collective efficacy was an attempt to explain why areas of concentrated poverty also exhibit high rates of crime. The assumption that disorder can lead to serious crime is a key component of "broken windows," and collective efficacy counteracts social disorder through social control. Social control is "the capacity of a group to regulate its members according to desired principles—to realize collective, as opposed to forced, goals. One central goal is the desire of community residents to live in safe and orderly environments that are free of predatory crime" (Sampson, Raudenbush, & Earls, 1997, p. 918). Community and problem-oriented policing attempt to build collective efficacy through police/community partnerships aimed at solving social problems. By establishing partnerships and building consensus regarding common values and goals of a community and improving the quality of life for its members police can instill pride, confidence, and a sense of ownership in residents thus reinforcing cohesion and social ties.

#### COMMUNITY-ORIENTED POLICING

Community-oriented policing (COP) is an enigmatic concept, seldom being the exact same thing for any two



departments. There are, however, several characteristics that are common to many programs. These characteristics can be grouped into four dimensions: philosophical, strategic, tactical, and organizational. The characteristics in the philosophical dimension include citizen input and participation. There are numerous ways that citizens can participate and influence the police process. Departments can have citizen advisory boards allowing residents to voice their concerns and help improve police community relations. Community policing also implies a broad police role that extends beyond the enforcement of the law. Besides their traditional role of law enforcers, police assist the community in a variety of other ways. Police work is much more service-oriented. Community-oriented policing can be tailored to the needs of the particular jurisdiction. Increased discretion allows officers to handle situations according to the norms of the community (Cordner, 2001).

The second dimension of COP is strategic. The ideals of COP involve prevention through relationships with the community fostered by alternative means of patrol. These alternative means, including foot patrol, mounted patrol, and bicycle patrol, are intended to encourage more face-to-face interaction between the police and the public. Another



aspect of COP is geographic responsibility. Rather than holding officers responsible for a certain shift, officers are responsible for an area or neighborhood. This helps officers to establish rapport with residents of a certain neighborhood or area and also allows residents establish positive relations with the police. One of the most important aspects of COP is the emphasis on proactive policing, rather than the traditional reaction of responding to calls after a crime has been committed (Cordner, 2001).

One aspect of the tactical dimension is positive police/community interactions and partnerships between the police and the community. Rather than limit the interaction between police and the public to negative dealings such as the giving and receiving of traffic citations, COP officers are encouraged to initiate positive dealings with residents and business owners even if only to introduce themselves and offer assistance if needed. Partnerships with the community are other important aspects of COP. Citizens can assist the police through service as volunteers, reserve officers, or watching their neighbors' homes and taking an interest in maintaining a safer community. Officers can reciprocate by participating in



programs in the community or schools such as mentoring or establishing neighborhood watch groups (Cordner, 2001).

The fourth dimension of community policing is organizational. Restructuring associated with COP is comprised of several factors. Decentralization of authority and responsibility allows police service to be customized to the particular needs of the community and encourages a sense of ownership within officers giving them a stake in the safety of the community. Organizational structure is normally flatter (i.e. fewer levels of hierarchy) in community-oriented agencies. Officers are generalists, filling several roles for the community they serve. Specialization is limited to highly technical positions. Officers work in teams to improve efficiency and effectiveness. Administrators of COP agencies generally allow their officers more discretion and encourage creativity in accomplishing the broad goals of the department (Cordner, 2001).

#### RESEARCH ON COMMUNITY-ORIENTED POLICING

Research indicates there are some clear benefits of community-oriented policing. Two separate studies have shown that foot patrol and other community-oriented policing techniques are significantly correlated to



reductions in citizen fear of crime. In *The Newark Foot Patrol Experiment*, foot patrol and other community policing strategies resulted in decreases in citizen fear of crime (Moore & Trojanowicz, 1988). In a similar study in Michigan, "almost 70 percent of the citizens interviewed during the final year of the study felt safer because of the Foot Patrol Program" (Trojanowicz, 1982, p. 82). While there appears to be a correlation between community policing methods such as foot patrol initiatives and reduced citizen fear of crime, the correlation is not so clear between community policing and reduced crime. Studies have found mixed evidence regarding COP and reductions in crime. Several studies were unable to find any correlation between foot patrols and reduction in crime (Bowers & Hirsch, 1987; Pate & Annan, 1989). Kessler and Duncan (1996) found that neighborhood watch programs were not effective at reducing crime in Houston. An exception is police initiated door-to-door contacts. Studies have shown that home visits may lead to reductions in violent crime (Uchida, Forst, & Annan, 1992; Skogan, 1994). MacDonald (2002) found that departments that practiced community policing had significantly higher robbery rates.

the following statements by Kelling and Bratton: "Mid-management of the departments [studied], seeing team



## ADMINISTRATIVE ISSUES IN COP

Community-oriented policing represents a fundamental change to the culture of an agency. Therefore, it is necessary, when implementing COP, to take precautions at various levels to help ensure a smooth and successful transition. The police culture has long been a numbers-driven occupation governed and guided by lengthy policy and procedure manuals. Success has been measured in terms of arrest rates, response time, and citations issued. In order to minimize resistance to change, the agency culture must first change. Officers must be shown the value of community policing. Awards and promotions must be used to reinforce behavior that is good under the new system (Cordner, 2001). Rather than awarding the officer with the best arrest statistics, an agency should reinforce the value of the officer who starts a tutoring program at the local middle school or helps establish a neighborhood watch program. Officers and middle managers must be included in the implementation process and should have input regarding the details of the program. Middle managers have the potential to become major sources of obstruction. This is noted on the following statements by Kelling and Bratton: "Mid-management of the departments [studied], seeing team



policing as a threat to their power, subverted and, in some ways, actively sabotaged the plans" (1993, p. 1). The role of the middle manager has traditionally been to oversee district operations and ensure productivity (as measured in crime statistics). If the new culture will no longer concentrate on crime statistics as the primary measure of productivity, the role of middle manager must evolve with the culture. Middle managers should be given discretion to operate with some autonomy within the new department guidelines, and they should, in turn, give discretion to officers on the road to work cases with innovation and creativity (Sparrow, 1988).

#### PROBLEM-ORIENTED POLICING

The second major approach to quality of living policing shares many characteristics with community-oriented policing. While similar to COP, problem-oriented policing (POP) also contains some unique elements. The first element of POP is the grouping of incidents as problems. A problem can actually be one of three things, "a cluster of similar, related or recurring incidents rather than a single incident, a substantive community concern, [or] a unit of police business" (Goldstein, 1990, p. 66). Rather than deal with each individual call for



service, police group similar incidents that arise as a result of the same stimuli as one problem. Each incident is not an isolated, self-contained event, but a symptom of a larger problem (Goldstein, 1990). Examples of problems are "disorderly youth who regularly congregate in the parking area of a specific convenience store [and] an annual ethnic carnival with a high incidence of disorderliness, racial conflict, and street robberies" (Goldstein, 1990, p. 67).

