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Comparative Analysis between Routine Preventative Uniformed Police Patrols and Crime Reduction and Calls for Service

Oscar F. Vigoa
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Comparative Analysis between Routine Preventative Uniformed Police Patrols and Crime Reduction and Response to Calls for Service

Dissertation

Presented in Partial Fulfillment of the Requirements for the Degree of Doctor of Philosophy

Lynn University

By

Oscar Vigoa

2010
Comparative Analysis between Routine Preventative Uniformed Police Patrols and Crime Reduction and Calls for Service

Vigoa, Oscar
Lynn University, 2010

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APPROVAL OF DISSERTATION

Comparative Analysis between Routine Preventative Uniformed Police Patrols and Crime Reduction and Calls for Service

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ACKNOWLEDGEMENTS

I first became interested in the research of uniformed preventative patrols and crime when the incorporation fervor began in the 1990’s. My experience in policing told me that there was more to the logical assumption that more patrol officers alone reduced the amount of crime. My research proved that police scholars, politicians and society as a whole must first research a question accurately before wrong assumptions are made and most importantly before embarking on expensive propositions that lead to misinformation and misconceptions.

First I must thank my chairperson Dr. Farideh Farazmand, and previous chairperson Dr. Russell Boisjoly, whose endless persistent guidance, knowledge and energy have fueled my motivation to complete this task of a dissertation against overwhelming odds. But a special thanks to Dr. Farideh Farazmand for her special help at the end of the process. I also must thank my mentor Mayor Carlos Alvarez the Mayor of Dade County Florida who has been an inspiration of support and guidance for many years. In addition I must thank committee members, Dr. Robert Green, Dr. Jeannette Francis and Dr. Adam Kostnizky whom added an accurate quantitative and academic perspective to my committee.

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ABSTRACT

The majority of the theoretical and empirical literature on police patrols and crime has concentrated on the logical assumption that more uniformed preventative police patrols reduce crime. However, few studies have examined the comparative relationship between more police officers doing preventative patrols in a specific area and crime rates and response to calls for service. The objective of this research was to examine whether more uniformed police officers, doing routine preventative patrols, assigned to an area the size of a small city reduces class one crimes (robbery, residential, and commercial burglary and auto theft). The principal intention of the study was to investigate the comparative relationship between the amount of time uniformed patrol officers spend on routine patrols (patrol time) and the impact on the crimes of robbery, residential burglary, commercial burglary, and auto theft and response times. Personal observations, on the job experience and published literature including books and peer-reviewed journals were analyzed to identify gaps in the literature and assisted this researcher in analyzing the data and reach the conclusions. More uniformed preventative patrol officers generated more patrol time but more patrol time did not reduce robberies, residential burglaries and auto thefts. On the other hand, more patrol time reduced commercial burglaries and significantly reduced response time to non emergency calls for service in the City of Doral (Florida).
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CHAPTER I

INTRODUCTION TO THE STUDY

Introduction and Background to the Problem

The typical perception of police patrols and crime is that more police officers doing preventative patrols have an effect on reducing crime. In contrast, some research stipulates that more focused and organized directed police patrols reduce crime. There are disagreements regarding which of the two strategies is best for reducing crime (Walker, 1992). Nevertheless, there is a fundamental assurance that the presence of more police officers assigned to a specific area reduces opportunities to commit crimes resulting in the occurrence of less crime. However, there are exceptions to this traditional way of operating. Police organizations have been successful in the reduction of crime (short-term) by instituting directed police patrols which involves assigning more police officers to a high crime area (Seigel, 2003). On the other hand, police chiefs around the country utilize police preventative uniformed police patrol strategies to reduce crime.

Unfortunately, there is limited research on the impact of these policing strategies, specifically on the comparative relationship between patrol-time and crime rates (Wilson, 1995). According to the Federal Bureau of Investigations (FBI) Uniform Crime Reports (UCR), 12 million index crimes were committed in 2001 (Lab, 2004). Specifically, violent crime rates (including the crime of robbery), the types about which most people are concerned, have been steadily rising since 1961 when 158 offenses for every 100,000 persons were reported by the victims. In 2001, slightly over 500 offenses for every 100,000 persons were reported indicating a major increase in violent crimes (Lab, 2004).
Policing strategies are changing at an accelerated rate and the correct application of law enforcement strategies to reduce crime is now becoming more elusive.

Accountability is the common theme of most police departments as they struggle to prevent and control crime; in fact, patrol-time and crime are interdependent and they are at the forefront of the basic features of police knowledge (Obrien, 1996). A working knowledge of police patrol-time, crime causation and crime reduction is paramount to effectively understand the interrelated variables in the analysis of uniformed preventative patrols and various crimes. This analysis is significant because the prevailing view among police administrators, politicians, police scholars (in the field) and citizens is that more police officers in general assigned to a specific area reduces crimes. To support this testimonial (as cited in their book The Evolving Strategy of Police, (Kelling and Moore, 1991) Wilson (1995) a college educated officer and Vollmer (1972) explained the theory that additional uniformed preventative patrol officers doing patrol time assigned to an area reduces crime.

(As cited in their book Police Administration, Fyfe, Greene, Walsh, Wilson and Mclaren, 1997) Wilson (1995) theorized and Vollmer (1972) strongly believed that motorized, radio-directed preventative uniformed patrols provides a quick response to crime and thus creates a sense of omnipresence. Furthermore, they claimed that omnipresence of uniformed police personnel creates a visibility force that eliminates many opportunities for crime. This promulgated a basic law enforcement view among police departments and chiefs leading to a restructuring of departments to implement the concept of omnipresence uniformed patrols. In addition, this view influenced numerous police officials along with citizens into thinking that uniformed police patrols reduce
crime. Additionally, citizens and stakeholders perceptions could be a wrong notion that uniformed police officers are the only resource needed for preventing and controlling crime (Walker, 1992).

**Statement of the Problem**

There are three main issues that guide police preventative patrols and potentially crime rate reductions. “Crime remains an indisputable fact of life for many, if not most, members of modern society” (Lab, 2004, p. 1). Although some crimes have fallen in recent years, the overall violent crimes, such as robbery and in some cases home invasion robberies and residential and commercial burglaries have increased. In fact, according to the Miami-Dade Police Department, Compstat Report at the end of April (2008b) auto thefts went up significantly in the City of Doral. The costs associated with these crimes are astronomical; these crimes have a direct impact on the economy and the quality of life of citizens. A large number of citizens are victimized every year despite the efforts of law enforcement to combat crime. The crimes of robbery, residential and commercial burglaries and auto thefts are manifested by the lack of police presence and low citizen involvement with police in problem solving. Furthermore, the criminal justice system is overburdened with the processing of defendants who are entitled to due process of law (Abadinsky, 2006). The logical assumption in this argument is that the fewer defendants that enter the criminal justice system, the less personnel and resources law enforcement will need which translates into more cost savings to the citizenry. In other words, less capital is needed for prosecutors, public defenders and fewer jails and prison facilities to house the criminals.
If crime prevention is harnessed at the front-end, the crimes of robbery, residential and commercial burglaries and auto thefts will be minimized. If incorporating uniformed preventative patrols is effective, fewer culprits will enter the criminal justice system. In crime trends, opportunities and decisions by criminals play an important part in the dynamic operations of robbery and burglary groups. Robberies, residential and commercial burglaries leave a lasting negative impression on the victims and negatively impact the economy and the consumers of certain products. Auto thefts play a direct role in the economy as more thefts equate to increased insurance premiums (Seigel, 2003).

The prime intent of robbery is to take property from a victim by using whatever force is necessary to accomplish the criminal act; this is a psychologically traumatizing event for the victims. In residential burglaries, the intent of the perpetrator is to take the most significant and important valuables of the homeowner in order to seek the best reward for the risk (Wrobleski and Hess, 2003). In commercial burglaries, the intent of the criminal is to take high priced merchandise to resell it on the black-market. These crimes impact the foundation of a free society and paralyze the citizens with fear which cuts into the quality of life of each citizen. In some cases when victims are burglarized they state that they equate the experience to that of being raped, an even more psychologically traumatizing experience (Lab, 2004).

Auto thefts cost consumers thousands of dollars in losses and increased insurance premiums. These criminals use these vehicles for joy riding or short term transportation. In some cases, other criminals such as robbers use these stolen vehicles to commit robberies and if the vehicle is identified at the scene of the crime, it is not traced back to the criminal because the car is stolen (Wrobleski and Hess, 2003).
Police departments not only have a duty but a legal obligation to prepare an effective plan and execute precise law enforcement strategies and practices to reduce crime. According to Kelling and Coles (1996) the crime problem in the United States far exceeds that of other industrialized countries. Approximately 10 American males die by criminal violence for every Japanese, German, or Swedish man. When the robbery rate is analyzed, the data is more significant. For example, the robbery rate in New York City is five times greater than in London (Castberg, 2001). According to the Miami-Dade Police Department, Compstat Report (2008b), in unincorporated Miami-Dade County, over 2,640 robberies have been reported in 2008, year-to-date. Intelligence-based Strategic law enforcement is paramount as police officials plan, approve and execute the most effective strategy to combat crime (Gonzalez, Schofield, and Herraiz, 2005). Wilson, (1995) proffered a policing strategy and devoted most of his career working to increase the efficiency and effectiveness of uniformed preventative patrol and its omnipresence affect to combat crime.

The police budget has been an important component of law enforcement strategies, and since the 1970s, local governments have experienced fiscal problems associated with declining revenues, reduction in federal grant assistance, and voter initiated tax and expenditure limitations (Fyfe, Greene, Walsh, Wilson, O. W. and Mclaren, 1997). These factors have contributed to a shortage of income for public service and crime rate reduction programs. Now more than ever, police officials must be confident in the use of best-practices of law enforcement strategies to prevent and reduce crime. Accurate and effective budgetary decisions must be made at the policy making level to ensure that adequate resources are used coupled with the best law enforcement
strategy to reduce violent crime (Fyfe, et al., 1997). Law enforcement strategies are expensive to maintain and the cost factors associated with personnel salaries, benefits and equipment continue to escalate. Through scientific analysis and examination, police officials must identify the best law enforcement practices to reduce crime as the budget continues to dwindle.

Statutory obligations to combat crime are clearly delineated in the Florida State Statutes which have a direct relationship with the United States Constitution. Our Founding Fathers created a federal form of government with limited powers, but delegated the responsibility of policing to the local governments. Local policing is a homogeneous and democratic body under the leadership and authority of the people (Grant and Terry, 2005). Walker (1992) and Lab (2004) explained that the primary missions of local law enforcement are to prevent crime and the maintenance of order by delivering efficient service. Each state has an extensive set of statutes and case law that instructs the police on how to perform policing service in the local communities. The United States Constitution forms a structured foundation under the first ten amendments, known as the Bill of Rights. The police are held accountable under the law as the Bill of Rights is applied to each state in which the citizens expect the best policing practices (Wrobleski and Hess, 2003). Under the rule of law, the citizenry pay taxes to the local and city governments to ensure for effective police service and the protection of its citizens from criminals.

Crimes of Robberies, Burglaries and Auto Thefts

This section deals with the consequences of the ever-present crimes of robbery, residential and commercial burglaries and auto theft and how they impact the quality of
life of the citizenry. According to the Miami Dade Compstat Report (2004,2008b) from January to June of 2004, in Unincorporated Miami-Dade County approximately 6,760 residential burglaries were reported year-to-date (YTD). During the same period, robberies accounted for over 2,330 in 2004 YTD. According to the Miami-Dade Police Department, Compstat Report (2004), and (2008b) in 2008 robberies have increased significantly by approximately 304 cases over the 2004 levels. As more robberies and burglaries are reported the fear of crime spirals upwards promoting fewer interactions of the citizens with police which diminishes trust that culminates in less vigilance by the citizenry that leads to more crimes (Radelet, 1986).

One robbery or one burglary is enough to cause fear among the citizenry, hence 1000 robberies and over 3000 residential burglaries will cause panic that can impact the quality of life of a region. The crimes of robbery and residential burglary have a significant impact on the stability of a neighborhood and tears at the fabric of society. It is a cycle of fear which promulgates distrust in the community which hampers the efforts of law enforcement to reduce crime as it is manifested by the violent act. Similarly, business owners tend to move away from an area that has a high occurrence of robberies and residential burglaries. These moves will cause a diminishing tax-base which directly impacts the police budget. Additionally, it causes a downward spiraling cycle that promotes less vigilance and presence by police and more crime opportunities for criminals. If citizens are paralyzed by fear and do not get involved with the police to reduce crime; the task of law enforcement and reducing crime becomes more difficult (Walker, 1992). Most often, with the crime of robbery, the victims are injured which activates the emergency response systems of the fire department and local hospitals
increasing the cost of health care in society. In the case of residential burglaries, property losses have a direct bearing on the local insurance rate, the more insurance claims that are reported, the higher the premiums are. More importantly, in most cases fear is injected into other citizens causing a breakdown in communication between the citizens and the police (Lab, 2004).

Commercial burglaries are an unlawful entry into a building to obtain property that is usually valued much higher than what is found in residential burglaries. These crimes negatively impact the business community and the local economies suffer from higher taxes as corporations that pay a good share of these taxes move away looking for crime free neighborhoods. Furthermore, as certain products such as electronics, perfume, and clothing are targeted and stolen by burglars, consumers end-up paying higher prices at the stores. It is a vicious economic cycle that impacts everyone in that particular location and consumers throughout the region. Not many communities pay close attention to the impact of commercial burglaries and its effects on the local economy. In fact, many police departments focus more on violent crime and robberies instead of property crimes such as residential and commercial burglaries. But the costs associated with commercial burglaries runs-into millions of dollars (Walker, 1992). Professional burglars and crime groups are usually behind this type of crime which can yield many rewards with minimal risks of arrest.

Auto thefts are another crime of opportunity whereby the potential criminal carefully evaluates the risks and rewards of committing the crime. It was stated that “nearly 1.3 million motor vehicles were stolen in the U.S. in 1987” (Hagan, 1990, p. 276). Thieves usually have an exclusive type of car that they target such as Toyota
Camry, Camaros, and Pontiacs. For the most part, these vehicles are easy to steal and have a high re-sale value on the black market. Scholars in the policing field such as Wrobleski and Hess (2003) have offered the types of auto theft which include, joyriding, short term transportation, long term transportation and profit-motivated. Highly organized rings are usually associated with profit motivated thieves who make a living stealing cars and reselling them for parts in Latin America. The yearly costs associated with auto thefts are in the millions. Intangible consequences of this crime can also include the high costs of insurance all consumers must pay for more coverage to offset the loss that insurance companies incur.

Budget Issues

This section involves budget related implications and limitations as police administrators are faced with reduced budgets, resources and the demands to reduce escalating violent crime. Police administrators must choose between two main law enforcement theories to combat crime. Should they deploy more officers to the uniformed preventative patrols to create an omnipresence of uniformed officers in a specific area, or should more officers be assigned to investigative entities to conduct more sophisticated investigations to reduce crime rates (Grant and Terry, 2005)?

Which police strategy is most cost effective? Should more officers be assigned to uniformed preventative patrols to reduce the crime rate or should the investigative follow-up approach be implemented. However, this investigative approach will delay redeployment of resources that can influence the learning curve of investigators which can negatively impact crime rate reductions. Typically, overtime is used to augment investigative support personnel to combat violent crime as they are deployed in hot spot
areas as directed patrols. Directed patrols are considered an extension of the investigative follow-strategy previously mentioned. The cost factor associated with this strategy is staggering as more dollars are pumped into directed patrols. If uniformed preventative patrols are exclusively used to combat crime, overtime is kept to a minimum generating a cost savings to the department. Working within the allocated budget is an important factor for police officials. Therefore, it is paramount that police departments employ the most cost effective strategy to reduce the crime rate (Walker, 1992).

As a policing strategy, uniformed preventative patrols normally do not incur inordinate amounts of overtime to perform the mission of response to calls for service and crime control. On the other hand, when investigative personnel are deployed in an area to reduce crime, overtime is used to factor-in a deployment strategy called directed patrols.

Directed patrols involve the saturation of an area by police officers, and investigators to reduce crime rates. The stream of research has revealed that this type of policing practice generates short term results in crime reduction, but the long term effects of crime control is inconclusive (Braga, 2003). If crime is allowed to permeate an area, citizens are inclined to move-away reducing the tax base. The collections of taxes generate funds for the police budget which sustain law enforcement efforts for the community. Adequate general funds are essential to maintain an effective police presence in a particular area.

**Statutory Requirement**

The third issue centers on the general statutory requirements of the police to employ the best policing strategies to reduce crime. The United States governmental
structure demands from the police a level of service inclusive of crime control and the order of maintenance and response to calls for service. The taxing configuration of the local government is structured around the accountability of the police departments to provide effective service to the citizens and reduce crime. It also means that police departments must execute law enforcement plans that take into account the displacement of crime. It is not enough for the police to reduce the crime rates in the area temporarily and push it into other adjacent areas; police officials must prevent and control crime for the long term (Braga, 2003).

Budgets are proposed, approved, and executed on the assurance that the police department will employ the best law enforcement practices to reduce the crime rates. The State of Florida is empowered to swear-in and authorize citizens who graduate from a state sponsored and approved police academy to practice law enforcement in city and county governments. This authority is contingent on the assurance that sworn officers will practice law enforcement under statutory requirements and are compelled to practice policing under a rule of law which provides service, crime prevention and crime reduction. In this performance of service, crime prevention and crime control are essential elements that must be incorporated into the mission of police departments. Officers are empowered to make arrests for crimes committed against state law. It is believed that these arrests contribute to the reduction in crime rates (Lab, 2004).