Incidents can be grouped into problems according to several characteristics. Incidents are most frequently grouped according to behavior. Examples include noise, drug sales, and truancy. Another characteristic used to group incidents is territory. The most common example is a low-income housing area. Other examples might include commercial districts or a school. The third characteristic used to group incidents is persons. This can be according to offenders, complainants, or victims and can be very specific or fairly general. Incidents may involve a known repeat offender or may involve a group such as the elderly or homeless. The last characteristic used to group incidents into problems is time (Goldstein, 1990). Examples include the time of a particular event such as a



sports event or a time of day an area high school's lunch time.

The second element of POP is the perceived goal of policing. Rather than focus on procedures, effectiveness at solving problems is the ultimate goal (Goldstein, 1990). Goldstein (1990) argues that traditional policing suffers from a "means over ends" orientation. In other words, agencies are more concerned with going through the motions and procedures of policing than actually resolving the problems in their jurisdictions (Goldstein, 1990).

With its basis being problem solving, another element of POP is the system of problem identification and solving of problems. Coined the SARA model (Eck & Spelman, 1987), there are four steps used by officers: **scan**, **analyze**, **respond**, and **assess**. The first step, scanning, is used to identify the problem. A problem can be identified by line officers, members of the community, or even the media. Analysis of the problem includes consideration of the causes, scope, and effects of the problem. Response is the action taken to solve the problem. Assessment consists of determining whether the response to the problem was effective (Goldstein, 1990). There are five degrees of effectiveness associated with problem solving: 1) elimination of the problem, 2) reducing the number of



incidents resulting from the problem, 3) reducing the severity of the incidents associated with it, 4) creating ways to better deal with the incidents, and 5) dropping the problem from police consideration (Eck, Spelman, Hill, Stephens, Stedman, & Murphy, 1987).

Another element of POP is a proactive approach to crime. Rather than waiting to respond to calls, officers address problems that cause crime or may eventually cause crime. Officers respond to concerns about problems in certain neighborhoods. Officers are also decentralized and are given geographic responsibility to "capitalize on their knowledge of the community" (Goldstein, 1990, p. 159). To maximize problem-solving capabilities, POP departments network with other agencies to implement cooperative solutions to community problems (Goldstein, 1990).

#### RESEARCH ON PROBLEM-ORIENTED POLICING

There is substantial research regarding problem-oriented policing. One example is Boston's "Operation Ceasefire" (Braga, Kennedy, Waring, & Piehl, 2001). The premise of the experiment was to measure the effect of POP strategies on youth firearms violence. It was "based on the 'pulling levers' deterrence strategy that focused criminal justice attention on a small number of chronically



offending gang-involved youth responsible for much of Boston's youth homicide problem" (Braga et al., 2001, p. 195). The experiment tested POP strategies on a selected population, engaging in a selected crime, within a selected region. According to Braga and associates, "the impact evaluation support the growing body of research that asserts that problem-oriented policing can be used to good effect in controlling crime and disorder" (2001, p. 219). Eck and Spelman (1987) found that POP measures resulted in a decline in prostitution-related robberies in Newport News. Problem-solving strategies were used to target guns and reduce juvenile homicide rates in Boston (Kennedy, 1997; Braga et al., 1999a). Reductions in robbery and street-fighting were reported in Jersey City as a result of problem-oriented policing efforts (Braga et al., 1999b). Other research also exists supporting the view that POP is an effective method of controlling crime (Goldstein, 1990; Fyfe, Goldkamp, & White, 1997).

#### ADMINISTRATIVE ISSUES IN POP

The implementation of POP is subject to a few obstacles. The transition to POP requires a substantial effort by all involved, as it represents a complete change in policing technique. As is the case with community



policing, the most challenging hurdle for implementing POP is overcoming the deeply-ingrained nature of the police culture. Eck and Spelman (1987) suggest that seven characteristics should be present in any problem-oriented agency:

1. Problem solving will be the standard method of policing, not just an occasionally useful tactic.
2. Problem-solving efforts will focus on problems of the public, not police administration.
3. When problems are taken on, police will establish precise, measurable objectives.
4. Police managers will look constantly for ways to get all members of the department involved in solving problems.
5. Officers should consistently undertake thorough analysis using data from many sources, both internal and external to the police agency.
6. Officers will engage in an uninhibited search for solutions to all problems they take on.
7. All members of the department will be involved in problem solving (Piquero & Piquero, 2001, p. 538).

Goldstein (1990) noted the strong relationship between police administration and police function. According to Goldstein, "the management style of a police agency and that agency's collective concept of its function in the community are inextricably interrelated" (1990, p. 148). Management has, sometimes unknowingly, been the primary impediment when transitioning to a new departmental philosophy. In order for a successful transformation to



occur change must be made throughout an agency beginning with the administration.

Three changes are especially important to the success of problem-oriented policing: (1) Police leaders must articulate the basic values with which they approach the police task and which influence their management techniques; (2) they must have a strong commitment to problem-solving techniques as the core of policing, with all that entails; and (3) more broadly, they must make fundamental changes in the most common type of relationship that exists between leadership and the rank and file in a police agency (Goldstein, 1990, p. 152).

Law enforcement agency heads must be more than administrators, they must be leaders and problem solvers. They must establish a set of values and standards that demonstrate to their subordinates a foundation on which a change to POP can be built (Goldstein, 1990).

After laying a solid foundation, administrators must follow up with earnest commitment to the practice of POP (Goldstein, 1990). There are five steps administrators must take to demonstrate their commitment to change. First, administrators must ensure that they are well-versed in the literature and research associated with POP. Second, administrators should communicate to all personnel why problem-solving is more effective than traditional incident-based policing. Third, administrators should provide incentives to personnel who effectively demonstrate



problem-solving techniques. Fourth, administrators must encourage and foster creativity and initiative. Finally, administrators must lead by example and actually demonstrate good problem-solving (Eck & Spelman, 1987).

In addition to committing to problem-solving, administrators must make some changes to the basic relationship between administration and line officers. The paramilitary style traditional to police is not conducive to POP. Administrators must be willing to adopt a more relaxed leadership style that gives more discretion to officers, road supervisors, and regional commanders. There is inconsistency between agencies' recruitment of college-educated officers and their tendency to stifle creativity and original thought in those officers, precisely the factors that made them attractive candidates to begin with (Goldstein, 1990). Similar to community policing, POP thrives in theory when officers are given the latitude to think independently and devise individual problem-solving strategies.

#### QUALITY OF LIFE POLICING (ZERO TOLERANCE)

Other strategies, popularly known as zero-tolerance, order-maintenance, and quality-of-life policing, differ from community policing by focusing on the aggressive



enforcement of minor crimes and disorder (Katz, Webb, & Schaefer, 2001). Zero tolerance initiatives, while grounded in the same theory as community-oriented policing and problem-oriented policing, are much different. They resemble professional-era legalistic policing (Wilson, 1968) in that they focus on strict, across-the-board enforcement of the law. Guided by the broken windows theory of disorder leading to more serious crime, the mission of zero tolerance policing is to prevent minor social decay and disorder from growing into larger crime problems (Katz et al., 2001).

One form of zero tolerance policing is crackdowns. These are actions taken by police to deter, through increased presence and enforcement, certain criminal offenses or all offenses in a certain area. Crackdowns deter through increasing two aspects of deterrence: certainty and severity. Certainty is addressed by increasing manpower allowing more officers to enforce a particular offense. Severity may be addressed by imposing stricter sanctions on those who commit certain acts. Typically, there are three necessary components of a crackdown. The first component is presence. Police increase their presence as a visual deterrent and as a means of more effectively enforcing the law. The second



component of crackdown is sanctions. Sanctions can be any act used by the police as a means of locating and apprehending offenders. Examples include field interviews and traffic checkpoints. The third component necessary for an effective crackdown is media threats. Police announce their intentions of a crackdown as a means of deterring some would-be offenders (Sparrow, 1988).

Another form of zero tolerance involves much larger scale crackdowns. Zero tolerance initiatives such as those that have been conducted by New York City usually target a certain numbers of offenses believed to decrease the quality of life in a jurisdiction. They are usually targeted at order-type offenses. New York City concentrated its efforts on turnstile jumping, panhandling, window washing (a.k.a. squeegee men), dwelling/urinating/spitting on public streets, littering, disorderly behavior, drinking in public, unlicensed selling of goods in public, and loud noise/music/motorcycles. These offenses were enforced with "zero tolerance." The rationale was that by enforcing minor offenses more serious criminals would be apprehended resulting in less crime and less citizen fear of crime (Erzen, 2001). Zero tolerance of quality of life crimes has been credited by some



(disputed by others) as the cause of New York City's substantial decline in crime rates (Eck and Maguire, 2000).

A quality of life policing initiative, in the form of aggressive enforcement of disorder offenses, was conducted in Chandler Arizona (Katz et al., 2001). The study suggested that "the quality-of-life initiative made the clearest and strongest impact on two categories of crime and disorder: public morals and physical disorder" (Katz et al., 2001). Other studies have found that aggressive policing results in reduced robbery rates (Sampson & Cohen, 1988). A separate study by Smith (2001) on *Blitz to Boom* police crackdowns in Richmond found that areas receiving the crackdown showed a significant reduction in Part I offenses and violent crime during and following the crackdown period. A similar program in New York City called *Operation Pressure Point* involved the deployment of 240 uniformed patrol officers to a crime-ridden area charged with "aggressively [patrolling] the area clearing parks, issuing tickets, conducting field interrogations, and making arrests" (Smith, 2001, p. 65). Robberies and burglaries were drastically reduced; however, due to the substantial resources needed the program could not be continued on a long-term basis (Zimmer, 1990). Sampson and Cohen (1988) found cities that had higher arrests for



disorderly conduct and driving under the influence had lower robbery rates. A well-known crackdown effort is the Weed and Seed program. A study by Dunworth and Mills (1999) has shown that increased enforcement efforts, when combined with prevention and revitalization, resulted in Part I crime reductions in three quarters of the sites tested. In a survey of 164 large U.S. cities, MacDonald (2002) found that aggressive enforcement of order-based offenses such as disorderly conduct and driving under the influence resulted in reductions in both robbery and homicide rates.

There are several key zero tolerance issues of importance to police administrators. The most obvious is abuse of power. Wide discretion allows officers to stop and question citizens without clear evidence (or suspicion) of criminal wrongdoing. Officers' own biases may interact with this discretion to create discriminatory police practices where none (or less) existed before. According to McArdle (2001), for example, "In its declared war on drugs and street crime, the NYPD dispatches scores of barely trained recruits into the Street Crime Unit where, in 1997 and 1998, NYPD data indicate that 45,000 people—primarily black and Latino males—were stopped and frisked, often for no reason other than the fact that they were



black and Latino" (p. 147). Other critics question the Constitutionality of criminalizing homelessness and mental illness (Barr, 2001). With these issues, departments risk the potential for negative media attention and civil lawsuits.

#### OTHER STRATEGIES

Another administrative factor somewhat related to aggressive enforcement that may affect arrest rates is the enforcement of traffic laws. Research on the possible link between traffic offenses and more serious crime was first conducted over a half century ago. Based on interviews and observations of London taxi drivers and analysis of London driving and criminal records, Tillman and Hobbs (1949) concluded that "a man drives as he lives. If his personal life is marked by caution, tolerance, foresight, and consideration for others then he will drive in the same manner. If his personal life is devoid of these desirable characteristics then his driving will be characterized by aggressiveness" (p. 329).

There is substantial research supporting the enforcement of traffic laws as an effective means of fighting more serious crime. Research by Michalowski (1975) examined the relationship between vehicular homicide



and interpersonal violence. With the analysis of 119 vehicular homicides in a large city he found a correlation between traffic offenses and other aggressive criminal behavior. Michalowski (1975) concluded that "the tendency toward aggressive behavior, characteristic of a subculture of violence, influences the way an individual drives as well as his face-to-face interactions" (p.30). Research indicates that traffic enforcement directly influences other types of crimes. Wilson and Boland (1978) conducted a study of 35 large U.S. cities and found that higher rates of traffic citations increased the probability of robbery arrests, which then correlated with reductions in robbery rates. Cordner (1998) found that increased vehicle stops and field interrogations led to crime reduction in Pontiac, Michigan. The Kansas City Gun Experiment showed that aggressive traffic enforcement could reduce calls for service for violent crimes in hot spot areas (Sherman et al., 1995). Giacopassi and Forde (2000) address crime prevention through traffic enforcement in the context of broken windows (Wilson and Kelling, 1982). They suggest that an argument could be made for "crumpled fenders" theory after analysis showed a correlation between traffic fatalities and the homicide rates in various large cities. They argue that failure to enforce traffic laws can create



a perceived lack of police presence that may lead to higher rates of crime. They conclude that "enforcement of traffic laws will significantly improve the quality of life of citizens in America with tangible benefits in terms of lower traffic fatality rates and potentially a lower crime rate as fewer incivilities will translate into less overall lawlessness" (Giacopassi and Forde, 2000, p. 404).