The U.S. Constitution is the fundamental instrument that empowers state governments to enact policing authority and mandates which includes law enforcement and accountability. Inclusive of statutory requirements are budgetary legal obligations which directly impact funding source availability and accountability for police
departments. Local governments are not allowed to exceed their budget allocations. Therefore, police departments must function within their budgetary means. The budget has other limitations and implications that include factoring in for emergencies such as hurricanes and other disasters, so there is a need to be fiscally prudent within the law to ensure that there is enough funding in reserve for crime control initiatives. As a result, the most cost effective policing strategy to fight crime is paramount to ensure funds are available for the entire budget cycle of one year (Walker, 1992).

**The Kansas City Preventative Patrol Experiment**

Historically, police officials, citizens and politicians have been wrestling with the postulation that more police officers assigned to an area reduced crime. To fuel the supposition, citizens complained about the rising crime rate and demanded that more officers be assigned to their areas to combat crime. These views and arguments for and against preventative patrols and crime continue today causing a disjointed police strategy to combat crime. Police departments around the country have formulated departmental structure centered on this notion that more officers assigned to an area reduces crime. However, different strategies began to emerge, to deploy more officers in a given area to reduce crime such as directed patrols and uniformed preventative patrols took a back-seat to the crime prevention strategy of crime reduction which was supported by historic scholars in the field of policing such as Vollmer (1921) and Parker (1950) (As cited by Kelling, 1988).

The fact of the matter was that no one had scientifically measured or tested whether more police officers doing preventive patrols reduced crime. In fact, police scholars such as Wilson (1977), Wilson (1985), and Walker (1992) all alluded and
supported the logical assumption that more officers assigned to an area reduced crime. They all concluded that an experiment of this nature would entail strict experimental conditions and controlled groups not possible in policing circles and would interfere with police responsibility, and the nature of policing would compromise officer and citizen safety. In 1971 Kelly, the Chief of the Kansas City Police Department decided to embark on a controversial study to measure and test the effectiveness of uniformed patrol and crime reduction. He was tired of listening to the logical assumption that more officers assigned to an area reduced crime; he wanted to truly test the theory. However, the willingness to move forward with the experiment caused a variety of concerns, such as, police department personnel are not geared towards research, and a variety of skilled persons had to be employed: statisticians, analyst, economists and others which caused a logistical challenge.

The study involved the differences in the level of routine patrol for 15 Kansas City police sectors or areas (Kelling, Pate, Dieckman, and Brown 2003). These areas were randomly divided into five reactive sectors, in the first (five) sectors; officers were instructed not to patrol, but to only respond to calls for service. In the second (five) sectors, officers were told to resume routine preventative patrols, and in the remaining five sectors more aggressive sectors, the level of routine patrols was intensified two to three times its normal level assigning more patrol cars to the areas. Instruments such as victimization surveys were used to calculate the level of fear and satisfaction of the citizens. As the study developed, a variety of hypotheses were created for the purpose of testing:

1. Crime would not vary by patrol intensity or otherwise.
2. Citizen perception of patrol would not change.

3. Citizen fear of crime would not vary by patrol.

4. Police response time and citizen satisfaction would change by patrol.

5. Traffic accidents would increase in the reactive sectors.

The findings suggest that a serious challenge to the commonly held belief that random patrols reduce crime rates. The Kansas City Preventative Patrol Experiment was the most comprehensive study on routine preventative patrol and crime ever undertaken. "The findings of that study concluded that either decreasing or increasing uniform patrols had no significant impact on the level of crime" (Klockars, 1983, p. 130)

The ultimate challenge would be whether the police department could sustain these experimental conditions through time but since the leadership of the organization was conducive to the challenge that experiment went forward supported by the Police Foundation (Kelling, Pate, Dieckman and Brown, 2003).

**Theoretical Literature**

Scholars such as Wilson (1995) and Klockars (1983) in the field of criminology consider this concept of police presence fundamentally valid but maintain that there are other sociological and environmental factors that influence crime rates such as a dire economy, a lack of opportunities to succeed in school or at work, single parent families with a lack of supervision for the children, living in urban depressed areas, and delinquent peer associations. These factors must be considered to accurately define crime and crime causation. Criminologists, they write, must examine and characterize crime from the perspectives of the following professions: biology, psychology, sociology,
history, economists. The view points of professionals in each field are needed to properly categorize the dimensions and causes of crime.

The Kansas City Preventative Patrol Experiment was the most comprehensive study on routine preventative patrol and crime ever undertaken. “The findings of that study concluded that either decreasing or increasing uniform patrols had no significant impact on the level of crime” (Klockars, 1983, p. 130). Wrobleski, et al. asserted that the results of the Kansas City Preventative Patrol Experiment indicated that “it makes about as much sense to have police patrol routinely in cars to fight crime as it does to have firemen patrol routinely in fire trucks to fight fires” (Wrobleski and Hess, 2005, p. 185). Furthermore, the findings suggested that the reason for the deterrence failure of routine patrols was the certain reality of the Criminal Justice System in providing a swift and accurate punishment to the crime. The goal of deterrence was not attained because most criminal cases take too long to prosecute and in most situations the penalty does not fit the crime. Another contrasting view on the research involved the interpretation of the level and form of preventative uniformed patrols. It was surmised that the results for the Kansas City Preventative Patrol Experiment could have been different if more proactive patrols would have been used and tested to combat crime in high crime areas. The objective of these patrols is for officers to be assigned to specific areas for more precise probing of the criminal element.

The study also found that the experimental condition had no significant effect on residential and non-residential burglaries, robberies and other class two crimes such as thefts. It is important to note, that these particular crimes are considered to be preventable through routine preventative uniformed patrol. Citizen’s fear of crime was not impacted
and the attitudes of area business persons toward crime and police service were not affected by the experimental design and conditions. Finally, these particular findings generated an inordinate amount of negative speculation about the traditionally held belief that more police preventative patrols reduce crime. This study has a strong correlation with the Hawthorne experiment that was done by Elton Mayo in 1932. In this experiment the lighting of the manufacturing plant was changed so many times that the workers felt important and wanted and thus, performed better whether lighting was increased or decreased. The conclusion of the Hawthorne study was analogous to the conclusion of the Kansas City Preventive Patrol experiment in which crime did not go down or up, but citizens saw the police make changes in patrol deployment and becoming more visible creating a sense of security for the areas. Correlations between the similar groups can be assumed as both groups felt more of a presence and attention and thus felt more secure and appreciated. But the essence of the experiment in both cases failed to test the actual variables and factors associated with performance and crime reduction, essentially not empirically demonstrating a casual effect on crime reduction (Robbins and Coulter, 2002). The negative results of the study can be traced back to the poor design of the study. In particular, Kansas City did not have similar population density and structural demographics as other major cities in the United States and therefore, the correlation of police visibility and crime was not properly tested.

A summary Report by the Police Foundation on the Kansas City Preventative Patrol experiment suggested the following points:
1. Challenges to the value of preventative patrol and crime rate reductions were rare until recent years, that is, scholars were reluctant to conduct these studies because the experimental design was difficult to control.

2. Bruce Smith writing about increased uniformed patrol discussed its possible ineffectiveness and its lack of scientific demonstration. The study was ineffective because the collection of the data was difficult when you considered the dark figure of crime, e.g., crimes that go unreported. In addition, the spillover effect, also called the displacement of crime is difficult to control, thus the data is not valid for scientific comparison.

3. Not many people paid attention to the body of literature about police preventative patrols and crime.

4. Another reason for the lack of study of uniformed patrols and crime was because researchers in the early 1970s had difficulty obtaining sufficient and correct data-sets to measure the effects of patrol and crime.

To provide an alternative perspective on the study, the police foundation summary report by Kelling, et al. (2003) and as cited by Patrick V. Murphy (2003) (President of the Police Foundation) points out that most police departments around the country are reluctant to create an experimental design necessary to measure and test the validity of police patrols and crime reduction. Police officers are assigned the job of protecting citizens and recreating an experiment of this magnitude would interrupt police functions.
Empirical Literature on Crime Causation

One empirical study that encompasses all these factors is called Differential Association Theory. This theory is important to the study of crime because it directly relates to the understanding and analysis of crime displacement and its effect on crime. Sutherland (1939), a social learning theorist, believed that crime is a product of learning the norms, values and behaviors connected with criminal activity. He strongly believed that deviant peers and family members have a direct influence on the criminal development of subjects. In fact, he states that members of society learn to better commit crimes by following their delinquent peers in criminal acts. Another scholar in the field, Cressey (1969), a long time associate of Sutherland, continued Sutherland’s work in spite of the limitations of testing the assumptions of the theory. Several notable research efforts have supported the underpinnings of this theory which is that crime is a learned behavior from deviant peers.

The study has limitations because it is not easy to follow people over time and do a comprehensive longitudinal study. Furthermore, one significant limitation to the study is that the reason that a person exposed to deviant behavior does not become deviant cannot be explained. In other words, some juveniles in the study who associated with known deviants did not become deviants. Nevertheless, other scholars such as Short (1958) surveyed institutionalized youth and found they committed crimes because they were closely associated with deviant persons that support Cressy’s work. Short (1958) wrote that there is a correlation between having deviant friends and crime; in fact, holding deviant attitudes and committing deviant acts go together. Criminologist Short
(1958) surveyed incarcerated youths who stated that they had in fact maintained close associations with delinquent youths prior to committing a violent act.

Although there are gaps in the theory (such as, the theory assumes that criminal and delinquent acts to be rational and systematic, it ignores wanton acts of violence and opportunity to commit crimes), the core principle that criminal activity may be learned through associations with criminals takes into account a substantial number of factors from psychology, sociology, economics and history. They play an important part in the definition and understanding of crime. In addition, it also adds a natural science perspective that includes the sociological and psychological processes in which criminal learning is a by-product of interaction with criminals.

**Purpose of Study**

The purpose of this study is to investigate the best practices of law enforcement deployment, such as uniformed preventative patrols, directed patrols or an increase in investigative resources that are most effective in reducing the crimes of residential burglary and robbery. The following are the specific purposes of this study: (1) To determine whether more police officers doing uniformed preventative patrol reduce the crimes of robbery and residential burglary, commercial burglary, and auto theft and (2) To study the significant differences between directed patrols, uniformed preventative patrols, crime rate reductions and response to calls for service.

There are exceptions to this traditional mindset, police organizations have been successful in the reduction of crime by instituting directed police patrols and increasing investigative roles in certain areas which involves assigning more police officers and investigators to a high crime area. On the other hand, Police Chiefs around the country
utilize police uniformed preventative patrol strategies to reduce crime. Unfortunately, very little has been studied on the impacts of both policing strategies, specifically patrol-time and crime rates and the effectiveness of follow-up investigate strategies and crime reductions. Currently, some police administrators are under the non-scientific postulation that more detectives doing follow-up investigations reduce crime, they argue that more precise investigative strategies generate more arrests and more arrests equates to crime reductions.

There are disagreements regarding the policing strategy which is best for preventing and reducing crime. Nevertheless, there is a fundamental assurance that the presence of more police officers assigned to a specific area prevents crime and reduces the opportunity to commit crimes. Therefore the research question for this study is, does the crime of robbery, residential burglary, commercial burglary and auto theft decline or increase when patrol time increased or decreased?

**Research Questions**

RQ1: Does the crime of robbery, residential burglary, commercial burglary and auto theft decline or increase when patrol time is increased or decreased?

RQ2: Is there a relationship between patrol time and how long it takes an officer to respond to an emergency and non emergency calls for service?

**Research Hypotheses**

H1: The crime of robbery will decline when there is an increase of patrol time in the City of Doral.

H2: The crime of residential burglary will decline when there is an increase of patrol time in the City of Doral.
H3: The crime of commercial burglary will decline when there is an increase of patrol time in the City of Doral.

H4: The crime of auto theft will decline when there is an increase of patrol time in the City of Doral.

H5: More patrol time generates quicker response to emergency calls for service in the City of Doral.

H6: More patrol time generates quicker response to non emergency calls for service in the City of Doral

**Definitions of Terms**

**Policing Characteristics**

*Theoretical definition:* Law enforcement utilizes a variety of policing law enforcement strategies to provide service (response to calls for service), prevent crime and reduce crime. Uniformed preventative patrols, investigative follow-up strategies and directed patrols are inclusive in the examination of data and review of the literature (Wrobleski and Hess, 2003).

*Operational definition:* Policing strategic outcomes was measured by vehicle patrol time, and compared to the reduction in the number of robberies, residential and commercial burglaries and auto thefts using a t-test method of analysis to compare variations between two crime groups in 2004 and 2006 as they impact on patrol time, response to calls for service, crime prevention and crime reductions which includes policing characteristics measured by patrol time doing uniformed preventative patrols (Seigel, 2003).
Organizational Characteristics

Theoretical definition: Organizational characteristics comprise the identity of the police organization and its method to deploy and maintain resources. In addition, these characteristics include the name of the organization and its mission statement. The characteristics resemble a hierarchal organization with a chain of command structure to ensure up and down lines of communication (Stojkovic, Kalinich and Klofas, 2008).

Operational definition: Organizational characteristics encompass traits that identify the entity which includes the department, type of service, deployment strategies and the role of the uniformed patrol officer. The type of service depicts the prevention of crime, the control of crime and the maintenance of order (Hagan, 1990).

Patrol Functions

Theoretical definition: As mentioned by many scholars in policing, including Peel (called the Father of Policing) Vollmer (1936) Wilson (1995) stated that, routine uniformed patrol services are the backbone of policing agencies. Wilson (1995) a renowned scholar and police chief in the field of patrol, clearly illustrated the benefits of rapid response to crime and in some cases the prevention of crime by the rapid response of uniformed patrols (As cited by Fyfe, et al., 1997).

Operational definition: The collection and examination of patrol time data provides information on the exact time uniformed police officers spend on routine preventative patrols (Wilson, 1995). Police officers are taught in the police academy and during their first phases of field training on how to properly complete the worksheet. Supervisors in their chain of command are responsible to ensure for the accuracy of the
worksheet to include the exact times for obligated time and patrol time. The police worksheet was examined to capture actual patrol time.

**Crime**

**Theoretical definition:** Robbery is defined as the taking of property by using force. Residential burglary is defined as breaking and entering into a residential structure with the intent of taking property. Commercial burglary is defined as breaking and entering into a commercial structure with the intent of taking property. Auto theft is defined as the taking of a motor vehicle with the intent of depriving the owner (Seigel, 2003).

Traditionally, crime trends follow specific patterns following wars, civil unrest, and dire economic conditions. In 1981 when the economy was in a recession, the number of index crimes peaked at about 13.4 million and then began a consistent decline until 1984 when (the economy improved) police reported 11.1 million crimes (Seigel, 2003). Many factors help explain the rise and fall of crime such as the suspect's age, economic conditions, social dysfunctions (e.g., abortion, guns and teens, gangs, drug use), and justice policy.

**Operational definition:** Crime was measured using a comparative analysis of significance equation to evaluate important variations between the crimes of robbery, residential and commercial burglaries, and auto theft.

**Crime Prevention**

**Theoretical definition:** Crime prevention involves the many actions citizens and police undertake to reduce the actual level of crime and or the perceived fear of crime.
"These actions are not restricted to the efforts of the criminal justice system and include activities by individuals and groups, both public and private" (Lab, 2007, p.24).

**Operational definition:** Crime prevention significantly denotes an attempt by citizens and the police working together to eliminate crime either before it occurs or before subsequent activity, contains the intangibles of citizen involvement with the police to reduce crime. Crime prevention is the applied efforts by citizens and the police to stop crime before it is allowed to occur (Lab, 2007). A possible variable to measure citizen involvement in crime prevention is to analyze and factor how much patrol time uniformed officers have to engage the citizens and help them become crime prevention practitioners.

**Delimitations and Scope**

This study has the following delimitations:

1. The geographic setting will be confined to Miami-Dade County, Florida.
2. The study will be restricted to the City of Doral incorporated in 2004.
3. The target and scope of the data will only include an overall six month and 8 day analysis.
4. The study will only include robbery and residential and commercial burglary and auto theft data.
5. The absence of reported crime to the police by victims that do not want to make a police report.
6. Police officers mis-categorizing and incorrectly adjusting the initial crimes of robbery to theft, or residential burglary to theft.
Chapter I consisted of an introduction to the study about the relationship between uniformed police preventative patrols and the crimes of robbery, residential and commercial burglary and auto theft. The statement of the problem emphasized the importance of law enforcement patrol strategies that police departments consider important to combat crime. Theoretical and operational definitions are defined for each variable (patrol time and the crimes of robbery, residential and commercial burglary and auto theft). Delimitations of the study are identified and tabulated. The study is significant and justifiable as the safety of citizens and police are at stake and notwithstanding the legal obligation of the police to prevent and control crime.

Chapter II provides a literature review, theoretical framework, crime trend, theories and patrol function interpretation and classification, and finally the Kansas City Preventative Patrol Experiment was introduced as a model for analysis of study. The significance of the study was also incorporated.

Chapter III incorporates the research design, research questions, hypotheses, demographic identification, patrol time and crime data and methods of data analysis and evaluation and measurement of the data.

Chapter IV provides the final comparative analysis, the analysis of data and the results of the research hypotheses.

Lastly, Chapter V provides a summary of the findings, the limitations of this study, implications for future research, and recommendations for law enforcement policy.

Significance of the Study

The review of the literature found that Vollmer (1972) Walker (1992) as also cited by Wilson’s (1972) interpretation of police preventative patrols response times and crime
offers a basic understanding of the research questions. But they failed to empirically test the impact of the comparative relationship between the variables of police patrols and residential, commercial burglary, auto theft and robbery and response to calls for service. What cannot be ignored is that there is a logical assumption that more uniformed patrols assigned to an area could reduce crime and improve response times. The mere presence of police patrols in the area logically can cause a preventative and deterrent effect by causing potential criminals to think twice before they commit a crime. However, a quantitative scientific study of the comparative analysis of patrol time and crime has not been attempted since 1972 in the Kansas City Preventative Patrol experiment.

A second question that could impact more police preventative patrols assigned to an area is do more officers assigned to an area improve the response times to calls for service? O’Brien (1996) conducted a study on police productivity and crime and he indirectly alludes that quicker reporting and response times by police to criminal violations have a positive impact on crime prevention. However, the relationship between the response times to calls for service and the reduction in crimes has not been attempted.
Chapter II

Review of Theoretical and Empirical Literature

Introduction

Peel (1901) is considered the architect of modern policing in England; he basically stated that the primary function of the police was crime prevention. As such, keeping the peace by peaceful means was the central duty of uniformed police officers and to prevent crime; the police would be deployed throughout the city and their presence was conspicuous to the entire population. The indirect conclusions of Peel suggest that uniformed police units responding to crimes in progress and making arrests could be a primary deterrence to criminal behavior. A secondary result was that potential offenders were deterred through the knowledge that other persons were arrested for criminal behavior.

Consistent preventative patrol was believed by some scholars in the field to be a form of crime prevention by the omnipresence of uniformed police patrols (Kelling and Coles, 1996). Research results also support that patrols designed to arrest offenders in progress of committing a crime is not effective. In their book *Fixing Broken Windows*, (Kelling and Coles, 1996) conducted an examination in Chicago that indicated that 93 percent of arrests were initiated by citizens whom contacted the police to report a crime. Police on random patrol came across very few crimes in progress, thus the strategy of patrol to apprehend offenders was flawed.
The subject areas of uniformed preventative patrols and violent crime are much discussed among police scholars, politicians and citizens. Much to the surprise of many police scholars, there are no conclusive results on whether uniformed preventative patrols or investigative follow-up efforts reduce crime rates. The comparative relationship between police preventative patrols and crime rates were examined along with different policing strategies that resulted in a reduction in violent crime. These interlocking associations were scrutinized including an examination of police organizational effectiveness and long range sustainability in crime reduction.

The Kansas City study contradicts the assumptions of Walker (1992), Vollmer (1972) and Wilson (1995) because they all seem to concur on the logical assumption that uniformed preventative patrols reduce crime. However, the Kansas City Preventative Patrol Experiment (1972) attempted to validate the theory, but the research contained gaps in the experimental design such as public safety concerns, the lack of testing for the long term effects versus the short term effects of uniformed preventative patrol and crime rate reductions, and the lack of accurate crime data collection for certain crimes like thefts which are traditionally underreported (Walker, 1992). The experiment set-out to prove or disprove if uniform preventative patrols reduced crime. As expected the experiment generated a lot of controversy and in the end the question was not fully answered. Short-term crime reduction and police patrols were compared to long range reductions with random preventative patrols; the conclusions were inconclusive. The findings of the experiment are considered in their most generalized form, without statistically significant conclusions. In one case, officers were added to a particular sector and crime remained consistent. When officers were removed from the same area, crimes
remained the same. The range and variation of the data was tested to no significant conclusion about uniformed patrols and crime rate reduction. Problems with the experimental design included the following:

1. Testing of the data for long-term effects compared to short-term was not done. In this type of analysis, this comparison is important to determine whether uniformed police patrols reduce crime rates.

2. The experimental design had a significant flaw in the area of public safety. As police officers are removed from the test area, the area in question is left with minimum staffing of officers to protect the citizens.

3. Officers openly complained about the public safety perspective as they were instructed to patrol areas with fewer officers which caused a safety gap. The experimental design could not control for officers moving into other areas to back-up their fellow officers.

The report summarizes, that an increase in police to prevent crime could be warranted if given a different orientation and strategy. The orientation or strategy in this case can be directed patrols assigned to a hot-spot area with a specific mission, to target robberies by concentrating on traffic stops (Sherman, Shaw and Rogan, 1995). A study of this type could validate the assumption that an increase in police officers doing preventive patrols (patrol-time) prevent and eventually reduce crime.

Levitt (2004) attributes the increase of police officers, the increase of the prison population, the reduction of the crack epidemic and legalized abortion to the reduction in crime in the 1990s. Levitt’s (2004) theoretical research is consistent with most scholars in
the field of law enforcement that more police officers equate to more crime prevention. But as mentioned throughout this critical analysis of the literature, there is no conclusive empirical study on the correlation between more officers and less crime. In concert with other scholars in the field, such as Vollmer (1972), Wilson (1995), Kelling (1996) and Walker (1992), summarize the logical assumption that more police officers assigned to a given area doing preventative patrols reduces crime (As cited by Kelling and Coles, 1996). There are limited empirical studies about uniformed patrol and crime; and the empirical findings are inconclusive because the cause and effect relationship or comparative relationship of patrols and crime rate reductions has not been thoroughly studied.

Comparatively, some police departments are returning to more traditional policing strategies such as uniformed police presence to reduce crime. University of Arizona professors Hirschi and Hindelang (1981) surmise that to affect crime rates, a jurisdiction should just simply increase the number of police officers; thereby restricting the offenders’ opportunity to commit crimes. On the other hand, Sherman (1998) talks about how cities with more police officers are not necessarily safer. He cites one example to prove his point. Washington D.C. increased its police force by 19 percent from 3974 in 1989 to 4740 in 1990. Total serious violent crime rose by 15 percent and homicides by 9 percent (Sherman, Gottfredson, Mackenzie, Eck and Bushway, 1998). This conclusion however does not consider or control for variables such as actual patrol time uniformed officers had for preventative patrols.

The research did not look at the cause and effect or comparative relationship of actual patrol time and crime, an essential ingredient to determine effective crime control
strategies. It appears the police department added more officers to other assignments but not to patrol. Traditionally, additional officers are hired and eventually are moved to investigative assignments to increase the detective ranks (Wilson and Petersilia, 1995).

**Theoretical Literature**

According to Shaw and McKay's (1972) Social Disorganization Theory, crime is a product of slum-type neighborhoods that manifest disorganization and chaos. The theory identifies why crime rates are higher in lower socioeconomic areas. Although homicides (also a violent crime) are tested in this study, Shaw and McKay’s (1972) work was instrumental in explaining the causes of certain types of crime including robbery, auto thefts and burglary. For this analysis, it is important to study the effects of environmental factors on crime. The study by Shaw and McKay (1972) involved the environmental causes of crime. As police officers conduct routine preventative patrols, they encounter environmental factors that influence crime and crime prevention. According to Seigel (2003) in his book, *Juvenile Delinquency*, the locations of heaviest crime and subsequent delinquency are concentrated in low socioeconomic areas in or near the inner city sectors. According to Shaw and McKay (1972) the consequences of neighborhood disorganization and decay directly impact police patrols and crime. Although the environment is not the central theme for this study, it must be analyzed to learn the effects that could influence crime and the impact of police preventative patrols (patrol-time). In Shaw and McKay’s (1972) Social Disorganization Theory, they found that neighborhoods that have the highest poverty level suffered higher rates of serious crime.
Beccaria (1764) in his essay of *Crimes and Punishment* indicated that he subscribed to the moderate approach of utilitarianism which emphasized that criminal behavior occurs when it benefits the perpetrator and him or she considers it useful, purposeful, and reasonable. Beccaria believed that people want to achieve pleasure and avoid pain (As cited by Paulucci, 1977). Therefore, it would seem logical that crime can be eliminated if people begin to view crime as a problem instead of as a benefit. The argument by Vollmer (1936), Wilson (1972) and Wilson (1995) and criminal justice scholars in the criminal justice field support the concept that if the criminal offender believes that he or she will get caught because of the omnipresence of police patrols, it creates a crime prevention atmosphere which ultimately leads to a reduction in crime. As cited in their book *Introduction to Law Enforcement and Criminal Justice*, Wrobleski and Hess 2006 stated that scholars such as Kinley, Larntz and Reiss allude to the need for more study in the area of police patrols and crime. These scholars are puzzled by the paucity of empirical studies on effects of patrols on crime. Too few studies have been done to scientifically test the relationship between routine patrols and crime (Wrobleski and Hess, 2006). Beccaria’s (1764) theory is that criminals or potential offenders consider crime to be risky in nature rather than rewarding. Therefore, as the probability of getting caught by the omnipresent uniformed patrol officer is higher, it outweighs the benefit of the reward. In other words, the potential criminal will desist from committing a violent act because the presence of the uniformed officer increases the likelihood for arrest.
Crime Trends

Traditionally, crime trends follow specific patterns following wars, civil unrest, and dire economic conditions. In 1981 when the economy was in recession, the number of index crimes peaked at about 13.4 million and then began a consistent decline until 1984 when (the economy improved) police reported 11.1 million crimes (Seigel, 2003). Many factors help explain the rise and fall of crime such as the suspect’s age, economic conditions, social dysfunctions (e.g., abortion, guns and teens, gangs, drug use), and justice policy. Traditionally, teens have extremely high crime rates. A demographic change in population (a younger population) can cause a shift in crime rates and the crime trend for certain crimes can escalate.

With the United States society getting older, this partially explains the reduction in certain types of crime such as, thefts, white collar crimes and property crimes. However, the number of juveniles and senior citizens are expected to increase within the next decade. This shift in population growth could forecast higher crime trends for certain crimes like robbery and murder and a lower trend for burglaries and auto theft (Seigel, 2003). The debate continues on whether the economy plays a major role in crime trends. A poor economy may lower crimes rates as more parents are home to protect their property and take care of their children (O’Brien, 1996). Therefore, the belief that the economy is a non-controllable dependent variable in this analysis could be flawed; however the studies conducted by O’Brien (1996) were inconclusive.

O’Brien (1996) nevertheless continues to stipulate that a long-term recession may produce an increase in the crime rate as more bread-winners are out of work. A relationship can be made between the surge in the economy during the 1990s and
reduction in the crime rate. Social dysfunctions such as single parent families, drop-out rates, racial conflicts, teen pregnancies and their incidence rates attribute to rates of criminal activity. For example, children born to single mothers need more social service assistance, and a lack of parental supervision bolsters the opportunities for teenagers to commit more crime. These factors contribute to the propensity of individuals (specifically children under the age of 18) to commit the crimes of robbery and burglaries (Wrobleski and Hess, 2006).

To illustrate the propensity of teenagers to commit crimes, Siegel (2003) in his book *Juvenile Delinquency* discusses Merton’s (1964) Strain Theory. Most people share similar goals but the ability to attain these goals is stratified, and individuals from lower socioeconomic classes have lower levels of goal achievement and that can lead to an increase in the incidence of crime. The theory is logical in terms of a young person living in a capitalist society that stresses the goals of attaining wealth, success and power wanting to satisfy their goals. To attain these goals, individuals from the lower socioeconomic classes have their opportunities stifled by demographic factors and in many cases they cannot achieve their goals even though society encourages hard work and education as the means to achieve those goals.

In determining crime rate trends, the opportunities and decisions by criminals play an important part in the dynamic operations of robbery, auto theft and burglary groups. As mentioned by Hochstetler (2001), he conducted a study in which he interviewed 50 male robbers and burglars who shared interactional dynamics in the criminal decision-making process. The data for the study specifically involved the structured interviews with 50 men on community supervision in a metropolitan area.
(Hochstetler, 2001). All subjects were on probation or parole following their conviction for robbery or burglary. Normally, offenders for these types of crime (robbery and burglary) act in groups that have a significant experience in street life. In some cases the crimes are unplanned, but occur spontaneously when situational factors favor a low probability of punishment for the crime committed (Hochstetler, 2001).

Kane (2006) on the other hand, conducted a study of the effects of arrests and its variations on the incidence of the crimes of robbery, and burglary (and aggravated assaults) in New York City. Kane (2006) studied the effects of arrest for violent crime to determine if there were resultant reductions in robbery and burglary (includes commercial and residential). He found a non-linear relationship between violent crime arrests, that is, raw arrest counts, and a specific reduction in robbery and burglary. In fact, when more arrests were made, the robberies and burglaries decreased temporarily, but over time returned to a higher equilibrium level. That is, crime levels reverted back to the original plane (Kane, 2006). Results suggested that robbery and burglary offenders identified their risk of apprehension as officers increased their arrest rates for violent crime in a specific area. Offenders go through a thought process to assess the risk of apprehension. Further analysis of this study revealed that the strategy of increasing arrests to reduce violent crime is temporary in nature (Kane, 2006).

On the issue of abortion and crime trends, a significant finding subsequent to the Roe versus Wade verdict was that criminal activity by pregnant women was reduced and controlled subsequent to obtaining an abortion which contributed to lower overall crime rates. Scholars predict that crime rates will continue to fall as the full effects of legalized abortion are realized (Levitt, 2004). The significance of this study focuses attention only
on the lower crime rate; it does not attempt to analyze or try to interpret psychological or sociological factors that prompt the decision by women to seek abortions or not. It is important to analyze this study to understand the significance of lower crime rates and factors not associated with police patrols. It provides a different view on the subject of crime data analysis as it relates to non-policing activities. Thus, the crime rate also is impacted by factors and variables that are not controlled by police activities but are sociologically based. More research needs to be done about other sociological factors such as homelessness, inferior schools, single parent households, among other things and their impact on crime rates. Much has been written about sociological factors such as the reduced economic opportunity of lower class neighborhoods, fewer good paying jobs for individuals that live in lower class neighborhoods and single parent families; but further discussion of that literature is beyond the scope of this research effort.

Guns and teens are significant factors that impact crime trends. The influence and easy ownership of firearms in the U.S. has fueled the proliferation of weapons in the hands of teens and makes for a more violent society. As gun violence increases, violent crime trends continue to escalate (Wolfgang, 1996). Jurisdictions that have a high proportion of teens and gun ownership report higher crimes (Wolfgang, 1996).

Gangs are a menace to society and they try to destroy the fabric of democracy by incorporating fear in the hearts of citizens. According to many reports, there are more than 850,000 gang members in the United States (Seigel, Welch and Senna, 2006). These individuals are more prone to possessing weapons, especially firearms, and are more likely to utilize deadly force to commit crimes. According to Blumstein (1989) gang members recruit juveniles because they have low levels of fear and they are willing to
take risks, both indispensable variables in the art of gang warfare, and Seigel et al. (2006) agrees. The combination of a higher rate of juvenile residents in low to low-middle income areas and their need to belong to a group leads to an advanced propensity for gang affiliation and crime. These factors are likely to exist in urban areas and can have an impact on crime in all areas of a city. Gang involvement directly impacts crime trends, specifically the crimes of robbery and burglary. As mentioned by Siegel (2003) emerging theories of crime prevention discourage the use of treatment for juvenile offenders since recidivism rates continue to increase. However, the theory suggests that a more productive approach to crime reduction is to limit the opportunities offenders have to commit crimes (Seigel, et al., 2003).

Drug use impacts crime trends in a variety of ways. First, the crime of burglary is most impacted by drug users who need cash to support their habit. Burglary of a residence or a business is the most effective way to commit a “non-identified” crime which can yield cash and property. Secondly, drug abuse also propels violent crime as gangs defend their drug selling turfs by engaging in shootings. This dimension of drug dealing and abuse is most dangerous when combined with teens and guns, and it is directly attributed to the high murder rate in the 1980s. Drug abuse and criminality are associated in many past and current studies (Grant and Terry, 2005). Under the National Institute of Justice (NIJ) Arrestee Drug Abuse Monitoring (ADAM) program, the Bureau of Justice Statistics has conducted numerous studies on the subject of drugs and crime and the following findings were revealed:

1. Male arrestees who tested positive for an illicit drug at the time of arrest ranged from 51 percent to 80 percent in New York.
2. 51 percent of prison inmates committed their first offense while under the influence of drugs or alcohol.

3. 82 percent of inmates stated they used drugs at one point in their lives.

4. 28 percent of state and federal prison inmates reported being under the influence of drugs at the time of their offense (Grant & Terry, 2005).

Recent studies reveal a dramatic increase in the correlation between drug use and crime (Blumstein and Wallman, 2001).

**Residential and Commercial Burglaries and Auto Thefts and Robberies**

Residential burglaries are a crime of opportunity. Burglary is defined as an unlawful entry into a structure for the purpose of committing theft or another felony (Seigel et al., 2003). Factors that influence the crime of burglary include the lack of lighting in the area, lack-of citizen watch groups, the seclusion of the structure, the presence or lack of alarms in the building, and the presence of concealing windows or doors in the structure (Lab, 2006). These factors and others directly influence the burglary rate. In addition, police response to a crime-in-progress and police visibility could also influence the burglary rate (Siegel, 2003). According to the Miami-Dade Police Department (2006) response to calls for service report the average response time to in-progress calls of burglary range from 8 to 10 minutes, and residential burglary subjects normally commit their crime during the day when the citizen is at work and not home. The motives and expectations for burglary are money-related with an expectation for medium or low rewards.

Commercial burglaries also are considered a crime of opportunity, but in most cases the perpetrator is more sophisticated and the rewards are more cost-benefit
significant. These crimes impact the local communities in many ways, local corporations (and in most cases small companies which cannot afford a major theft) contribute significantly to the local economy and they provide a sound tax base and jobs for citizens who live near and around the neighborhoods. Pursuant to the Miami-Dade Police Department Compstat Report, in 2007, over 1712 commercial burglaries were reported in unincorporated Miami-Dade County. Similarly, according to the Miami-Dade Police Department, City of Doral Compstat Report, in the City of Doral, over 55 high-end burglaries (e.g. a large amount of high priced items were taken such as electronics and clothing) were reported from January to April (2008a) at an estimated loss of millions of dollars. Not only does the economy get impacted with commercial burglaries, the insurance companies normally raise theft premiums to offset the loss of commercial properties losses. As these costs escalate the product that these companies produce also goes up, it is a holistic incorporation of higher costs to the consumer.

Auto thefts are considered a crime of opportunity not only for the average criminal but also for the young delinquent. Joy riding is a preferred motive for the juvenile delinquent with this type of crime. It becomes a concern for the community because these subjects have no regard for public safety as they drive recklessly through the local neighborhoods to impress their friends. On the other hand, auto theft is also an organized crime objective which impacts the local economy in many ways (Hagan, 1999). First, the price of motor vehicles is rising because manufactures have to include a variety of theft prevention devices to reduce auto thefts. In addition, insurance premiums are mounting each day to keep up with the rising cost of auto thefts of certain types of vehicles. According to the Miami-Dade Police Department Compstat Report of (2008b),
in unincorporated Dade County over 5,972 auto thefts were reported and in the City of Doral 97 auto thefts were reported April Year to Date in 2008. The costs to taxpayers and corporations runs into the millions.