There are other administrative factors that may have some effect on arrest rates. The existence of a police union or collective bargaining may provide resistance to organizational change and in turn inhibit potential positive change. The use of computers and other technology may have a positive effect on the implementation of policing strategies and can also aid in the effective deployment of resources and the identification of problem areas. Higher proportions of field officers within a department may have a positive effect on arrests by maximizing the number officers who are actually patrolling, answering calls for service, and making arrests.

#### COMPARISON OF STRATEGIES

There is some difficulty in comparing differing strategies. Zero-tolerance policing has been credited with the drastic decline in crime in New York City in early



1990s. New York City experienced a 37% decline over a five-year period. However, San Diego, a problem-oriented policing agency, experienced a similar decline over the same five-year period accompanied by a smaller increase in personnel (Eck & Maguire, 2000). Therefore, it stands to reason that if the style of policing was responsible for the decrease in crime then POP is superior for providing the same result with less cost. It would be naïve to assume to that other factors did not have a role in the decline in crime in both cities. Therefore, it is difficult to quantify one style's benefit versus another. Furthermore, many departments do not limit themselves to one style or another. Many departments adopt a unique style comprised of one or all of the various approaches.

Community-oriented policing undoubtedly began the shift to the current policing paradigm. Cooperation with the community to discover alternative methods of ensuring public safety is wide-spread. The incorporation of innovative problem solving techniques to address problems rather than symptoms has vastly increased the tools officers now have at their disposal. Despite their controversy, zero tolerance campaigns have yielded undeniably positive results in dealing with certain crimes in certain areas. Each approach has benefits and there are



situations that may require one style versus another. Departments should not limit themselves to one style. The most effective approach is tailoring components of each to specifically address the crime issues present in a particular jurisdiction.

The implementation of community-oriented policing is a good foundation for building the ideal policing system in a community. This allows officers to get out into the community to assess both the public's level of cooperation and interest in COP and also determine what needs the public views as high priorities. Community contacts in the business, education, and public service sectors are not only valuable in COP but can also be used to further problem-oriented policing efforts. This allows the department time to phase in the new culture to support more proactive and innovative policing. Rather than having a community policing team or division, departments should adopt the philosophy for the entire agency. By not excluding any group, all personnel are given ownership in the new strategy and will be less likely to resist change.

Problem-solving strategies can be phased in as the department adjusts to the new culture. No provision of community-oriented policing runs counter to POP so a two-step implementation process may provide a smoother



transition. Problem-oriented strategies can be implemented in the same way as COP strategies, working to ensure cooperation from all levels within the agency. Partnerships with other government agencies (e.g. public works, code enforcement women's shelters, and charity groups) can help facilitate more effective solutions to a wider range of problems.

Community and problem-oriented policing is not effective in all settings. Some areas ravaged by especially high rates of crime and poverty have extremely low rates of collective efficacy. Relations with police may be strained due to cultural or racial tensions. In these type situations the crime must be controlled before efforts can be made to rebuild relations with the community. In these instances, zero tolerance crackdowns can be an effective way of "getting one's foot in the door." After some of the street level crime is reduced, the agency could enter the community intent on rebuilding it with the approval and assistance of law abiding community members.

The use of zero tolerance policing on a city or county-wide basis is not worth the decrease in crime that will probably follow. The poor, mentally ill, racial and ethnic minorities and other disadvantaged are



disproportionately effected by such initiatives (Manning, 1998; Yardley, 1999). The strain that results may counteract the benefits of lowering the amount of crime. However, using zero tolerance tactics in specific areas for specific periods of time can be an effective way to take back the streets. The best approach to improving the quality of life within a jurisdiction is combining aspects of community, problem-oriented, and zero tolerance policing to create a style conducive to the cultural and political atmosphere of a particular area (Sherman, 1995).

of an agency's executives. Despite the common assumption linking police administration and officer performance, very little research has been done empirically to examine their relationship.

## METHODOLOGY

This study will be based upon two primary sources of data. The first will be the 1997 Law Enforcement Management and Administrative Statistics (LEMAS) survey conducted by the U.S. Bureau of Justice Statistics (BJS). The LEMAS survey was first conducted by BJS in 1987. Since then, four updated versions of the survey have been completed. The 1997 LEMAS uses data from the 1996 BJS Census of State and Local Law Enforcement. The 1997 LEMAS



## METHODOLOGY AND RESULTS

The present study seeks to answer the question: Do police administrative factors affect police officer job performance? Police administration is generally considered key to police performance. Emphasis is placed on having educated and experienced police executives. If results within a department are not satisfactory, one of the first steps taken by governing bodies is the replacement of an agency's executives. Despite the common assumption linking police administration and officer performance, very little research has been done empirically to examine their relationship.

METHODOLOGY

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survey includes approximately 700 state and local agencies that employed at least 100 full-time sworn officers and employed at least 50 full-time uniformed sworn officers whose regularly assigned duty was responding to calls for service. Also included is a nationally representative sample of smaller agencies. An eight-page questionnaire was sent to 3,597 agencies, and 3,412 agencies (95%) responded. Included in the LEMAS are 651 local law enforcement agencies and the primary state law enforcement agency from every state except Hawaii. This study drew a sample of the 207 municipal agencies serving populations of 100,000 or more from the LEMAS. Due to missing data for some variables there are 182 valid cases in the model. Data from the LEMAS survey will be linked to arrest data. Arrest data will be drawn from the Federal Bureau of Investigation's Uniform Crime Report. The factors within the LEMAS survey will be analyzed with calculated rates of arrest per officer to determine the influence of administrative factors on police officer job performance.

#### DEPENDENT VARIABLES

Table 1 presents the descriptive statistics for all variables in the model. Due to the lack of a better measure of officer performance, the rate of arrest per



officer was used as the dependent variable. Data were taken from the UCR to determine the number of arrests for a particular agency. This number of arrests was divided by the number of sworn personnel to determine the rate of arrest per officer. Arrests for all index crimes were examined. The first dependent variable is "arrests per officer - total offenses" (ARRPER). The minimum value is 1.33 and the maximum is 55.64. The mean number of arrests per officer (including all offenses) is 7.50. The standard deviation is 4.65. Also, arrests for violent offenses were examined separately. The second dependent variable is "arrests per officer - violent offenses only" (VIOLPER). The minimum value is .17 violent arrests and the maximum value is 16.65 arrests. The mean is 1.99 violent arrests with a standard deviation of 1.68.