In most cases, robberies are a violent crime perpetrated by violent subjects that have no reservations about using deadly force to commit their crime. In fact, robberies are a classic criminal offense which involves fear as an influence. For example, the offender inflicts fear on the victim by displaying deadly force. The offenders usually utilize physical force to remove the victim's property and, in some cases, the offenders utilize a firearm or a weapon to extract the property from the victim. The crime of robbery is considered under the following elements of the law: (1) the taking and (2) carrying away of (3) personal property of (4) another with (5) the intent to deprive permanently by (6) the use of force, fear, or threat of force (Swanson, Chamelin and Territo, 2003).

According to theoretical literature, robbery is essentially a concern of large cities in predominately poor areas and in diverse communities. Unfortunately, almost one-third of all robberies result in injury to the victims, and females are more likely to be injured than males. A common denominator between residential and commercial burglaries and robberies is that they are a crime of opportunity. Robbery offenders usually stake-out the victims and find the right time to commit the crime. Recently, there has been a disturbing trend among robbers whereby they become less tolerant of their victims when they are uncooperative. The robber tends to use force beyond what is required to remove the property or worse yet they shoot the victim. Most robberies occur on the roadways or in
parking lots, and in most cases the victim is alone and the lighting conditions of the area are either poor or non-existent.

In summary, residential and commercial burglaries, auto theft and robbery are crimes of opportunity that could be prevented with an omnipresent police force. It is assumed by scholars, such as Vollmer (1936) that if more officers are allocated sufficient time to exercise effective routine patrols, they could reduce residential burglary and robbery rates (As cited by Kelling, Pate, Dieckman and Brown, 2003). On the other hand, some scholars such as (Levitt, 2004) state that routine preventative patrols are not effective and most police departments must utilize other proactive policing tactics to combat crime.

Investigative personnel are of the opinion that follow-up investigations are the most effective deterrent to crime because an increase in investigative time leads to more criminals getting caught. Current literature by Bayley (1998) also concludes that investigative police personnel could be the most effective deterrent to crime. When they investigate crime more precisely and make direct criminal apprehensions, they believe that crime decreases. The conclusion is that there is a literature gap because no-one has scientifically or systematically tested whether routine preventative patrols or investigative resources and deployment reduce violent crime.

**Crime Causation Theories**

The causation of crime is also important to study as it impacts crime and routine police patrol. According to Merton’s (1964) two theories of crime causation one particular dimension is of interest for this study. In *Anomie and Strain*, Robert Merton (1964) explains that the concept of strain contained within the model of his research can
be incorporated with other theories to explain crime causation. In this case, anomie and strain occur when certain citizens in our community are excluded from financial opportunities that other more affluent persons have (Featherstone, 2003). The nexus of the theory *Anomie and Strain* is explained when members of our community cannot attain the same fiscal goals of other more affluent members. They tend to revert to crime to purchase those items that are denied them by conventional means in our current capitalist society.

To further explain crime causation and criminal sociological learning theories Seigel, Welsh and Senna (2003), in his book, *Juvenile Delinquency*, asserts that Differential Association Theory by Sutherland (1939) is a significant study of crime causation. It stems from the social learning theory realm and it is a product of learning the norms, values and behavior associated with criminal activity. Social learning postulates that criminal behavior is learned. That is, criminals teach other subjects criminal techniques such as the art of hot-wiring a car, or how best to commit a residential burglary or robbery.

The elements of the theory indicate that learning happens within intimate groups which include family, friends, and peers that have the most influence on the subject. Research demonstrated that juveniles who grew up in the homes of alcoholic parents viewed alcohol abuse as being beneficial and as a fear inhibitor, alcohol abuse by juveniles leads to crime (Siegel, 2003). Research efforts have supported the core principles of the theory, that there is a correlation between having deviant friends and having deviant attitudes and, finally, committing deviant acts. In fact, according to Short (1958) youths maintained close association with deviant friends prior to their criminal act
In the Theory of Anomie and Strain, individuals unable to get opportunities to succeed may turn to crime as the most expeditious alternative. In addition, individuals seeking advantages offered by crime may seek out criminal groups to learn how to succeed as a criminal.

Criminology could be interpreted as a discipline stemming from sociology and is the study of criminal behavior, its impact on crime and society, and its causes and definition. Seigel, Welsh and Senna (2003) in their book, *Juvenile Delinquency*, prominent scholars Sutherland (1939) and Cressey (1969) define the following dimensions as the foundations to the definition of criminology: (1) the development of criminal law and its use to define crime, (2) the causes of law violations, (3) the methods used to control criminal behavior (Siegel, Welsh and Senna, 2003). A most difficult undertaking is the historical investigation of why people commit crimes; it has been the subject of study and critical analysis of most theoretical and empirical literature by various scholars in criminology. During the twelfth century and beyond, satanic and possessed people were believed to be the stand alone group of criminals and they were believed to be responsible for most of the crime in society. After conducting various studies, this concept was proved to be unfounded. In the interim many whippings, brandings and maiming were inflicted on suspects accused of committing crimes because there was a persistent thought was that crime was induced by satanic infiltration of the soul and there was a need to extract confessions by inflicting pain.

To effectively understand and control for criminal factors, one must explore the causation of crime from its primitive core (Wrobleski and Hess, 2003). Learning how criminology evolved facilitates a holistic assessment of the data; it makes it easier to
determine which variables to examine interrelationships with police patrols. In addition, if it is true that offenders are afraid of getting caught while committing a crime, then the study of why people commit crime is important. Perhaps a connection can be made between the presence of police patrols and a reduction in crime. Routine preventative patrols generate a certain type of police omnipresence which can create a fear of being apprehended; similarly no police presence encourages crime because the likelihood of apprehension is lower. For the study to proceed systematically, it must be understood and clarified whether offenders are afraid of getting caught committing a crime. The literature review examines whether a rational human being becomes apprehensive when the idea of getting caught is expressed. During the Classical Criminology era developed by Italian criminologist Beccaria (1764) social philosophers in the mid eighteenth century began to focus on a different approach to the concepts of crime, law and justice (As cited by Wrobleski and Hess 2003).

The literature includes an examination of Choice Theory. According to Choice Theory a perpetrator is motivated by the amount of reward and the lack of detention or apprehension for a crime. “Choice Theory also includes the dimension of free-will whereby subjects are in charge of their destinies and are free to make personal behavior choices unencumbered by environmental factors” (Siegel, Welch, and Senna, 2006, p. 66). Similarly, classical criminology theory on the causes of crime asserts that decisions to break the law are weighed against possible apprehension and subsequent punishment. In fact, to deter crime, the pain of punishment must be greater than the benefit of gain. This assertion is significant for this study because when police create omnipresence in an
area, the likelihood of an offender getting caught is greater, therefore, logically, crime should go down.

Conversely, according to Sherman (1995) subjects are smart enough to circumvent police omnipresence, and therefore, uniformed police visibility makes no significant contribution to the reduction of crime in the area. The theoretical research explains the choice of committing delinquent acts because offenders are motivated to commit crimes when the opportunity presents itself. That is, the offender believes that they will not get caught if they commit the crime. Planning has little influence in the execution of the crime as long as the opportunity presents itself (Hirschi, Hindenlang and Weis, 1981).

Criminal scholars such as Klockars (1983) and Wilson (1985) consider the concept of police presence fundamentally valid but maintain that there are other sociological and environmental factors that influence crime rates such as economic conditions, lack of opportunities to succeed in school or at work, single parent families with a lack of supervision for the children, living in urban depressed areas, and association with delinquent peers. These must be considered to accurately define crime and crime causation. Criminologists, they write, must examine and characterize crime from the perspectives of the following professions: biology, psychology, sociology, history, economists. The viewpoints of professionals in each fields of biology, psychology, and sociology, along with history and economics; all are needed to properly categorize the dimensions and causes of crime.
Crime Prevention

Crime prevention has been in existence since the Code of Hammurabi was introduced in approximately 1900 B.C. (Seigel, and Senna 2003). The Code of Hammurabi was utilized as a reform to retribution principles of Lex Talonis, “an eye for an eye” response to crime was the driving principle in the Hammurabic law. Historically, people have sought ways and means to protect themselves from criminals and they depended on themselves and formalized control systems within their community, such as current day “watch and ward” systems to prevent and arrest criminal activity.

During those times, the penalty for committing a crime was severe and it was theorized that getting caught and inflicting a high penalty was enough to combat and prevent crime. In modern times, community crime prevention programs were seen as a hindrance to the patrol tactics police officers employed to combat crime because as professionals in the field of policing, they did not need the help of the community to fight crime. They were the experts that knew how to effectively deploy police resources to combat crime. Crime prevention requires an understanding of the extent of the crime problem which sometimes is difficult to decipher. The scope of the crime problem involves the interpretation of many variables and an understanding of the impact of the fear of crime (Lab, 2004). Attempts to find causes for certain types of crime during certain times of the day are difficult. Anomalies can be found in the tracking and recording of certain crimes that are perpetrated by definite types of offenders.

As we have learned throughout history, the reality of getting caught and receiving a swift and high penalty for the crime is not enough in a democratic society, such as the United States, to reduce crime. However, it still stands to reason that an offender will
consider the probability of getting caught before he or she commits a crime. This statement is important in the analysis of police uniformed omnipresence in the community. Again there is a need for a study of the association between more police patrols and reduced crime rates.

Other means of crime prevention also must be studied to discover effective strategies of law enforcement as it relates to patrol-time and crime. For the sake of this study, a comprehensive analysis of the criminal justice system (such as the courts, the State Attorneys’ Office and the Correctional system) will not be done since it will not impact the problem statement. To comprehensively define crime prevention as it interrelates to uniformed patrol time and crime, the following crime-prevention model will be discussed and it is divided into three approaches similar to those found in other models of crime prevention (Lab, 2004).

The application of crime prevention is integral in the study of police patrols and crime as it relates to opportunities to commit crimes and offender interaction with police. According to Walker (1992) the main reason a city could engage in more crime prevention strategies and practices is that more officers per capita can be assigned to specific patrol areas creating more presence in the patrol areas through increased patrol time. Increased patrol time in this situation equates to the opportunity for police officers to interact more with the citizens they patrol, in essence generating good exchange of information and trust between both the officer and the citizen which leads to effective crime prevention as the flow of information is enhanced.

The first approach in the crime prevention model is termed Primary Crime Prevention. It includes as its elements environmental or architectural design that is
conducive to less obtrusive object placement yielding good visual acuity from all angles, installing appropriate lights, good access control and visible property identification.

Neighborhood watch is also a component of Primary Crime Prevention. Surveillance by citizens from their own homes is an effective means to prevent crime. When extra patrol officers are assigned to an area and are more involved with the citizens in crime prevention, they have more free time (patrol-time) to engage citizens while on patrol.

General deterrence also is factored into the model by a good arrest and conviction ratio coupled with effective sentencing methods that can serve as a deterrent to criminal acts.

Public education is also a critical dimension associated with Primary Prevention. If officers have enough time (as patrol-time) to educate the citizens on crime prevention techniques, the concept can be implemented more effectively. The deterrence perspective is explained by Kane who stated, “That as legitimate criminal sanctions increase, the probability of offenders committing crime decreases” (Kane, 2006, p.7). Citizens need to clearly understand the debilitating effects of crime.

The fear of crime incapacitates the citizens and prevents them from getting involved with neighborhood police patrols. If too much crime is impacting a community, paralysis occurs and citizens retreat into their homes and will not participate in neighborhood watch (Lab, 2004). Thus, it is very important that officers spend appropriate time with the citizens to explain all the dimensions associated with crime prevention. Scholars in the field of policing, such as Kelling and Coles (1985), emphasize the importance of officer and citizen participation in solving and preventing crime (As cited by Wilson and Herrnstein, 1985). Each neighborhood must have a good understanding of unemployment and poverty in the area. This effort will provide an
awareness of the demographics of the area that can lead to improvements in job training and employment assistance which are elements of crime prevention. Yes, according to Lab (2004), the citizens need to be involved in employment issues to ensure at risk people are assisted in finding jobs and job training is offered; it is a multidimensional approach to crime prevention.

Finally, private security can be hired to assist law enforcement and citizen groups to seek out criminal activity and prevent crime. This prevailing approach is gaining momentum in the law enforcement community because it helps patrol officers gain beneficial crime information for further investigation. According to Lab (2004) and supported by police officials, the trend around the country is that security officers are hired by some businesses and communities because assigned uniformed officers are not sufficient to prevent crime because there is a lack of omnipresence.

The Secondary Prevention approach is termed direct involvement; it involves direct interaction by law enforcement (theoretically without citizen involvement) but it does not exclude the citizen from indirectly getting involved in a prevention role. Identification of criminal acts and the prediction of such acts involve the careful and conclusive analysis of crime data. Police Departments employ crime analysts that devote their entire work day in collecting, recording, and analyzing crime data for future prediction of crime trends. Patrol forces are in direct contact with investigators and crime analysis personnel to track and identify criminal activity. As cited by Wilson, (1995) Vollmer (1936) wrote that as more officers are assigned to an area, they have more time to consult with detectives and crime analysts to decipher crime trends. On the other
hand, officers assigned to larger jurisdictions patrolling large areas have limited patrol time causing a gap in intelligence information gathering, review and dissemination.

The idea of situational crime prevention is a new idea that seeks to identify existing problems in the environment and institutes law enforcement and other primary crime prevention interventions that are developed for a specific problem (Lab, 2004). Community involvement is also a part of Secondary Prevention, as the police and the citizen’s work together in problem solving and crime prevention strategies. The citizen has the most knowledge of suspicious activities in their neighborhood; therefore, they are in a better situation to alert the police on crimes in progress. As more officers are assigned to an area, they have more time to practice true problem solving and create community partnerships. Problem solving in the community takes time since an assessment of the area is required and the execution of a plan can take weeks.

The studies done and illustrated by Lab (2004) on direct community involvement by police, point to the reduction in crime when police officers engage the residents in crime prevention. It is common sense to note that citizens that live in their neighborhoods “day-in and day-out” have a better understanding of the areas’ problems more so than the police whom are either never called into the area or who visit the area so infrequently that observational gaps are prevalent (Radelet, 1986).

Substance abuse prevention and treatment are also incorporated in the Secondary Prevention approach. As also indicated under Primary Prevention, citizens must get involved in the education and assistance of drug prevention and treatment. The literature stipulates specifically in the article by Zhao, and Lovrich (2003), and the literature by Lab (2004) and Radelet (1986), that the best way for the citizens to be involve in these
endeavors is by partnering with the area police officers to learn and exchange information about neighborhood concerns and to work on mutual strategies to correct the problems. A good vehicle to use for this participation and “partnering” is crime-watch. Crime-watch is a program that brings citizens and police together to exchange information and work together to correct neighborhood concerns to include crime prevention and crime control. As the citizens work together with the police, the citizens will understand the limitations and abilities of drug-abuse offenders. Similarly, schools and crime prevention also fall into Secondary Prevention. In addition, it is paramount that citizens be involved with the school systems to fully discover the advantages and disadvantages of crime prevention. Citizen involvement in the school PTA and other school activities creates an understanding of the impact of school programs such as “just-say-no-to-drugs” and DARE have on students and how these programs interrelate with crime prevention and control.

The final dimension to the Crime Prevention Model is titled Tertiary Prevention. This approach is a little more difficult to decipher and understand because it involves the workings of the entire Criminal Justice System (Lab, 2004). In fact, it involves the direct intervention by police officers with offenders and correctional programs designed to rehabilitate the offender. Officers with more patrol time have the opportunity to properly track criminal cases within the criminal justice system which enables the close monitoring of the convictions. Since officers have more patrol time they are able to contact the State Attorney’s Office to ascertain the status of their case. As such, the attorney handling the case will devote more time to the prosecution of the case.
This level of commitment is commendable, but a bit more complex as citizens learn from the police on the inner-workings of the criminal justice system and a first-hand understanding of its limitations and advantages. At this level, criminal justice participants (police officers) are facing an obstacle that law enforcement personnel often face disappointment in the system or the process of rehabilitation and punishment. As both police and citizens work together, the citizen learns the effectiveness and limitations of the criminal justice system and both work diligently within the system to achieve the best outcome possible. The balance of crime prevention and law enforcement is critical to the crime prevention equation that must incorporate the commitment and involvement of its citizens to prevent crime.

Without the help and commitment of the public, law enforcement is doomed to fail. It tries feverishly to combat crime and handle calls for service along with a variety of other functions that is expected to accomplish. In some police departments, officers have out of service time or investigative time to further educate the citizens and get them involved in crime prevention. A combination of omnipresence policing and citizen involvement in crime prevention has resulted in less criminal activity. Case studies as cited by Lab (2004) and Zhao, and Lovrich (2003) in the field of law enforcement point to this conclusion with certainty and validity. Following a careful review of the literature on crime and crime prevention one factor stands out, that crime occurs when opportunities present themselves and offenders take advantage of the situation (Lab, 2004). Furthermore, as more police officers are assigned to an area, it appears that they have more time to engage the community in crime prevention.
Uniformed Patrol Tactics and Function

As mentioned by many scholars in policing, including Peel (1901), Vollmer (1936) and Wilson (1995) routine uniformed patrol services are the backbone of policing agencies. Wilson (1995), a renowned scholar and police chief in the field of patrol, clearly illustrated the benefits of rapid response to crime and in some cases the prevention of crime by the rapid response of uniformed patrols by responding to calls for service (Fyfe, et al., 1997).

Police departments around the country employ vast amounts of resources to maintain and operate uniformed patrol forces. Police protection in the United States is a very expensive proposition. In 1990, local governments spent $31.8 billion for police protection (Lindgren, 1992). Most departments assign the majority of the sworn officers to patrol and they are responsible for primary and secondary crime prevention and calls for service. But in some cases, large departments are redeploying sworn personnel to investigative entities because there is an assumption that more investigative involvement and hours devoted to it reduces crime. That is, more investigative time equates to arrests which in turn takes the offender off the “streets” causing a reduction in crime. In addition, officers are required to process arrests and transport offenders to the county jail. Furthermore, officers are also required to attend pre-trial conferences with the State Attorney’s Office and attend court to testify for the State. The responsibilities lead to reductions in patrol time.

In today’s policing, uniformed patrol officers are responsible for the following primary police tasks (Fyfe, et al., 1997).
1. Respond to calls for service (their primary function)
2. Prevent crime
3. Conduct preliminary investigations
4. Engage in problem solving
5. Maintain order, or restore it
6. Aid persons in need of assistance
7. Engage in conflict resolution
8. Control traffic, enforce traffic laws, write tickets
9. Issue warnings
10. Make arrests and write reports
11. Use physical force to include deadly force to apprehend suspects or criminals

These activities account for most of the contacts between the police and citizens, and their presence in the community has been coined as the most important activity a government representative can perform (Wilson and Pertesila, 1995). Citizens formulate a lasting opinion of government from the contacts they make with uniformed police officers. These officers as first responders have a mammoth task in preventing crime and they quickly and efficiently respond to calls for service as mandated by citizen requests. These factors alone make the patrol officer the most important decision maker in the police department.

As previously mentioned, the functions of patrol involve a multi-tasking variety of generalized responsibilities. Needless to say, patrol officers must juggle a variety of duties and perform services no other governmental agency would want to perform on a seven days a week for 24 hours throughout the whole year. In addition, officers are asked
to attend meetings, work with the community to exchange information and problem solving. Goldstein (1990) clearly alluded to the fact that these uniformed officers are diagnosticians and problem-solvers. Uniformed patrol officers also must develop certain traits and exhibit unusual conduct as part of a subculture that includes many conflicting behaviors from the citizenry. These behaviors include public suspicion from citizenry that is demanding and non-supportive and conducting street patrols when they are the least desirable police assignments (Wrobleski and Hess 2003).

Moreover, uniformed patrol officers must develop a sharp eye to detect crime and must maintain visual acuity at all times. As they encounter dangerous situations, they are expected to handle the situation using only that force necessary to control the disturbance or apprehend the perpetrator. There has been a shift in the view of what constitutes the primary functional duties of patrol officers. In the mid-1920s, Peel (1901) the founder of the Metropolitan Police in England in 1929, strongly believed that random preventative patrols were the most effective means to prevent crime (Kelling and Coles, 1996). In fact, Peel assumed that if crime did occur, the rapid response by the uniformed patrol force was the deterrence to criminal activities (Wrobleski and Hess 2006). Wilson (1977) also believed in this philosophy, so much so, that he expounded that criminal desire and opportunities to commit crimes were essential elements in crime causation and that preventative uniformed patrol created a suppressive effect on these two dimensions (Wilson and Petersilia, 1995).

In order for uniformed preventative patrols to be effective the following formula developed by Wilson (1977) needs to be embraced. Under this formula, random preventative patrols require the transfer and assignment of a majority of a department's
police officers to patrol units that patrol their jurisdictions at all times. However, since the 1960s, the urgency and emphasis has been to increase the workload of patrol officers and diminish the uniformed patrol force by substituting more specialized investigative assignments that now includes homeland security assignments.

It is speculated that this has created a work-gap in uniformed patrol units and less patrol time has reduced viable citizen contact, causing a spike in crime (Goldstein, 1990). Unfortunately, this shift in policy in the community policing era has created a reactive uniformed police force that responds to calls for service only and is ill-equipped to prevent crime (Fyfe, et al., 1997). This new and evolving system of policing prevents the patrol officer from conducting preventative patrols since no time is allocated to this practical task; the officer’s mandatory patrol-time is spent responding to calls for service. In addition, this mode of policing removes the involvement of the citizen causing a critical gap in crime prevention; the police are now expected to do it all.

As policing continued its shift in strategy, the aforementioned eras of policing began to evolve, police functions changed from reactive policing in the reform era (1930 to 1980) to a modified strategy of community policing (1980 to present). This paradigm shift occurred over time and the latest shift (of community policing) was introduced to police departments in the hope of resurrecting the involvement and increasing contact with citizens in crime prevention, and provide more attention to problem-solving. More police involvement with the citizens they serve tends to result in crime reduction (Lab, 2004). Hence, the thought process for the strategy shift anticipated an increase of citizens’ participation that would lead to more teamwork between the police and the community. Its core operational component involved proactive patrols with citizen input.
and assistance instead of random visible patrols that included a directed patrol system that only targeted the security and safety needs of a neighborhood. In theory, this shift and new tactic is feasible, but with fewer resources (fewer officers assigned to uniformed patrol doing random patrol which equates to more patrol time) deployed to the uniformed patrol division, community policing does not function as intended. Police departments around the country are back to the fundamental question of whether more police officers assigned to uniformed patrol are essential for good service and crime reduction (Wilson and Petersilia, 1995).

In 1972, with the funding assistance of the Police Foundation, the Kansas City Police Department launched a wide-ranging case study to test the effects of police patrols and crime. (The discussion is appropriate at this juncture to demonstrate a natural sequence of variable importance). The experiment continued through 1973 and it was administered by the Kansas City Police Department and supervised by the Police Foundation. Major findings of the experiment included the following; the citizens did not notice the differences as the level of patrol was changed. In fact, the increase and decrease of patrols had no significant effect on crime. However the findings failed to demonstrate the association of a highly visible police presence and crime prevention, and in some cases, the causation of crime.

The non-empirical implications of the study were that added preventative patrol resources could be best devoted to other crime-control strategies such as directed uniformed patrols in targeted areas. In fact, Kelling, et al. (2003) makes the argument that a more directed deployment strategy of officers in a targeted area could be effective in the reduction of crime.
Police preventative patrols are considered the backbone of police work (Fyfe, et al., 1997). As mentioned throughout this study, billions of dollars are spent each year to maintain and support patrol forces capable of rapid deployment to emergency scenes and quick response to calls for police service. To quantify the research, an extensive search on the subject of patrol and crime was conducted and very few articles were found on the subject. The articles and journals reviewed only validated the obvious, that no empirical study has been done since 1972 on motorized preventative patrols and crime prevention. In 2002, Mesloh conducted a study of the COMPSTAT process (an accountability crime statistic process review that was implemented in New York City during the late 1980s) and stated that the Kansas City Patrol Experiment (1972) and the Newark Foot Patrol Experiment (1981) have contributed to the evolution of patrol strategies, again signaling the shift of policing strategy from more directed patrols to uniformed routine preventative patrols, a shift to the old patrol strategy proposed as effective by Vollmer (As cited by Mesloh, 2002).

In recent years the choice of policing strategy used by most police departments to combat crime involved the use of directed patrols, a temporary solution to crime rate reductions. Since the data on uniformed preventative patrol and crime rate reduction is inconclusive, more police departments are changing their patrol strategy to incorporate more uniformed preventative patrols to reduce crime. Most peer journals and books also refer to the Kansas City Experiment as the fundamental concept behind key points on the linkage of patrol and crime. It appears scholars, police officials, politicians and citizens are content with the assumption that more officers assigned to patrol an area create omnipresence which they think ultimately reduces crime, the historic thinking of police.
The Kansas City Preventive Patrol experiment suggested the contrary, that more or less police assigned to designated areas had no affect on crime. The more reason to systematically study the question of whether more uniformed officers doing patrol (more patrol-time) reduces residential burglary, commercial burglary, robbery and auto thefts. The theory that more officers assigned to an area reduce crime is still not updated, and the impact of the strategy of more or less uniformed patrols and the association with the incidence of crime is somewhat expensive, non-scientific and non-strategic. Nevertheless, more police chiefs and government officials and city leaders factor budget allocations based on the conclusions of the Kansas City Study without further analysis of the effectiveness of all patrol strategies to reduce crime.

Conversely, police departments around the country are now considering critical modifications and adjustments of their investigative capabilities to increase investigative units which equates to a decrease in uniformed patrol officers; as well as an increase of homeland security strategies to satisfy an untested theory which stipulates that investigative follow-up activity equates to better homeland security. They concluded that more uniformed patrol officers do not reduce crime or assist in homeland security and that more investigative follow-up is needed by detectives to reduce crime overall and enhance homeland security (Heath and Terry, 2005). However, a study done by the Bureau of Justice Assistance (BJA) in September 2005 stated that officers on the beat (doing routine patrol) are an excellent resource for gathering information on all kinds of potential threats and vulnerabilities to more effectively accomplish homeland security (Gonzales, Schofield and Herraiz, 2005).
The results of this study could have a significant impact on the demographic make-up of most police departments around the country. A shift of more police officers to uniformed patrols could signify a paradigm shift in policing which could either benefit police departments in reducing crime, lead to a crime reduction with no impact on investigative outcomes or homeland security, or further compromise investigative endeavors and homeland security. The paramount objective is to empirically test the relationship between routine preventative patrols (patrol-time) and crime reduction. For many years' police scholars and police officials have stayed away from conducting an experiment or a study to test the effectiveness of police routine patrols and crime. Traditionally, in police work cultural change or a shift in thinking is very hard to promote, but these factors should not hinder the imperative; to study the association between routine preventative patrol (patrol-time) and the incidence of crime.

A Shift in Policing

The review of the literature indicates that policing has been undergoing a paradigm shift from reactive policing to a more community-based policing concept. In their book Grant and Terry (2005), Law Enforcement in the 21st Century, stated that policing agencies have been transformed from the era of politics to community policing. The period between 1840-1930, was the era of politics and it included the following dimensions: 1) authority was primarily derived from politicians, 2) police organizations were decentralized and there was a close relationship with the community, and 3) foot patrols were prevalent. Then in the reform era (from 1930-1980), it consisted of: 1) authority mostly stemmed from the law, 2) the primary function of the police was
crime control, 3) the law enforcement organizations were centralized, 4) the use of motorized patrols was prevalent, and 5) a separation with the community existed. Thus, poor relationships were allowed to manifest themselves. Finally, the current era (from 1980 to present) is termed the community era, and includes the following dimensions: 1) authority is now derived from the law and the community, 2) police organizations again are decentralized, and 3) close relationships with the citizens are established and the use of community policing is encouraged.

Justice policy is directly related to this study as it attempts to define or suggest how aggressive, and different, police tactics help to reduce crime. Some scholars in the field of police patrols suggest that aggressive police tactics that focus on quality of life issues are most effective and reduces crime, particularly drug-related crimes. Assertive routine uniformed preventative patrols can fill the void left by increased investigative efforts that attempt to apprehend subjects involved in the drug-trade with a "hit and miss" (e.g., saturate hot crime areas without complete and effective criminal intelligence) law enforcement strategy that is not effective most of the time (Walker, 1992).

Crimes related to quality of life issues can be defined as, the crime of panhandling, graffiti, petty drug dealing, and loitering (Bayley, 1998). If quality of life concerns are monitored by uniformed police officers, the act of crime prevention is allowed to be manifested in the neighborhoods. As crime prevention activities increase the crime of graffiti, petty drug use and other misdemeanor violations will be reduced. Stifling crime opportunities is one of the most suitable methods to eradicate the criminal enterprise. Do more uniformed police assigned to a given area reduce the opportunities
criminals have to commit crimes? The question has been contemplated for years with no positive and consistent empirical results.

Opportunity to commit a crime is a viable factor in crime trend analysis and crime causation components and is directly tied into crime prevention. The lack of crime prevention leads to opportunities to commit petty crimes which foster more crimes of robbery and residential burglaries. The accessibility and lack of apprehension along with the opportunity available for petty crimes propels defendants to commit more violent crimes (Lab, 2004).

If crime is to be reduced, opportunities must be curtailed by employing a variety of strategies that will reduce the appetite of the criminal to commit crimes (Siegel, 2003). With more police officers assigned to a city, more opportunities emerge to implement prevention strategies as citizens work cooperatively with the officers assigned to their area. From a logical perspective, more officers assigned to an area should generate additional patrol time for more visibility and interaction with the citizens and problem solving activities. Current research indicates that citizens working with the police builds trust and leads to good partnerships between the police and citizens which culminate in reduced criminal opportunity (Lab, 2004).

**Policing Strategies to Reduce Crime**

In an article by Scott (2004) for the United States Department of Justice, directed patrol strategies have concluded that assigning additional officers to an area (directed patrols) reduces crime. These patrols only concentrate on crime suppression and are not utilized to respond to calls for service. Another particular study of interest is Sherman and Weisburd (1995) research that involved the concentration of uniformed patrols in hot
crime spot areas. The conclusion of the Sherman and Weisburd (1995) study indicated that more officers assigned to an area doing directed patrols reduced crime. The analysis focused on hot spot areas (areas plagued by crime) utilizing a directed patrol strategy to increase police presence in the targeted area. This approach to crime-fighting was shown to be effective, but less effective when compared to preventative patrols because traditionally hot-spot deployment of resources is temporary in nature. Long-term reductions in crime and displacement of crime have not been studied utilizing this policing strategy (Bayley, 1998). There appears to be a general consensus by scholars in the field that when police officers are present the criminal element is absent which leads to a reduction in crime (Wilson and Herrnstein, 1985).

The Greenwood-Chaiken and Pertisilia examination of the criminal investigative process was a study aimed at the examination of the effectiveness of follow-up investigations and crime reduction (Wilson and Pertisilia, 1995). Similarly, Wilson and Pertisilia (1995) concluded that the evidence is inconclusive to empirically determine whether there is a correlation between assertive follow-up investigations and reduced crime rates. Search for theoretical journals on the subject crime control revealed an article by Zhao and Lovrich (2003) on the priorities related to the three core functions of American policing: crime control, the maintenance of order, and police service. Changes in organizational priorities related to policing have been a part of this profession for over 50 years. In the 1960s and 1970s, crime rates rapidly increased and traditional strategies of crime control (which then mainly involved uniform preventative patrols) were perceived to be ineffective.
As mentioned by Zhao, and Lovrich (2003) and Kelling (1988) there is a need for policing to adapt to a changing social environment. But first Zhao and Lovrich (2003) wanted to analyze the importance of crime control as citizen demands for service increased. “The findings revealed that with respect to the mean ratings of the two core functions, control of crimes against person and service provisions remained consistently high over the entire decade” (Zhao and Lovrich, 2003, p. 18). These findings included in Zhao’s (2003) research study suggested that the control of violent crime is a significant priority, that is, citizens demanded to be safe from violent crime. The community policing strategy was incorporated in this analysis to determine the effectiveness of this police strategy on crime reduction. The data suggested that the strategy was inconclusive when comparing community policing strategies and crime control.

Therefore, traditional policing (uniformed police patrols and crime) was not tested as a form of crime control. The scholars stipulated that in the 1960s the prevailing view was that traditional policing was ineffective so they discounted further study. They assumed traditional preventative patrols to combat crime were ineffective. To validate this point, Zhao and Lovrich (2003) concluded that although the data was collected and analyzed, community policing strategies and crime reduction and community disorder could not be measured empirically and they cautioned that reading the results must be based on theoretical conclusions only. The fundamental revelation in this study is that citizens continue to stress the importance of crime control but the means to achieve crime reduction is still elusive.
Kansas City Preventative Patrol Experiment

Uniformed patrol has been the primary function of policing throughout the years. Over $2 billion are spent each year for patrol operations (Kelling et al., 2003). The argument for uniformed patrol has always been that omnipresence of uniformed police officers causes a deterrent effect in a given location and from a logical perspective. This assumption is valid. Many police departments around the country, and for that matter around the world, have allocated resources and personnel according to this principle. Unfortunately, the challenges of designing a police patrol experiment include the costs of such an experiment and the need to ensure that officer safety and public safety are not compromised intentionally. The safety concerns for the public and the police disallow the precise experimental design and the collection of data to measure and ultimately validate the theory. Just increasing police patrols to test the casual relationship of patrols and crime will exclude a comparison component of before and after patrol deployment in an area and the crime rates. It is a concern because you would have to remove preventative patrol officers from another area to augment the test area creating a safety concern for the citizens and patrol officers of the previous area. Removing officers in a given area to test the assumption that fewer officers increase crime has a twofold concern: officer safety concerns for the officers as less officers equate to a higher probability of injuries and use of force and citizen’s fear of crime and less police response is projected. Comparatively, if crimes go up in the area and citizens are exposed to more danger and injuries, then it becomes an unethical experiment.

In 1972, in Kansas City, Missouri, under a grant from the Police Foundation scholars in the field of policing conducted an empirical study (that lasted one year) on the
subject of police patrols and crime (Kelling, Pate, Dieckman and Brown, 2003). Chief Kelly and the Kansas City Police Department were supportive to the study of routine preventative patrol because the department was committed to the use of technology and was prepared to make changes to support efficiency. The study involved differences in the level of routine patrol for 15 Kansas City police sectors or (beats) (Kelling and Pate et al., 2003). These sectors (beats) were randomly divided into three groups and the first groups, in the first five reactive sectors, officers were instructed not to patrol, in these sectors but to only respond to calls for service.

In the next five control sectors (beats) officers were told to resume routine preventative patrols at its current level and in the remaining five sectors, more aggressive preventative patrols were instituted, in other words, the level of routine preventative patrols was intensified to three times its normal level assigning more patrol cars to the last five sectors. Victimization surveys were used to calculate the level of fear and satisfaction of the citizens. The study had a variety of hypotheses that were created for the purpose of measurement:

1. Crime would not vary by patrol intensity or otherwise as more patrols were injected into the area distinct variations in the crime trend was nonexistent.

2. Citizen perception of patrol would not change as they believed that more officers assigned to their area reduced crime.