#### INDEPENDENT VARIABLES

The independent variables were factors selected from the LEMAS survey. The first independent variable "computer index" (COMPIND) is a summated index created from ten computer-related factors in the LEMAS survey. The first component of the index is "computer use: MDT" (MDT). The variable is coded as 0=agency does not use mobile data terminals or 1=agency uses mobile data terminals. The



second component of the computer index is "computer function: crime analysis" (CRANAL). The variable is coded as 0=agency does not use computers for crime analysis or 1=agency uses computers for crime analysis. The third component of the computer index is "computer function: crime mapping" (CRMAP). The variable is coded as 0=agency does not use computers for crime mapping or 1=agency uses computers for crime mapping. The fourth component of the computer index is "computer function: dispatch" (CAD). The variable was coded as 0=agency does not use computer-aided dispatch or 1=agency uses computer-aided dispatch. The fifth component of the computer index is "computer function: resource allocation" (RESALLOC). The variable is coded as 0=agency does not use computers for resource allocation or 1=agency uses computers for resource allocation. The sixth component of the computer index is "patrol access: vehicle records" (VEHREC). The variable is coded as 0=officers do not have access to vehicle records while on patrol or 1=officers have access to vehicle records while on patrol. The seventh component of the computer index is "geocode-mapping: calls for service" (GEOCALLS). The variable is coded as 0=agency does not use geocode-mapping for calls for service or 1=agency uses geocode-mapping for calls for service. The eighth



component of the computer index is "geocode-mapping: arrest data" (GEOARR). The variable is coded as 0=agency does not use geocode-mapping for arrest data or 1=agency uses geocode-mapping for arrest data. The ninth component of the computer index is "geocode-mapping: incidents" (GEOINC). The variable is coded as 0=agency does not use geocode-mapping for incidents or 1=agency uses geocode-mapping for incidents. The tenth component of the computer index is "computer files: field interviews" (FIFILES). The variable is coded as 0=agency does not maintain computer files on field interviews or 1=agency maintains computer files on field interviews. The summated index is comprised of ten variables and therefore has a potential range from 0 to 10. Higher index scores indicate more extensive use of computers for administrative and operational purposes. In this sample the minimum index score is 1 and the maximum index score is 10. The mean index score is 7.03. The standard deviation is 2.38.

The second independent variable is "special enforcement index" (SPENFIND), a summated index comprised of four special enforcement factors in the LEMAS survey. The first component of the special enforcement index is "enforcement of traffic laws" (TRAFENF). The variable is coded as 0=agency is not responsible for enforcement of



traffic laws or 1=agency is responsible for enforcement of traffic laws. The second component of the special enforcement index is "vice enforcement" (VICEENF). The variable is coded as 0=agency is not responsible for vice enforcement or 1=agency is responsible for vice enforcement. The third component of the special enforcement index is "special drug unit: full-time officers" (DRUGUNIT). The variable is coded as 0=agency does not have a special drug unit or 1=agency has a special drug unit. The fourth component of the special enforcement index is "drug task force: full-time officers" (DRUGTASK). The variable is coded as 0=agency does not participate in a drug task force or 1=agency participates in a drug task force. Agencies with higher index scores engage in more special enforcement activity. The minimum index score is 2 and the maximum index score is 4. The index mean is 3.69 and the standard deviation is .50.

The next independent variable "POP index" (POPIND) is a measure of an agency's use of problem-oriented policing (POP) concepts. The summated index is comprised of three POP-related factors in the LEMAS survey. The first component of the POP index is "encourage SARA" (SARA). SARA is an acronym for "Scan, Analyze, Respond, Assess" and is one of the foundations of the problem-oriented policing



model (Eck & Spelman, 1987). The variable is coded as 0=agency does not encourage use of SARA principles or 1=agency encourages use of SARA principles. The second component of the index is "problem solving in evaluation" (PROBEVAL). The variable is coded as 0=agency does not use problem-solving evaluations or 1=agency uses problem-solving evaluations. The third component of the index is "problem-solving partnerships" (PROBPART). The variable is coded as 0=agency does not use problem-solving partnerships or 1=agency uses problem-solving partnerships. Higher index scores indicate more use of problem-solving strategies. The minimum index score is 0 and the maximum index score is 3. The mean index score is 1.79, and the standard deviation is 1.05.

The next independent variable "COP index" (COPIND) is a measure of an agency's use of community-oriented policing (COP). The summated index is comprised of seven COP-related factors in the LEMAS survey. The first component of the COP index is "foot patrol: routine" (FTPATR). The variable is coded as 0=agency does not routinely use foot patrols or 1=agency routinely uses foot patrols. The second component of the COP index is "bike patrol: routine" (BKPATR). The variable is coded as 0=agency does not routinely use bicycle patrols or 1=agency routinely



uses bicycle patrols. The third component is "formal community policing plan" (CPPLAN). The variable is coded as 0=agency does not have a formal community policing plan or 1=agency has a formal community policing plan. The fourth component of the COP index is "CP training: all new recruits" (TRAINNEW). The variable is coded as 0=agency does not train all new recruits in community-oriented policing or 1=agency trains all new recruits in community-oriented policing. The fifth component of the COP index is "CP training: all in-service sworn" (TRAININS). The variable is coded as 0=agency does not provide in-service community-oriented policing training to all sworn personnel or 1=agency provides in-service community-oriented policing training to all sworn personnel. The sixth component of the COP index is "geographic patrol beats" (GEOPATR). The variable is coded as 0=agency does not assign patrol responsibility according to geographic areas or 1=agency assigns patrol responsibility according to geographic areas. The seventh component of the COP index is "geographic detectives" (GEODET). The variable is coded as 0=agency does not assign detectives according to geographic regions or 1=agency assigns detectives according to geographic regions. Agencies rating higher on this index report more community policing training and operations.



The minimum index score in the sample is 1 and the maximum index score is 7. The mean is 4.81. The standard deviation is 1.54.

The next independent variable is "CPO ratio" (CPORAT). The ratio represents the number of full-time sworn community policing officers (CPOs) divided by the number of sworn police officers for each jurisdiction. The ratio represents the share of sworn personnel whose full-time duty involves community policing. The minimum value in the sample is 0, and the maximum value is .49. The mean is .045, and the standard deviation is .071.

The next independent variable is "SRO ratio" (SRORAT). The ratio was calculated by dividing the number of full-time sworn school resource officers by the number of sworn personnel. The minimum value in the sample is 0 and the maximum value is .11. The mean is .016, and the standard deviation is .017.

The next independent variable is "field to administrative ratio" (OPSADM). The ratio represents the total number of sworn field operations officers divided by the total number of sworn administrative personnel. A higher value indicates a higher percentage of field operations officers. The minimum value in the sample is



1.65, and the maximum value 174.67. The mean ratio is 29.55. The standard deviation is 22.25.

The next independent variable is "male to female ratio" (MFRAT). The ratio is calculated by dividing the total number of male sworn personnel by the total number of female sworn personnel. A higher value indicates a higher percentage of male officers. The minimum value is 2.41, and the maximum value is 37.43. The mean is 10.32, and the standard deviation is 5.85.