3. Surprisingly, citizen fear of crime would not vary by patrol variations.

4. Police response time and citizen satisfaction would change by patrol; better response time was reported in the areas of more patrols.
5. Although no scientific explanation could be ascertained, traffic accidents would increase in the reactive sectors (Kelling et al., 2003).

The findings suggest that a serious challenge to random patrol surfaced in the frequently cited Kansas City Preventative Patrol Experiment which was the most comprehensive study on routine preventative patrol and crime ever undertaken. The findings of the study concluded that either decreasing or increasing uniform patrols had no significant impact on the level of crime. Klockars (1983) and Wrobleski and Hess (2003) found that the results of the Kansas City Preventative Patrol Experiment (1972) indicated that “it makes about as much sense to have police patrol routinely in cars to fight crime as it does to have firemen patrol routinely in fire trucks to fight fires” (Wrobleski and Hess, 2003, p. 185). Furthermore, the findings suggested that the reason for the deterrence failure of routine patrols was the certain reality of the Criminal Justice System in providing a swift and accurate punishment to the crime.

The goal of deterrence was not attained because most criminal cases take too long to prosecute and in most situations the penalty does not fit the crime. Another contrasting view on the research involved the interpretation of the level and form of preventative uniformed patrols. It was surmised that the results for the Kansas City Preventative Patrol Experiment could have been different if more proactive patrols would have been used and tested to combat crime in high crime areas. The objective of these patrols is for officers to be assigned to specific areas for more precise probing of the criminal element.

The study also found that the experimental condition had no significant effect on residence and non-residence burglaries, robberies and other class two crimes. It is important to note, that these particular crimes are considered to be preventable through
routine preventative uniformed patrol. Citizen fear of crime was not impacted and the
cattitudes of area business persons toward crime and police service were not affected by
the experimental design and conditions. Finally, these particular findings generated an
inordinate amount of negative speculation about the traditionally held belief that more
police preventative patrols reduce crime.

This study has a strong correlation with the Hawthorne experiment that was done
by Elton Mayo (1946). In their book *Criminal Justice Organizations*, Stojkovic, Kalinich
and Klofas (2008) explain that in the Mayo (1946) experiment the lighting of the
manufacturing plant was changed so many times that the workers felt important and
wanted, and thus, performed better whether lighting was increased or decreased
(Stojkovic, Kalinich and Klofas, 2008).

The conclusion of the Hawthorne study was analogous to the conclusion of the
Kansas City Preventive Patrol experiment (1972) in which crime did not go down or up,
but citizens saw the police make changes in patrol deployment and become more visible
creating a sense of security for the areas. Correlations between the similar groups can be
assumed as both groups in the experiment felt more presence and attention and thus felt
more secure and appreciated. But the essence of the experiment in both cases failed to
test the actual variables and factors associated with performance and crime reduction,
essentially not empirically demonstrating a causal effect on crime reduction (Robbins &
Coulter, 2002). The negative results of the study can be traced back to the poor design of
the study. In particular, Kansas City did not have similar population density and
structural demographics as other major cities in the United States and therefore, the
correlation of police visibility and crime was not properly tested.
As cited by Patrick Murphy in a *Summary Report* by The Police Foundation (Kelling, Pate, Dieckman and Brown, 2003) on the Kansas City Preventative Patrol experiment suggested the following points:

1. Challenges to the value of preventative patrol and crime rate reductions were rare until recent years. Scholars were reluctant to conduct these studies because the experimental design was difficult to control.

2. Smith a researcher in 1930, writing about increased uniformed patrol discussed its possible ineffectiveness and its lack of scientific demonstration. The study was ineffective because the collection of the data was difficult when you considered the dark figure of crime (e.g., crimes that go unreported). In addition, the spillover effect, also called the displacement of crime is difficult to control, thus the data is not valid for scientific comparisons.

3. Not many people paid attention to the body of literature about police preventative patrols and crime.

4. Another reason for the lack of study of uniformed patrols and crime was because researchers in the early 1970s had difficulty obtaining sufficient and correct data-sets to measure the effects of patrol and crime (Kelling et al., 2003).

To provide an alternative perspective on the study (As cited by Murphy, the President of the Police Foundation, in the Summary Report, The Kansas City Preventative Patrol Experiment, Kelling et al., 2003) the police foundation *Summary*
Report points out that most police departments around the country are reluctant to create an experimental design necessary to measure and test the validity of police patrols and crime reduction. Police officers are assigned the job of protecting citizens and recreating an experiment of this magnitude would interrupt police functions. The experiment involved variations in the level of routine preventative patrol within 15 Kansas City Police Beats. These beats were randomly divided into three groups. In certain sectors routine preventative patrols were eliminated and officers were instructed to only respond to calls for service. In other beats routine preventative patrols were maintained and in the remaining beats routine preventative patrols were intensified (Kelling, et al., 2003). The experiment did not address a multitude of other patrol strategies and issues associated with two officer patrol cars, team policing and community policing. In addition, the geographical area of the city and low population density is not representative of most cities in the United States. But most policing problems faced by Kansas City are found in most cities around the country. The area is considerably large with a low population density but the crime rate per 100,000 residents is consistent with other major jurisdictions.

The experiment set-out to prove or disprove if uniform preventative patrols reduced crime. As expected the experiment generated a lot of controversy and in the end the question was not fully answered. Short-term crime reduction and police patrols were compared to long range reductions with random preventative patrols and the conclusions were inconclusive. The findings of the experiment are considered in their most generalized form, without statistically significant conclusions. In one case, officers were added to a particular sector and crime remained consistent. When officers were removed...
from the same area, crimes remained the same. The range and variation of the data was tested and showed no significant conclusion about uniformed patrols and crime rate reduction. Problems with the experimental design included the following:

1. Testing of the data for long term effects compared to short term was not done. In this type of analysis, this comparison is important to determine whether uniformed police patrols reduce crime rates.

2. The experimental design had a significant flaw in the area of public safety. As police officers are removed from the test area, the area in question was left with minimum staffing of officers to protect the citizens.

3. Officers openly complained about the public safety perspective as they were instructed to patrol areas with fewer officers which caused a safety gap. The experimental design could not control for officers moving into other areas to back-up their fellow officers (Kelling et al., 2003).

The report summarizes that an increase in police patrols to prevent crime could be warranted if given a different orientation and strategy. The orientation or strategy in this case can be directed patrols assigned to a hot-spot area with a specific mission, to target robberies by concentrating on traffic stops (Sherman and Weisburd, 1995). A study of this type could validate the assumption that an increase in police officers doing preventive patrols (patrol-time) prevent and eventually reduce crime.

Bayley (1998) reported in his research study on the subject of American Policing that the theoretical findings of both the Kansas City Preventative Patrol Experiment (1972) and the Newark Foot Patrol (1981) examination concluded the obvious that despite the logic that more police officers focusing on crime should reduce crime, the
empirical evidence is inconclusive at this time. For that matter, whether preventative
uniformed police patrols or the investigative process in particular reduce crime has not
been empirically tested to demonstrate a casual relationship between more police patrols
and reduced crime rates. To express the lack of evidence and the dearth of consistent
analysis in the field of uniformed police patrols and crime, Bayley (1998) goes on to
conclude that these two studies (the Kansas City and Newark Foot Patrol) are empirical
in nature and their findings attempted to formulate policing reforms in the 1970s. The
findings of both studies have been accepted as true although the experimental designs
have been classified as flawed by other scholars in the field such as Kelling, Pate,
Dieckman and Brown (2003).

The experiments contained problems in the research setting design such as: 1) the
safety practice of removing police officers from a sector to test the impact on crime
reduction, 2) officers assigned to the experimental areas with reduced police presence
were complaining of a lack of police response which could cause an officer safety
situation, 3) the data collection could have been skewed as citizens may have been
reluctant to report minor thefts, and 4) crime displacement was not accurately measured
to show disparity in the data.

Lastly, Bayley (1998) states that although these research studies have not
promoted new policing paradigms, he suggested that more replication of these two
experiments need to be done so that policing strategies are constantly reviewed and
improved (Bayley, 1998).
Conclusions

Significance of the Study

As policing continues to shift in its strategies, the eras of policing began to evolve, police functions changed from reactive policing in the reform era (1930 to 1980) to a modified strategy of community policing (1980 to present). This paradigm shift occurred over time and the latest shift (of community policing) was introduced to police departments in the hope of resurrecting the involvement and increasing contact with citizens in crime prevention, and provide more attention to problem-solving. More police involvement with the citizens they serve tends to result in crime reduction (Lab, 2004). Hence, the thought process for the strategy shift anticipated an increase of citizens' participation that would lead to more teamwork between the police and the community. Its core operational component involved proactive patrols with citizen input and assistance instead of random visible patrols that included a directed patrol system that only targeted the security and safety needs of a neighborhood.

In theory, this shift and new tactic is feasible, but with fewer resources (fewer officers assigned to uniformed patrol doing random patrol which equates to more patrol time) deployed to the uniformed patrol division, community policing does not function as it is intended. Police departments around the country are back to the fundamental question of whether more police officers assigned to uniformed patrol are essential for good service and crime reduction (Wilson and Pertesila, 1995).

Police preventative patrols are considered the backbone of police work (Fyfe, et al., 1997). Billions of dollars are spent each year to maintain and support patrol forces capable of rapid deployment to emergency scenes and quick response to calls for police
service. To quantify the research, an extensive search on the subject of patrol and crime was conducted and very few articles were found on the subject. The articles and journals reviewed only validated the obvious, that no empirical study has been done since 1972 on motorized preventative patrols and crime prevention and control.

In 2002, Mesloh conducted a study of the COMPSTAT process (an accountability crime statistic process review that was implemented in New York City during the late 1980s) and stated that the Kansas City Patrol Experiment (1972) and the Newark Foot Patrol Experiment (1981) have contributed to the evolution of patrol strategies. Again stimulating the shift of policing strategy from more directed patrols to uniformed routine preventative patrols, a shift to the old patrol strategy (Mesloh, 2002). In recent years the choice of policing strategy used by most police departments to combat crime involved the use of directed patrols, a temporary solution to crime rate reductions. Since the data on uniformed preventative patrol and crime rate reduction is inconclusive, more police departments are changing their patrol strategy (to enhance crime prevention and control) to incorporate more uniformed preventative patrols to reduce crime.

Most peer journals and books also refer to the Kansas City Experiment as the fundamental concept behind key points on the linkage of patrol and crime. It appears scholars, police officials, politicians and citizens are content with the assumption that more officers assigned to patrol an area create omnipresence which they think ultimately reduces crime, the historic thinking of police.

Society must find an effective police patrol solution (or accurate police strategy) to effect the prevention and reduction of crime. Violent crime and crime in general continues to be ever-present causing disruptions in the lives of the citizenry. In fact, the
crime problem is so pervasive that millions of dollars are spent each year on police budgets, increased taxes, increased health care costs and insurance premium increases. As more disruptions occur, the quality of life for the citizens of a community is hampered reducing communication with the police to engage problem solving solutions which is necessary to prevent and reduce crime; a vicious cycle that must be broken (Lab, 2004).
CHAPTER III

RESEARCH METHODOLOGY

Chapter III identifies the research methods designed to address and examine the research questions and hypotheses concerning the relationship between patrol time and the number of robberies, residential and commercial burglaries, and auto thefts, and the related response time. The research design will provide a quantitative examination of the impact of uniformed preventative patrol time on the crimes of robbery, residential burglary, and commercial burglary and auto thefts. Furthermore, the relationship between related response time and the crimes of robbery, residential burglary, commercial burglary, and auto theft will be quantitatively tested. This chapter describes the research design, ethical considerations and data collection methods, methods of data analysis, and evaluation of research methods. The study will test comparative results on patrol time and the number of robberies, residential burglaries, commercial burglaries and auto thefts reported in the City of Doral for the before and after examination period. Furthermore, response to calls for service will be compared and examined on the relationship between the crimes of robbery, residential burglary, commercial burglary and auto theft.

Research Questions

RQ1: Does the crime of robbery, residential burglary, commercial burglary and auto theft decline or increase when patrol time is increased or decreased?

RQ2: Is there a relationship between patrol time and how long it takes an officer to respond to an emergency and non emergency calls for service?
Research Hypotheses

H1: The crime of robbery will decline when there is an increase of patrol time in the City of Doral.

H2: The crime of residential burglary will decline when there is an increase of patrol time in the City of Doral.

H3: The crime of commercial burglary will decline when there is an increase of patrol time in the City of Doral.

H4: The crime of auto theft will decline when there is an increase of patrol time in the City of Doral.

H5: More patrol time generates quicker response to emergency calls for service in the City of Doral.

H6: More patrol time generates quicker response to non emergency calls for service in the City of Doral.

Research Design

This study used a quantitative, descriptive, exploratory (comparative), analysis research design to examine the relationships between quantitative variables such as patrol time, response times, number of robberies, residential burglaries, commercial burglaries and auto thefts statistics over an eight month and 4 day period in 2004 and 2006. The study compared the relationship between patrol time and response times in addition to the change in the number of robberies, residential and commercial burglaries and auto thefts when there was a change in uniformed officer patrol time in a South Florida City. Does more uniformed preventative patrol time reduce the crimes of robbery, residential and
commercial burglaries and auto thefts? Does more patrol time reduce the time it takes uniformed officers to respond to an emergency and non-emergency call for service?

For descriptive purposes, average and comparative, measures of central tendency, and variability were utilized to answer Research Question 1 and Research Question 2 describing all variables. Inferential statistical analysis was used to evaluate differences and averages and percentages. For the unit of measurement, the coding of the data was captured in minutes for patrol time, and response times and in numerical sequence for the crimes of robbery, residential burglary, commercial burglary and auto theft. The dependent variables will be the crimes statistics for robbery, commercial burglary, residential burglary, and auto theft and total crimes and their response times. The independent variable will be the amount of vehicle patrol time recorded on the officers’ worksheet. An analysis of the distribution of each crime statistic was examined to learn if the average had shifted over time as patrol time changed and whether a common variance has developed. The before and after comparative time period analysis begins in January 1, 2004 thru April 4, 2004 (before the City of Doral incorporated) and after (two years later same month comparison) the City officially incorporated thru April of 2006, a four month and 4 day approximate comparison of pre and post data for a total of approximately eight months and 8 days.

**Sampling Plan and Instrumentation**

The patrol time data is recorded on Uniformed Patrol Daily Activity Report referred to as worksheets that uniformed officers use to record actual time spent on uniformed vehicle preventative patrol. The response time is captured in minutes to illustrate how long it takes a uniformed patrol officer to respond to a call. Only vehicle
patrol time is grouped into a class by itself, under obligated time and reported in this format to save space. The worksheet also captures other types of obligated time such as investigative, court, service calls, administrative; and non-obligated time (administrative time) such as meals, temporarily out of service time, vehicle maintenance, roll call and training for a total of 480 minutes (8 hours of daily work).

The validity of the data is all-encompassing as officers must record actual patrol time on the back of the worksheet, under obligated time, letter D., number one. This information is received and dispatched from a computer based Computer-Aided Dispatch (CAD) system that records and tabulates actual allocated time and does not reflect other obligated time such as actual calls for service and other categories, e.g. court, investigations, traffic enforcement and many others. Non-obligated time however, such as meals and temporarily out of service, is recorded in the front of the worksheet and then transferred in minutes on the back of the worksheet. Each officer must complete a daily worksheet and turn it in at the end of every shift. A supervisor of the rank of sergeant is responsible for the supervision of this task.

The Crime Analysis System (which uses GIS Arcview to process information) is a Windows-based computer application that allows for the fundamental entry of all criminal incident data (the crimes of robbery, residential and commercial burglary and auto theft), elements and serves as the primary investigative analysis, incident tracking, and management system by Crime Analysis Units in police district stations and in the Headquarters Intelligence Section. This precise regulatory application is controlled by the MDPD Manual, Chapter 2, Part 3, titled Automated Systems, number 25. The system affords refined user-friendly ad hoc tabular reporting functions that assist in
precisely analyzing and forecasting criminal activity. The Miami-Dade Police
Department (MDPD) Crime Analysis System is used for the accurate collection,
collation, and analytical review of the crime data which is eventually entered into the
CAD Data Warehouse. Although there will always be the "dark figure of crime" (when
certain crimes, such as rape are not reported) the percentage of not reporting robberies,
residential and commercial burglaries and auto thefts are traditionally low compared to
rape, vehicle burglaries and thefts (Grant and Terry, 2005).

The reliability of the data is consistent and inclusive of the Policies and
Procedures of the Miami-Dade Police Department (Departmental Manual, Chapter 27,
Part 2, Activity Reports). These regulations mandate the proper procedures and protocols
for completing and safeguarding a worksheet. Police officers must accurately prepare
and seek the approval for their daily worksheet, and furthermore, are taught how to
prepare and complete a worksheet from the police academy setting to the training phases
that follow. Accurate and complete entries, including exact dispatched, arrival and in-
service times must be included on the worksheet. All officers are required to complete a
worksheet and shall (which is mandatory in MDPD language) break down time expended
into the appropriate categories on the back of the Activity Report (worksheet).

Moreover, to ensure for further accountability, the Communications Bureau dispatches
calls for services and records obligated and non-obligated times in a Computer-Aided
dispatch (CAD) system. The system is an on-line/real time structure which keeps track
of all calls for service and officer in service availability. This allows for the proper
accountability of time (480 minutes per day) spent each day while patrolling a specific
area. Obligated and non-obligated time related to a specific signal number whether
dispatched or requested by the police officer is recorded and vehicle patrol time is recorded separately. The detailed summary of the report shall reflect exact totals which must match the times on the front of the worksheet. In addition, supervisors (sergeants) must review each worksheet at the end of every shift, and on a monthly basis review CAD reports for accuracy and completeness (validity and reliability) before approving by signing the reports.

The reliability of recorded and accurately maintained crime data is consistent with policies and procedures of the Miami-Dade Police Department (Chapter 2, Part 5, Records Control, and Chapter 10, Part 1, Crime Analysis) and regulations from the State of Florida and the Federal Government under the Uniform Crime Reporting (UCR) system (Hagan, 1990). Local police departments are mandated to record all reported crimes and the data is entered and transferred to a central crime data repository called the CAD Data Warehouse for tabulation and review. A query/report is then generated depicting targeted crimes (which included robberies, residential and commercial burglaries and auto theft) for specific districts, grids or areas in question.

The margin of error for this type of data entry is minimal as the MDPD employs specially trained civilian Police Crime Analysis Specialists and Intelligence Analysts who work at the district level, at the Central Records Bureau and Headquarters Intelligence Sections. These Specialists are highly trained and they follow a simple checklist to enter data information and analyze police and crime reports and statistics. In conclusion, the validity and reliability of response time data (and obligated time reporting) is conclusive as it is received and recorded in the Computer-Aided Dispatch system that is controlled by a secure computer software method that generates a CAD dispatched report. The
complaint Officer receives the call for service from the public, enters the information in
the computer and sends it to the dispatcher who evaluates the characteristics of the call,
records it and dispatches it to the officer in that particular area. The data is computerized
from the inception to the end of the call. This type of reporting mechanism is
computerized and its real/time and is very reliable and valid.

Methods of Data Analysis

To test hypothesis 1-4, a comparative analysis independent sample t-test method
of inferential statistics measures the comparative relationship between patrol time in 2004
and 2006 and the crimes of robbery, residential burglary, commercial burglary, and auto
theft in 2004 and 2006 along with an analysis of the data to compare differences between
patrol time and number of committed robbery, residential burglary, commercial burglary
and auto theft. To test hypothesis five and six a comparative t-test analysis and a method
of percent distribution was used to compare differences between the timed response to
calls for service (Gennaro and Blankenship, 2002). The analysis examines variations
between the data, on patrol time, response times and crime patterns. The analysis of
variance summarizes information about the sources of variation in the data. In this study,
the nature of the variation is a natural phenomenon as the shape of distribution between
patrol time, crime, and response time is measured. A look at marked deviations from the
overall shape and sets of the data will be examined in the form of tables. The best way to
examine and test the research questions and hypotheses is by calculating a t-test for non-
independent pre and post data to compare two groups that are formed by matching data.

After approval by the University’s IRB, the request and collection of data was
tabulated according to acceptable research methods. The patrol time data (in the
worksheets) is kept at the police district level and maintained by their property custodian. The Major of each district is responsible for accurate supervision, maintenance and record keeping in accordance with Florida Department of Law Enforcement Rules and Regulations, and the Public Records Law and the MDPD Departmental Manual, Chapter 2, Part 5, Records Control.

The Miami-Dade Police Department has Policies and Procedures that regulate the accurate supervision, maintenance and safe keeping of all records to include this data. Similarly, the crime data is kept by the police districts and the MDPD Headquarters Intelligence Crime Information Warehouse, and laws (in particular, Florida State Statute, Sections 119.01, and 119.07 Public Records Law) MDPD Rules and Procedures also govern their maintenance and accuracy of records. The response time reports are kept at the Communications Bureau and these records are computerized and secured under current software security and aforementioned law, rules and regulations. Under Florida State Statute, Sections 119.01 and 119.07 these reports and corresponding data are considered public record and as such can be accessed thru a Public Records Request to the MDPD Legal Bureau requesting copies of the concerned documents that contain the data in question. There is no privacy issue related to the data or the officers involved in this study and the data is considered post and as such it’s safe to retrieve, access and study.

According to the MDPD Manual and the aforementioned Public Records Law, privacy and security matters are important but certain departmental post records (such as Uniformed Officer Activity Reports, CAD reports and Crime Analysis Reports) shall at all times be open for inspections by any person. As an added safeguard, it’s the
responsibility of the designated MDPD Departmental Records Management Liaison Officer (DRMLO) to properly process the Public Records request and to ensure there are no privacy violations. If certain information such as Officers badge number or name are to be kept confidential this Liaison Officer will black-out this information.

For the exploratory comparative research design, two separate t-tests calculations and interpretations will be used to examine differences or combinations of the crimes of robbery, residential burglary, commercial burglary, and auto theft and which best discriminate among the groups sample means in the particular comparative design. It is a test of the significance of group differences and expressed as a ratio the differences between two means divided by the standard error of difference (Gennero and Blankenship, 2002). For hypotheses 1-4, the examination and interpretations involves whether additional police officers doing uniformed preventative patrols (patrol-time) reduce the crimes of robbery, residential and commercial burglaries and auto thefts. For hypothesis H5, and H6 (two paired t-test calculations will be used) the examination involves whether additional uniformed officers (more patrol-time) responding to calls for service respond quicker to emergency and routine calls for service.

Comparative relationships among the crimes of robbery, residential burglary, commercial burglary and auto theft and patrol time and response times were prevalent demonstrating significant levels of probability a comparative relation between two variables closely linked in the data, police patrol time and crime or patrol time and response time. The quantitative variables associated with this study are:

Independent Variable:

1. Patrol time
Dependent Variables:

2. Robberies
3. Residential burglaries
4. Commercial burglaries
5. Auto thefts
6. Response time:
   a. Emergency
   b. Non-emergency (Routine)

The results of the analysis are presented in table comparative format. A pre and post illustration of patrol time and crime are shown, before incorporation of the City of Doral and after incorporation to demonstrate significant comparative correlation as this is measure by the strength of the linear association between these variables. In addition, tables will be used to present the data in a different configuration to compare the before and after effect of incorporation, patrol time, response time and crime.

Procedures: Ethical Considerations and Data Collection Methods

Data collection methodology and ethical considerations were applied to the following:

1. After IRB approval, a Public Records Request was submitted to the Miami-Dade Police Department seeking copies of uniformed Police Officer Worksheets for the area of the City of Doral from January 1, 2004 to April 4, 2004 and January 1, 2006 to April 4, 2006 to capture, encode and tabulate patrol time.

2. A statistical output request incorporated in the Public Records Request was forwarded to the Miami-Dade Police Department to capture the statistical numerical value of robberies, commercial and residential burglaries and auto
thefts for the same time periods. In addition, a request for emergency and routine response time reports was made for the same time period.

3. Data collection lasted approximately three months.

Evaluation of Ethical Aspects of the Study

The research study is considered ethical due to the following:

1. The IRB application was submitted for a full board review.
2. Approval by the University’s IRB ensured proper procedures protecting the integrity of the collection and analysis of the data.
3. Collected data remains confidential and secured electronically.
4. The IRB will be informed when the study is completed.
5. The post existing data was available and subject to public access.

Collection of Data

Data collected was analyzed utilizing a percentage subgroup comparison with repeated-measures analysis of variance and within subjects’ factors (Babbie, 1992). To test hypotheses H1-H6, Independent interpretation of percent differences and corresponding variable such as patrol time was labeled as a predictor that significantly influenced the crimes of robbery, residential burglary, commercial burglary and auto thefts. Exploratory Data Analysis, Exploratory Factor Analysis, Internal Consistency Reliability, and percentage significance analysis were used to analyze data. The following steps were utilized prior to analyzing data:

1. Coding – Collected data has predestinated coding assigned to each entry in this study. The coding scheme involves a numeric identification of each dependent
and independent variable to ensure a step by step process creating a comparative field of calculations.

2. Exploratory Data Analysis – Descriptive statistics was examined to verify the parameters used in this study. Variables that did not meet statistical assumptions were identified. When one or more assumptions were broken, transforming variables were considered.

3. Exploratory Factor Analysis - Inferential statistics was also used to measure the underlying hypothetical factors that represented a large number of variables (non-performance criteria).

4. Internal Consistency Reliability - Linear comparative relationships were evaluated for internal consistency. Linear comparisons were used to explain the relationship between predicted variables (patrol time and response time) and a dependent or criterion variables, robbery, residential burglary, commercial burglary, and auto thefts.

5. An interview with Major Antonio Galindo of the Midwest District, Miami Dade Police Department was conducted in 2009 to verify internal policy conditions and to further explain deployment strategies in the pre and post area of study. Major Galindo now retired worked as the district commander of this area for over five years. His experience of personnel matters and deployment strategies in the area of study is without question.

6. Interviews with Major J.J. O’Donnell of the Miami Dade Police Department were conducted on November 2009 to verify and quantify the number of personnel assigned to the City of Doral in 2006. Major O’Donnell is assigned to a special
bureau that handles incorporation matters and he is the subject matter expert on matters related to the incorporation of the City of Doral.

7. Interviews with Lieutenant R. Demaso of the Miami-Dade Police Department, Midwest District, General Investigative Unit were conducted to verify and quantify the significance of a commercial burglary in the City of Doral.

8. Interviews with Major T. Gross of the Miami-Dade Police Department were conducted on January of 2010 to verify and quantify response time data entry and verification. Major Gross is the Commander of the Communications Bureau and resident expert on the subject of dispatched calls.

Descriptive Statistics

The researcher used descriptive statistics to codify and organize the data to answer Questions 1 and 2. Measures of central tendency, frequency distributions, and variability were obtained to determine the linear characteristics of patrol time and the crimes of robbery, residential and commercial burglaries and auto theft and patrol time and response to emergency and non-emergency calls for service.

T Test Comparative Analysis

To test Hypothesis 1-4, two paired t-tests for independent sample were done for pre-and post-group relationship and comparisons to examine the differences between the sum and sample means of patrol time, and the crimes of robbery, residential burglary, commercial burglary, and auto thefts in 2004 and 2006. Then a comparative analysis was used to compare differences in patrol time and the crimes of robbery, residential burglary, commercial burglary and auto thefts. To test hypotheses five and six two paired t tests for independent samples were done to denote the differences between the sum and sample
means of patrol time and emergency and non-emergency response to calls for service (Gennaro and Blankenship, 2002). A comparative analysis was done to indicate the difference between patrol time and emergency and non-emergency response to calls for service. This procedure can also analyze group interpretations and differences allowing the comparison of crime statistics (George and Mallery, 2003). These t-tests and comparative revelations examined whether there are differences between two groups among the crimes of robbery, residential burglary, commercial burglary and auto thefts simultaneously, testing for patrol time sum and means calculations.

**Evaluation of Research Methods**

Internal and external validity of the research methods was examined. Internal validity is considered a primary consideration in studies that try to establish comparative linear relationships (George and Mallery, 2003). External validity involves the appropriate certainty to simplify conclusions that would be valid regardless of a similar study.

**Internal Validity**

Internal Validity Strengths:

1. The quantitative, non-experimental, systematic (independent paired t-tests) research design is stronger than an analysis of variance ANOVA and firm exploratory design for this type of study.

2. The quantitative research design will have higher internal validity verses qualitative research methods.
3. The internal validity of this study is strengthened by the data scrutiny procedures deemed appropriate for this study.

4. The study utilized valid and reliable comparative computations and independent paired t test analysis.

5. Observational and interpretation analysis of the data problems associated with the F-tests and the ANOVA a multivariate analysis of variance has replaced the MANOVA to ensure an accurate picture of the data. The comparative analysis t-test has replaced the ANOVA in this study to ensure accurate comparisons of criminology data.

Internal Validity Weaknesses:

1. Experimental designs have higher internal validity than non-experimental designs.

2. It is important to note that robbery, residential burglary; commercial burglary and auto theft do not exhibit linear dependency on each other. If more independent f tests are administered, the propensity for error increases. This may threaten internal validity.

3. The Police Officer worksheet is not a scientific device and the collection of data is not 100 percent significant.

4. The data set could not include a daily entry value set and as such may not be analyzed in SPSS computer systems software.
External Validity

External Validity Strengths:

1. The data is collected into specific categories that reveal exact descriptive statistics.
2. The collection of data has not been captured in a laboratory setting; rather it has been collected in the natural environment.
3. The study utilizes simple coding procedures which helps with generalization of data collected.

External Validity Weaknesses:

1. The study uses an approximation of patrol time which uniformed officers estimate as they prepare daily worksheets.
2. The crimes studied could be underreported as victims do not report crime for a variety of reasons.
3. There might not be enough criminal statistical data to analyze using the SPSS program.

Summary

Chapter III describes the research methods utilized to answer the Research Questions and test Hypotheses about the relationship between patrol time and robbery, residential burglary, commercial burglary, auto thefts and patrol time and response time. Furthermore, the chapter describes the research design, data collection, ethical considerations and data collection methods, methods of data analysis, and the evaluative research methods. Chapter IV presents study findings using the methodology presented and discussed in Chapter V.
Chapter IV

Results

On October of 2009, this research was performed by a uniformed crime preventative patrol analysis that involved the examination of a quantitative research study to scrutinize the relationships between more uniformed patrol officers patrol time, response times, robberies, residential and commercial burglaries and auto thefts. The study compared the relationship between patrol time and response times and the change in robberies, residential and commercial burglaries and auto thefts in response to a change in uniformed officer preventative patrols (patrol time) in the City of Doral, Florida. To test for significance, paired t-test comparative analysis were used and the researcher factored in for type I error and thus set a. 05 level of significance to ensure that the decision is 95 percent certain and accurate of true group difference.

Data Collection

Pursuant to an approved Public Records Request, this investigator gathered from the Miami-Dade Police Department, Midwest District Station, Uniformed Daily Activity Reports (worksheets) for a six months and eight day period starting in January 1, 2004 thru April 4, 2004 (before the City of Doral contracted with MDPD for police services) and from January 1, 2006 to April 4, 2006 (two years after the City contracted with MDPD for policing services). According to the U.S. Census Bureau, Census 2000, The City of Doral is located just west of Miami International Airport and it boarders unincorporated Miami Dade County to the south and west and the City of Medly to the north and east. The population is comprised of approximately 29,000 residents with a medium household income of approximately $53,000, and per capita income at
The city is 15 square miles in size and it is divided into residential areas and a business district which regularly hosts over 100,000 people who commute into the area to work Monday thru Friday from 7:00am to 6:00pm. Prior to April of 2004, the area that is now the city of Doral was unincorporated and mostly serviced by Dade County Government. Under a local referendum, the citizens of the city voted to incorporate and formed the city of Doral in 2003. After April 4, 2004, the City contracted with the Miami-Dade Police Department for policing services which also included community response officers, administrative personnel and detectives. This information was contained in the Doral Fact Sheet and it was retrieved from the Internet on November 26, 2008.

Crime statistical figures for robbery, residential and commercial burglary and auto theft and response to calls for service data for these particular time periods were retrieved from the Crime Information Warehouse (Crime Analysis System) data base and the Computer Aided Dispatched System for response to calls for service. Between the months of July thru November of 2009, this investigator reviewed Uniformed Daily Activity Reports (worksheets) for the collection and recording of patrol time. Each worksheet was analyzed to ensure a valid ramification of area correspondence within Midwest District area one in 2004 and the City of Doral in 2006. The data was coded and entered into an Excel spreadsheet to accurately collate the patrol time and to ascertain the mean value and sum score of each column. A review of the statistical crime data and response times was also conducted and reported for this study. This researcher is trained in the area of Daily Activity Report review approval and
processing along with the accurate interpretation of post crime statistical data and response to calls for service data.

**Study Parameters**

The parameters of this study was to reveal the significant change and relationship between change in patrol time and change in number of robberies, residential and commercial burglaries, auto thefts and response times in the City of Doral. The Uniformed Daily Activity Report (worksheet) data revealed that from January 1, 2004 thru April 4, 2004, the before period, uniformed patrol officers assigned to area one in Midwest District (which incorporated all of the City of Doral) responded to numerous calls for service. Little patrol time was evident as uniformed officers spent most of their allotted (480 minutes per day) time on responding to calls for service. A significant observation in the analysis before the City of Doral contracted with MDPD (before April 4, 2004) demonstrated a high level of service calls handled in area one, on the afternoon shift. Most of the assigned officers remained in area one responding to a continuous barrage of service calls. Similarly, in 2006 the data showed more police officers assigned to the city but it also appeared that afternoon shift uniformed patrol officers responded to numerous calls for service generating little patrol time. In 2006 more uniformed patrol officers generated more patrol time during the day and midnight shifts and from the examination of the worksheets, it appeared that service calls went up in 2006.

Another important examination of the data revealed that the afternoon shift recorded very little patrol time for 2004 and 2006 as officers were dispatched to
numerous calls for service. This allowed for less patrol time but the month of January was very active for patrol time in 2004 and 2006. As mentioned by scholars in the policing field such as Walker (1992) and Wilson (1995) patrol time or uniformed preventative patrols are essential for the prevention of crime and effective interactions with the community. Furthermore, many scholars in the policing field, to include Vollmer (1972) Wilson (1977) stated that routine uniformed patrol services are the backbone of policing agencies. Wilson (1972) a renowned scholar and police chief in the field of patrol, clearly illustrated the benefits of rapid response to crime and in some cases the prevention of crime by the rapid response of uniformed patrols to calls for service (Fyfe, et al., 1997).

Police departments around the country employ vast amounts of resources to maintain and operate uniformed patrol forces. Police protection in the United States is a very expensive proposition. In 1990; local governments spent $31.8 billion for police protection (Lindgren, 1992). Unfortunately, as police departments hire more sworn officers, the ranks of uniformed patrols do not increase because officers are re-assigned to non-uniformed specialized units; this creates a vacuum in the uniformed preventative patrol strategy, to prevent crime.

The strong perception among citizens and certain local and state politicians is that hiring more sworn officers directly impacts and reduces crime. This notion has caused incorporation fervor on a local and national scale among divergent communities as they prepare for the separation from county governments to form smaller cities to increase the tax base to pay for more police officers and other services they say they cannot get from county governments. These politicians along with some citizens in the
community succinctly sell this concept to the citizens and they seem to “buy it”, harnessing community support for more incorporations of cities. As Major Galindo stated in the interview on October 28, 2009, one of the main reasons the City of Doral incorporated was to hire more sworn and uniformed preventative patrol officers to reduce crime and conduct more traffic enforcement.