The next independent variable is "marked car take-home allowed" (TAKEHM). The variable is coded as 0=agency does not issue marked take-home patrol cars to officers or 1=agency issues marked take-home patrol cars to officers. TAKEHM has a mean of .45 and a standard deviation of .49.

The next independent variable is "off-duty marked car use allowed" (PERSUSE). The variable is coded as 0=agency does not allow personal use of patrol cars while off-duty or 1=agency allows personal use of patrol cars while off-duty. PERSUSE has a mean of .21 and a standard deviation .407.

The next independent variable is "residency requirement" (RESID). The variable is coded as 0=agency does not require that officers reside within metro area/county/radius or 1=agency requires that officers



reside within metro area/county/radius. RESID has a mean of .27 and a standard deviation of .443.

The next independent variable is "educational requirement" (EDUC). The variable is coded as 0=agency does not require officers to possess at least a two-year degree or 1=agency requires officers to possess at least a two-year degree. EDUC has a mean of .10 and a standard deviation of .303.

The next independent variable is "collective bargaining: sworn" (UNION). The variable is coded as 0=no collective bargaining for sworn personnel or 1=collective bargaining for sworn personnel. The variable has a mean of .69 and a standard deviation of .463.

#### CONTROL MEASURES

This study includes four control variables. The first control variable is the "crime rate" (CRIMRT). The minimum value is 1,738.90 offenses per 100,000 residents and the maximum value is 14,578.20 offenses per 100,000 residents. The mean is 7,640.89 offenses per 100,000 residents. The standard deviation is 2,745.84 offenses per 100,000 residents. The "violent crime rate" (VIOLRT) is the next control variable. The minimum value is 64.50 violent offenses per 100,000 residents, and the maximum value is



3,075.50 violent offenses per 100,000 residents. The mean number of violent offenses per 100,000 residents is 1,001.55. The standard deviation is 591.76 violent offenses per 100,000 residents. The next control variable is "percent black" (BLACK). These data were taken from city-level data from the U.S. Bureau of Census. The minimum value is .4% and the maximum value is 84% black. The mean is 19.34% black. The standard deviation is 18.52%. The next control variable is "per capita sworn" (PERCAPSW). The variable represents the number of sworn officers per 100,000 residents. The minimum value is 104.37 sworn officers per 100,000 residents, and the maximum value is 666.04 sworn officers per 100,000 residents. The mean number of sworn officers per 100,000 residents is 217.45. The standard deviation is 89.47 officers per 100,000 residents.

### CORRELATIONS

Tables 2-4 present the correlations found in the analysis. "Arrests per officer - total offenses" is significantly correlated to five other variables. As would be expected, it is positively correlated to the other dependent variable "arrests per officer - violent offenses" since jurisdictions with high rates of overall arrests are



likely to have high rates of arrest for violent offenses. It is negatively correlated to two control variables: "percent black" and "per capita sworn." "Arrests per officer - total offenses" is correlated to two independent variables. It is positively correlated to "POP index" with a significance level of  $p=.021$ . Increased rates of arrests are coupled with problem-oriented policing index scores. Pearson's correlation is  $r=.161$ . It is also positively correlated to "male to female ratio" with a significance level of  $p=.043$ . The correlation is  $r=.141$ . Rates of arrest and a higher percentage of males are likely to be found in the same departments.

"Arrests per officer - violent offenses" is correlated with several variables. It is negatively correlated with two control variables: "violent crime rate" and "per capita sworn." Departments having a higher violent crime rate actually tend to have lower rates of arrest for violent offenses. This could be due to very violent areas having a greater "tolerance" for some violent offenses. This correlation is consistent with some jurisdictions such as Washington, D.C. where a very high homicide rate is joined by a very low clearance rate. It is also correlated to two independent variables. It is positively correlated to "POP index" with a significance level of  $p=.006$ . The



correlation is  $r=.190$ . Departments with a high rates of arrest for violent crime are also likely to score higher on the problem-oriented policing. It is also positively correlated to "collective bargaining - sworn" with a significance level of  $p=.010$ . The correlation is  $r=.179$ . Departments with collective bargaining for their sworn personnel are likely to have higher rates of arrest for violent offenses.

"Crime rate" is positively correlated to three control variables: "violent crime rate," "percent black," and "per capita sworn." The crime rate and violent crime rate are correlated as would be expected. Likewise, it is expected that the crime rate is positively correlated with the percentage of black residents, since race is a known correlate of crime. It is positively correlated to "COP index" with a significance level of  $p=.004$ . Pearson's correlation is  $r=.211$ . This suggests that departments that practice community policing strategies may actually experience higher rates of crime. It is negatively correlated to "male to female ratio" with a significance level of  $p=.000$ . The correlation is  $r=-.367$ . A possible explanation for this is that areas with known high rates of crime may have a harder time attracting female applicants.

level of  $p=.000$ . The correlation is  $r=-.421$ . Departments



"Violent crime rate" is positively correlated with two control variables: "percent black" and "per capita sworn." As found with the general crime rate, a correlation is expected between crime and minority populations. Given their disproportionate offending levels for violent crime, the correlation between the violent crime rate and the percentage of black residents agrees with other available data. The violent crime rate is also correlated to three independent variables. It is positively correlated to "COP index" ( $r=.174$ ,  $p=.016$ ). It is also negatively correlated to "male to female ratio" with a significance level of  $p=.000$ . The correlation is  $r=-.367$ . As suggested with the overall crime rate, a high violent crime rate may inhibit an agency's ability to attract female applicants.

"Percent black" is correlated with several variables. It is positively correlated to "COP index" with a significance level of  $p=.010$ . The correlation is  $r=.181$ . In other words, departments serving populations with a higher percentage of black residents tend to score higher on the community-oriented policing index. It is negatively correlated to "SRO ratio" with a significance level of  $p=.001$ . The correlation is  $r=-.229$ . It is negatively correlated to "male to female ratio" with a significance level of  $p=.000$ . The correlation is  $r=-.421$ . Departments



serving populations with higher percentages of black residents tend to not have more female officers.

"Computer index" is significantly correlated to three independent variables. It is positively correlated to "POP index" with a significance level of  $p=.000$ . The correlation is  $r=.265$ . It is positively correlated to "COP index" with a significance level of  $p=.009$ . The correlation is  $r=.009$ . It stands to reason an innovative departments would engage in POP and COP strategies and make use of computers and other technology.

"POP index" is significantly correlated with two other variables. It is positively correlated to "COP index" with a significance level of  $p=.000$ . The correlation is  $r=.324$ . Because they are so closely related and actually share some components and strategies, POP and COP are sometimes indistinguishable; therefore, it is expected that these variables should be highly correlated.

#### REGRESSION MODEL

Ordinary least squares (OLS) regression is used because both dependent variables are ratio level. All data were checked for outliers. Analysis shows that all variation inflation factors (VIF) are below the upper limit value of 4 indicating that the model does not suffer from



collinearity problems (Bachman & Patternoster, 1997). The hypothesis in this study predicts that the positive application of the independent variables will result in an increase in officer arrest rates for both overall and violent offenses.

## RESULTS

The information on Table 5 presents the models examining the effects of police administrative factors on arrest rates for total crime and violent crime. Both models include control variables measuring the total crime rate or violent crime rate, respectively, the percent of the population that is black, and the per capita number of sworn officers. The crime rate is factored in to ensure that an increase in arrest rates is not solely driven by a higher incidence of crime. As one would expect, the general crime rate is a significant predictor of officer arrest rates; likewise, officer arrest rates for violent offenses is predicted by the violent crime rate. Also statistically significant is the relationship between per capita sworn officers and officer arrest rates for both total and violent offenses. Both total and violent arrests were significantly lower with higher per capita sworn officers. For a standard deviation increase in per capita



sworn officers, arrests per officer for total and violent offenses decreases by .555 standard deviations. This may indicate a point of diminishing return for hiring additional officers. Another possibility is that the larger numbers of officers may represent large departments using two-man patrol cars. A two-man unit will not generate the number of arrests that two one-man units would generate. Percent black also serves as a significant predictor of the arrest rate for violent offenses. This would be expected considering the correlation between blacks and violent offending.

First, examining the regression model for total arrests per officer, there are three administrative factors that have a significant effect. Officers from departments that score higher on the problem-oriented policing index have significantly higher rates of arrest for all offenses. For a standard deviation increase in index score, arrests per officer increases by .131 standard deviation units. Also, officers issued marked take-home patrol cars have significantly higher arrest rates. The issuing of take-home patrol cars increases officer arrests rates for total offenses by .171 standard deviation units. In contrast, officers who are allowed personal use of their marked patrol cars when off-duty have significantly lower rates of



arrest. ~~16~~ Off-duty use of marked patrol cars decreases officer arrest rates by .148 standard deviation units. No other administrative factor in the model shows any significant effect on officer arrest rate.

Looking next at arrest rates for violent offenses only, there are two administrative factors that have significant effects. The effect of problem-oriented policing on the violence arrest rate mirrors that of the arrest rate for total offenses. Officers from departments that score higher on the POP index have significantly higher arrest rates for violent offenses. For a standard deviation increase in the index score, arrests per officer for violent offenses increases by .139 standard deviation units. The other administrative factor that has a significant effect on arrest rates for violent offenses is collective bargaining. Officers from unionized departments make a significantly higher number of arrests for violent offenses. The presence of a union increases arrests per officer for violent offenses by .150 standard deviation units. No other administrative factor in the model shows any significant effect on the arrest rate for violent offenses. The  $R^2$  value for the total arrest model is .412. The variables in the model explain 41% of the variation in officer arrest rates for total offenses. The  $R^2$  value for



the violent arrest model is .245; therefore, the variables in the model explain almost 25% of the variation in officer arrest rates for violent offenses.



## CHAPTER 4

### CONCLUSION

There has not been a comprehensive examination of the effect of police administrative factors on police officer job performance. This study attempted to fill a void in the literature by examining the significance of police administrative factors on officer arrest rates for both general crime and violent crime in large American cities.

The findings from this study do not support the predictions that each of the administrative factors in the model would result in higher rates of arrest for general and violent crime. However, the findings do show several significant relationships. Arrest rates are negatively influenced by the per capita number of sworn officers. This indicates that hiring additional officers does not necessarily increase productivity. It may also indicate a disadvantage of two-man patrol cars.

Arrest rates for total offenses are positively influenced by the use of problem-oriented policing strategies. Problem-oriented policing has a similar effect in arrest rates for violent offenses. These findings regarding POP are significant for several reasons. This



study provides new evidence of one potential benefit of problem-oriented policing.

Arrest rates for total crime are also increased by another administrative factor. Officers who are issued marked take-home patrol cars also have higher overall arrest rates. Issuing take-home patrol cars improves individual arrest rates and could also improve morale since take-home cars could be viewed as a job benefit. The fact that overall arrest rates are increased while arrest rates for violent offenses remains unchanged indicates that take-home cars results in arrests for less serious offenses or property offenses.

Collective bargaining for sworn personnel has a positive effect on arrests for violent offenses. Though administrators have little control over whether their agency is unionized, collective bargaining is generally viewed negatively by police executives. Unions are often seen as counter-productive because barrier is inserted between administrators and officers. Unions also provide some insulation and additional job protection for officers. These findings offer some evidence in support of unions. Since collective bargaining had no effect on overall arrest rates, it is certainly not a clear endorsement of union



officers as being more productive. It does, however, provide some support where very little existed previously.

Another important finding of this study is what did not affect police officer job performance. Special enforcement such as traffic, vice, and narcotics had no effect on officer arrest rates. This is contrary to what one would assume, since increased enforcement in these areas may lead to arrests in other areas. Community policing had no effect on the rate of arrest for overall or violent crime. This may be because arrests are not the best measure of the effectiveness of COP. Since COP is not arrest-driven, better measures may be citizens' fear of crime, citizens' perceptions of the police, or officer job satisfaction. Departments with higher proportions of male officers also failed to exhibit higher rates of arrest. Stereotypes of aggressive male officers versus more docile female officers are not supported by the data. While there may be benefits to more educated officers, better job performance is not one them. Officers from departments requiring at least a two-year college degree did not have significantly higher rates of arrest. Also, officer arrest rates were not affected by department residency requirements.



This study was a cross-sectional design; therefore, there is a threat of reverse causation. Given the limitations of this study, more research is needed on whether police administrative factors affect police officer job performance. However, the present study does suggest that certain factors may affect officer arrest rates. In addition, this study advances knowledge of effectiveness of police management on actual job performance. Findings suggest that police administrators should continue to focus efforts at problem-solving to maximize job performance within their respective agencies.

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# Appendix A

TABLE 1. Descriptive Statistics of All Variables in the Analysis

	N	Minimum	Maximum	Mean	Std Dev
ARRESTS/OFFICER-TOT	205	1.33	55.64	7.50	4.65
ARRESTS/OFFICER-VIOL	205	.17	16.65	1.99	1.68
CRIME RATE	186	1738.9	14578.2	7640.8	2745.84
VIOLENT CRIME RATE	191	64.5	3075.5	1001.5	591.76
PERCENT BLACK	204	.4	84	19.34	18.52
PER CAPITA SWORN	207	104.37	666.04	217.45	89.46
COMPUTER INDEX	207	1	10	7.03	2.38
SPEC ENF INDEX	207	2	4	3.69	.50
POP INDEX	207	0	3	1.79	1.05
COP INDEX	207	1	7	4.81	1.54
CPO RATIO	207	0	.49	.045	.071
SRO RATIO	207	0	.11	.017	.017
FIELD/ADMIN RATIO	207	1.65	174.67	29.55	22.25
MALE/FEMALE RATIO	207	2.41	37.43	10.32	5.85
TAKE-HOME CAR	207	0	1	.45	.499
PERSONAL USE CAR	207	0	1	.21	.407
RESIDENCY REQU	207	0	1	.27	.443
EDUCATIONAL REQU	207	0	1	.10	.303
COLL BARGAINING	207	0	1	.69	.463
Valid N	182			.76	.426



## Appendix B

Table 2. Correlations for Variables in the Analysis (a)

	ARRPER	VIOLPER	CRIMRT	VIOLRT	BLACK	PERCAPSW
ARRPER	1	----	----	----	----	----
VIOLPER	.769*	1	----	----	----	----
CRIMRT	-.032	-.055	1	----	----	----
VIOLRT	-.088	.155*	.710*	1	----	----
BLACK	-.216*	-.012	.478*	.601*	1	----
PERCAPSW	-.346*	-.169*	.500*	.651*	.665*	1
COMPIND	.073	.093	.056	.121	-.095	.016
SPENFIND	-.066	.027	.055	.129	.027	.171*
POPIND	.161*	.190*	-.091	.015	-.131	-.096
COPIND	.000	.048	.211*	.174*	.181*	.242*
CPORAT	.004	.048	.034	.046	-.040	-.072
SRORAT	.119	-.017	-.109	-.169*	-.229*	-.255
OPSADM	-.014	-.052	.082	.002	.004	.012
MFRAT	.141*	.064	-.354*	-.367*	-.421*	-.347*
TAKEHM	.002	-.059	.196*	.065	.163*	.019
PERSUSE	-.098	-.135	.102	-.028	.236*	.063
RESID	-.105	-.045	.040	.056	.029	.044
EDUC	.005	-.091	.054	-.070	.015	-.041
UNION	.088	.179*	-.097	.020	-.261*	-.023

Note: \* $p < .05$



## Appendix C

Table 3. Correlations for Variables in the Analysis (b)

	COMPIND	SPENFIND	POPIND	COPIND	CPORAT	SRORAT
ARRPER	----	----	----	----	----	----
VIOLPER	----	----	----	----	----	----
CRIMRT	----	----	----	----	----	----
VIOLRT	----	----	----	----	----	----
BLACK	----	----	----	----	----	----
PERCAPSW	----	----	----	----	----	----
COMPIND	1	----	----	----	----	----
SPENFIND	.015	1	----	----	----	----
POPIND	.265*	.016	1	----	----	----
COPIND	.180*	.032	.324*	1	----	----
CPORAT	.076	-.158*	.150*	.016	1	----
SRORAT	.081	-.097	.132	-.046	.102	1
OPSADM	-.061	-.029	.016	-.074	.013	.018
MFRAT	-.131	.071	-.076	-.226*	-.042	.102
TAKEHM	.185	.034	-.030	.073	-.036	.067
PERSUSE	.049	.042	-.021	.040	-.119	-.009
RESID	.016	.072	.007	.017	-.004	-.086
EDUC	.070	.039	.053	.020	.014	.045
UNION	-.005	.215*	-.034	-.034	.007	-.048

Note: \* $p < .05$



# Appendix D

Table 4. Correlations for Variables in the Analysis (c)

	OPSADM	MFRAT	TAKEHM	PERSUSE	RESID	EDUC	UNION
ARRPER	----	----	----	----	----	----	----
VIOLPER	----	----	----	----	----	----	----
CRIMRT	----	----	----	----	----	----	----
VIOLRT	----	----	----	----	----	----	----
BLACK	----	----	----	----	----	----	----
PERCAPSW	----	----	----	----	----	----	----
COMPIND	----	----	----	----	----	----	----
SPENFIND	----	----	----	----	----	----	----
POPIND	----	----	----	----	----	----	----
COPIND	----	----	----	----	----	----	----
CPORAT	----	----	----	----	----	----	----
SRORAT	----	----	----	----	----	----	----
OPSADM	1	----	----	----	----	----	----
MFRAT	.002	1	----	----	----	----	----
TAKEHM	-.013	-.140	1	----	----	----	----
PERSUSE	.010	-.110	.567*	1	----	----	----
RESID	.011	-.101	.006	.015	1	----	----
EDUC	-.024	-.021	-.014	-.014	-.093	1	----
UNION	.042	.127	-.194	-.353	-.047	-.018	1

Note: \*p<.05



# Appendix E

TABLE 5. Regression of Police Administrative Factors on Arrest Rate for Total and Violent Offenses

	ARRESTS PER OFFICER - TOTAL OFFENSES	Standardized Coefficients	ARRESTS PER OFFICER - VIOLENT OFFENSES	Standardized Coefficients
CRIME RATE	.000* (4.392)	.322	----- (-----)	-----
VIOLENT CRIME RATE	----- (-----)	-----	.001* (3.827)	.381
PERCENT BLACK	-.007 (-.339)	-.041	.020* (1.974)	.219
PER CAPITA SWORN	-.020* (-6.411)	-.555	-.011* (-5.432)	-.555
COMPUER INDEX	.008 (.040)	.006	.044 (.833)	.061
SPEC ENF INDEX	-.322 (-.929)	-.053	.142 (.588)	.042
POP INDEX	.387* (1.932)	.122	.231* (1.831)	.139
COP INDEX	-.007 (-.056)	-.003	.036 (.430)	.032
CPO RATIO	-.405 (-1.506)	-.092	-.703 (-4.33)	-.030
SRO RATIO	18.5 (1.414)	.097	-3.48 (-.487)	-.035
FIELD/ADMIN RATIO	-.008 (-.959)	-.054	-.004 (-.712)	-.048
MALE/FEMALE RATIO	.055 (1.414)	.099	.022 (.969)	.075
TAKE-HOME CAR	.114* (2.250)	.174	-.129 (-.446)	-.038
PERSONAL USE CAR	-1.19* (-1.890)	-.150	-.250 (-.676)	-.060
RESIDENCY REQU	-.617 (-1.349)	-.084	-.146 (-.551)	-.037
EDUCATIONAL REQU	.205 (.177)	.019	-.598 (-1.583)	-.108
COLL BARGAINING	.478 (1.181)	.068	.552* (1.936)	.150
R <sup>2</sup>	.412	-----	.245	-----

Note: t-values in parentheses; \*p<.05