Table 4-1 depicts the before (2004) and after (2006) differences of patrol time in the City of Doral: The data distribution included patrol time in minutes, hours and by shift (480 minutes per shift, per day). The uniformed preventative patrol officers that were assigned to the City in 2006 were able to generate an additional 34,689 minutes of more patrol time which theoretically translates into more uniformed patrol visibility.

Table 4-1

<table>
<thead>
<tr>
<th>Patrol Time percent differences in minutes and by hour</th>
<th>2004</th>
<th>2006</th>
<th>Differences in Percentages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minutes</td>
<td>83,257</td>
<td>117,328</td>
<td>+43%</td>
</tr>
<tr>
<td>Hours</td>
<td>10,408</td>
<td>14667</td>
<td>+43%</td>
</tr>
</tbody>
</table>

Source: Daily Activity Reports for the City of Doral 2004 and 2006

Uniformed Sworn Personnel Assigned to Area 1

According to Major Antonio Galindo, the Commander of the Midwest District, Miami Dade Police Department (MDPD) a specific squad of police officers (For Platoon one the midnight shift, for platoon two the day shift and platoon three; the afternoon shift; Squads A, E, and the, Field Training Officer [FTO] squads which served as a relief squad) and a sergeant per shift were assigned to area one which incorporated all of the
The present City of Doral. This personnel allocation for area one included on average 6 police officers and one sergeant (for a total of approximately 18 officers and three sergeants) assigned to each shift, day, afternoon and midnight platoons and according to the worksheets, it was verified that an average of 18 officers were assigned to area one before the city contracted for police services in 2004. Detectives and support personnel were also assigned as necessary to support preventative policing and to control crime in area one, According to A. Galindo interviewed on November 1, 2009, the detectives and support personnel did not generate patrol time and were not in uniform and thus were not inclusive of this study.

According to the review of the worksheets, in certain situations, officers left area one temporarily to assist other officers in adjacent areas within the Midwest District boundaries or to handle emergency calls for service. But the bulk of the officers and sergeants spent the majority of obligated and patrol times in area one.

According to Major Galindo interviewed on November 1, 2009, directed patrols or hot spot patrols were kept to a minimum and did not directly function as uniformed preventative patrols. The worksheets reflected minimal time spent on these specialized patrols. Therefore, during the review of the worksheets, if directed patrols were noted they were excluded from the study to ensure a precise recording and analysis of uniformed preventative patrol time.

It was interesting to note that less uniformed officers in 2004 in general responded to emergency calls quicker, by one second which is not statistically significant. That was not the case for non emergency calls for service in 2004 however. The 3 month and four day average of 41:00 minutes was poor when compared to the regional police response
average of other municipal police departments and to this study in 2006. More uniformed preventative patrol officers responded much quicker to non emergency response for service in 2006, which is statistically significant finding.

**Minimum Staffing of Uniformed Personnel assigned to the City of Doral**

**Minimum Staffing**

After April 4, 2004, as the City of Doral began contracted police services with the Miami-Dade Police Department, they paid for minimum staffing of Miami-Dade Police Department personnel to provide policing services to the City of Doral. The initial staffing included 45 police officers, 5 sergeants, lieutenants, detectives and a contingency of support personnel for a total of 67 overall positions. For this study, only uniformed police officers and sergeants were studied because they exclusively patrolled the City in uniform generating preventative patrol time. A total of 50 uniformed officers and Sergeants were assigned to the City of Doral for three shifts, day shift, afternoon shift and the midnight shift, and the relief shift. Table 4.2 illustrates the corresponding staffing levels of the before (2004) and after (2006) comparative analysis.

However, it is important to note that in 2006 (the second period analyzed for this study) the City of Doral increased the minimum staffing levels to 76 total personnel but the increase was attributed to 3 additional sergeants and six neighborhood resource officers, the assignment of 45 uniformed patrol officers and 5 uniformed sergeants remained the same J. J. O’Donnell (Personal communication November 15, 2009). As previously alluded to in this study, traditionally, as more sworn officers and supervisors are assigned to a policing entity they mostly are allocated to specialized units and not to uniformed preventative patrol (Wilson, 1995).
In 2006 the review of worksheets for 50 sworn personnel (45 police officers and 5 sergeants; see Table 4-2) was conducted and patrol time was recorded. The differences in patrol time between 2004 and 2006 were significant as more preventative patrol officers were assigned to the City of Doral in 2006. It was revealed that although a significant amount of officers were assigned to the City of Doral actually 64% were assigned to uniformed preventative patrols, the rest were assigned to specialized units such as the Neighborhood Resource Unit, and the General Investigation Unit. J.J. O'Donnell (Personal communication November 15, 2009). In 2006, shown on Table 4-2 more preventative patrol officers were assigned to the City of Doral.

Systematically, police departments around the country reassigned police officers from uniformed patrol to investigative assignments to enhance follow-up investigative efforts. This redeployment of personnel in some cases is necessary but in most cases it is counterproductive to effective uniformed presence and crime prevention strategies (Lab, 2004).

Table 4-2

<table>
<thead>
<tr>
<th>Personnel assigned to uniformed patrol percent difference</th>
<th>2004</th>
<th>2006</th>
<th>Difference Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personnel</td>
<td>21</td>
<td>50</td>
<td>+138.00%</td>
</tr>
</tbody>
</table>

Source: Daily Activity Reports (Worksheets) of 2004 and 2006

As reported, there is an important discrepancy in the uniformed officers assigned to area one in 2004 compared to the City of Doral in 2006 contracted services of minimum staffing. This disparity revealed the noteworthy differences in recorded patrol time, as more officers were assigned to the City of Doral, patrol time increased by 43%.
According to Wilson, (1995) and other policing scholars, such as Walker (1992) more uniformed preventative patrols directly and indirectly impact crime prevention. The Kansas City Preventative Patrol Experiment concluded that police preventative patrols are considered the backbone of police work. Billions of dollars are spent each year to maintain and support patrol forces capable of rapid deployment to emergency scenes and quick response to calls for police service (Fyfe, et al., 1977). To quantify the research, an extensive search on the subject of patrol and crime was conducted and very few articles were found on the subject of patrol time and the crimes of robbery, residential burglary, commercial burglary and auto theft and response to calls for service.

The articles and journals reviewed only validated the obvious, that no empirical study has been done since 1972 (the Kansas City Preventative Patrol Experiment) on motorized preventative patrols and crime prevention. Mescoh (2002) doing a study of the COMPSTAT process (an accountability crime statistical process review that was implemented in New York City during the late 1980s) states that the Kansas City Patrol Experiment and the Newark Foot Patrol Experiment have contributed to the evolution of patrol strategies, again signaling the shift of policing strategy from more directed patrols to uniformed routine preventative patrols; a shift to the old patrol strategy proposed as effective by Vollmer (1972) and as cited by Mescoh (2002).

In recent years the choice of policing strategy used by most police departments to combat and control crime involved the use of directed patrols or otherwise called hot-spot patrols, saturating a specific area with law enforcement officers to conduct arrests sweeps, a temporary solution to crime rate reductions (Scott, 2004). Since the data on uniformed preventative patrol and crime rate reduction is inconclusive, more police
departments are contemplating changing their patrol strategy to incorporate more uniformed preventative patrols to prevent and reduce crime (Grant and Terry, 2005). Most peer journals and books also refer to the Kansas City Experiment as the fundamental concept behind key points on the linkage of patrol time and crime.

**Patrol Time**

Patrol time is a significant indicator of uniformed patrol presence in an assigned patrol area. The analysis of patrol time data is considered paramount to the study of crime in particular, robbery, residential burglary, commercial burglary, and auto thefts, crime prevention and response times. The study examined daily worksheets from January 1, 2004 to April 4, 2004 and from January 1, 2006 to April 4, 2006, recording a daily account of patrol time. Actual patrol time for the before comparison which is January 1, 2004 thru April 4, 2004 accounted for 83,257 minutes. For the after period (from January 1, 2006 thru April 4, 2006) patrol time accounted for 117,328 minutes. See table 4-1 for a breakdown by month and in minutes.
Table 4-3

<table>
<thead>
<tr>
<th>Month</th>
<th>2004</th>
<th>2006</th>
<th>Difference</th>
<th>D2</th>
</tr>
</thead>
<tbody>
<tr>
<td>January</td>
<td>39091</td>
<td>38272</td>
<td>-819</td>
<td>670,761</td>
</tr>
<tr>
<td>February</td>
<td>21124</td>
<td>35409</td>
<td>+14285</td>
<td>204,061,225</td>
</tr>
<tr>
<td>March</td>
<td>19238</td>
<td>38823</td>
<td>+19585</td>
<td>383,572,225</td>
</tr>
<tr>
<td>April</td>
<td>3804</td>
<td>4824</td>
<td>+1020</td>
<td>1,040,400</td>
</tr>
<tr>
<td>Sum</td>
<td>83,257</td>
<td>117,328</td>
<td>34,689</td>
<td>1,203,326,721</td>
</tr>
<tr>
<td>Mean</td>
<td>20,814</td>
<td>29,332</td>
<td>8518</td>
<td>72,556,324</td>
</tr>
</tbody>
</table>

Source: MDPD Daily Activity Reports 2004 and 2006
T=1.7060 P<.05 df=3, two tailed test
P value equaled 0.1865

A paired t-test for independent samples to test between the means of related groups was conducted on the two above patrol time groups for 2004 and 2006 to determine statistical significance of differences between means and the average amount of variability in the set of scores also known as the standard deviation. In addition, the t-test was administered to learn if the differences between the means of the two groups could be due to chance or related in any way. It was important to determine if the particular samples that were collected were representative of the universe from which they were drawn (Salkind, 2008).

The following is the paired t-test results: (t=1.7060 P< .05, df=3, two tailed test) and the two tailed P value equals 0.1865 with a standard error of difference = 4992.798 and the mean of group one minus group two equals -3.00 with a standard deviation of 14444.94 for 2004 and 16407.06 for 2006. By conventional criteria and as established in
Crime

Robbery

Six (6) robberies were reported from January 1, 2004 thru April 4, 2004 (pre-incorporation). Twelve (12) robberies were reported from January 1, 2006 to April 4, 2006 (after incorporation). A very interesting comparison, but theoretically predictable according to Wrobleski and Hess, (2003) on the issue of police preventative patrols and crime, as more uniformed patrol officers were assigned and patrol time went up, an increase in robberies occurred. This increase in patrol time had no significant association with a reduction in robberies, instead robberies increased by six cases.

Residential Burglaries

Twenty six (26) residential burglaries were reported during the before period (2004). Twenty six (26) burglaries were recorded during the after period (2006). There was no significant variation on the level of crime when uniformed preventative patrols increased or decreased. Again, a predictable outcome when compared to the Kansas City Preventative Patrol Experiment, the conclusions were, whether or not patrol time changed, crime remained the same (Kelling et al., 2003)
Commercial Burglaries

In 2004 fifty (50) burglaries were reported and in 2006, forty (40) burglaries were reported. In this case, as more uniformed preventative patrol officers were assigned and as patrol time increased there was a noteworthy decrease in commercial burglaries. In police work, a 20 percent decrease in crime is significant, in particular, in the case of commercial burglary, one burglary, that is one case, can mean the theft of property valued in the millions. R. Damaso (personal communication, November 17, 2009). The reduction in commercial burglary was not statistically significant and it was a predictable outcome if analyzed and compared to the theoretical and empirical data on uniformed preventative patrols (specifically from the Kansas City Preventative Patrol Experiment, 1972) and patrol time and crime according to Wrobleski and Hess (2003).

Auto thefts

Sixty six (66) auto thefts were reported during 2004 and 82 auto thefts were reported in 2006. In this case, as more uniformed preventative patrols were assigned and as patrol time increased auto thefts increased a direct relationship. A similar finding to the crime of robbery. Again, more uniformed officers and patrol time did not reduce the crime of auto theft, a consistent result according to Wrobleski and Hess (2003).

Below is a crime comparative Table 4-3, it is included to actually visualize the comparative analysis of the data. A difference column is added to show the significance of the increases or decreases of crime for 2004 and 2006.
Table 4-4

*Crimes for Three Months four Day period*

<table>
<thead>
<tr>
<th></th>
<th>2004</th>
<th>2006</th>
<th>difference</th>
<th>D²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Robbery</td>
<td>6</td>
<td>12</td>
<td>+6</td>
<td>36</td>
</tr>
<tr>
<td>Residential burglary</td>
<td>26</td>
<td>26</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Commercial Burglary</td>
<td>50</td>
<td>40</td>
<td>-10</td>
<td>100</td>
</tr>
<tr>
<td>Auto Theft</td>
<td>66</td>
<td>82</td>
<td>+16</td>
<td>256</td>
</tr>
<tr>
<td>Sum</td>
<td>148</td>
<td>160</td>
<td>12</td>
<td>144</td>
</tr>
<tr>
<td>Mean</td>
<td>37</td>
<td>40</td>
<td>3</td>
<td>9</td>
</tr>
</tbody>
</table>

Source: Miami-Dade Police Department Compstat Reports

T=0.5508 P<.05, df=3, two tailed test

P value equaled 0.6201

A paired t-test for independent samples was conducted on the two above crime groups for 2004 and 2006 to determine statistical significance of differences between means and the average amount of variability in the set of scores also known as the standard deviation. In addition, the t-test was administered to learn if the differences between the means of the two groups could be due to chance or related in any way. It was important to determine if the particular samples that were collected were representative of the universe from which they were drawn (Salkind, 2008).

The following is the paired t-test results: (t=0.5508 P< .05, df=3, two tailed test) and the two tailed P value equals 0.6201 with a standard error of difference =5.447 and the mean of group one minus group two equals -3.00 with a standard deviation of 26.41 for 2004 and 30.24 for 2006. By conventional criteria and as established in Table A.3 (t-Distribution chart) in the appendix section of the *Statistical Analysis in Criminal Justice*
and Criminology, a user’s guide book (2002) the difference is considered to be not statistically significant (Gennaro and Blankenship, 2002).

The aforementioned charts illustrate a simple but yet a comprehensive view of the data for a comparative review and balance of the variables. The chart was kept simple to convey a t-test measure of significance and the one idea as straight forwardly as possible eliminating distracting information. In fact, the charts stand alone to convey the message in a comprehensive but simplistic fashion. The only crime that went down when more uniformed officers were assigned and patrol time increased was commercial burglary, the rest of the crimes either increased or remained the same; a important finding. A monthly breakdown of crime was not included because it would not be statistically significant when compared to the monthly breakdown of patrol time or response times.

**Response times**

Response times were recorded per month and an average for January 1, 2004 to April 4, 2004 (3 months and 4 days) and were calculated at 7:05 minutes response times for emergency calls and 41:21 minutes for non-emergency response. As depicted in table 4-5, from January 1, 2006 thru April 4, 2006 (3 months and four days) the emergency response time for the City of Doral was an average of 7:06 minutes per month (it slightly went up as patrol time increased) and for non-emergency calls at 16:54 minutes (it substantially went down as patrol time increased). The comparative analysis of non emergency response to calls for service is very significant, as mentioned throughout this study, quicker and consistent response to non emergency calls for service builds trust in the community and theoretically more crime prevention is fostered (Lab, 2004). But the number of robberies, and auto thefts increased, while residential burglaries remained the
same and only commercial burglaries decreased. "The Kansas City Response Time
Analysis found that a large proportion of crimes were not discovered until sometime after
they occurred and were therefore unaffected by rapid police response" (Bennett and Hess,
2007, p. 387).

Table 4-5

| Monthly average Emergency Response time in minutes |
|-----------------|-----------------|-----------------|-----------------|
|                 | 2004            | 2006            | Differences     |
| January         | 8:51            | 5:16            | -335            |
| February        | 6:20            | 7:45            | +125            |
| March           | 5:12            | 8:14            | +302            |
| April           | 7:53            | 9:44            | +191            |
| Sum             | 2736            | 3019            | 283             |
| Mean            | 684.00          | 754.75          | 71              |

Source: MDPD Calls for Service Reports
T=0.5050, P<.05, df=3, two tailed test
P value equaled 0.6483

An independent samples paired t-test was conducted on the two above crime
groups for 2004 and 2006 to determine statistical significance of differences between
means and the average amount of variability in the set of scores also known as the
standard deviation. In addition, the t-test was administered to learn if the differences
between the means of the two groups could be due to chance or related in any way. It was
important to determine if the particular samples that were collected were representative of
the universe from which they were drawn (Salkind, 2008).
The following is the paired t-test results: \( t=0.5050, P<.05, df=3, \text{ two tailed test} \) and the two tailed P value equals 0.6483 with a standard error of difference =140.093, with the mean group one minus group two equals -70.75 with a standard deviation of 148.69 for 2004 and 179.28 for 2006. By conventional criteria and as established in table A.3 (t Distribution chart) in the appendix section of the *Statistical Analysis in Criminal Justice and Criminology*, a user’s guide book (2002) the difference is considered to be not statistically significant (Gennaro and Blankenship, 2002).

The aforementioned data illustrates the disparity in response times between 2004 and 2006. The emergency response to calls for service in January (2006) was significantly faster than in January 2004. The rest of the months in both groups displayed a different picture, although there were more uniformed preventative patrol officers in 2006, response to emergency calls for service increased, a noteworthy finding. As more uniformed patrol officers respond to emergency and non emergency calls for service quicker, there is a strong logical assumption that a high level of crime deterrence is generated culminating in reduced crime (Wilson, 1995). It was interesting to note that in 2004 reductions in emergency response times for February and March were recorded. Conversely, in 2006 higher response times for February, March and April; were noted, a non logical and surprising finding.

Although the data demonstrated that only the crime of commercial burglary decreased, quicker response to calls for service generates trust between the community and the police (Gaines, Kappeler and Vaughn, 1994). Furthermore, as police departments generate more patrol time, they have more options in utilizing different crime prevention strategies such as additional hot spot patrols or community oriented
policing to reduce crime. It is also important to note that the acceptable average of police emergency response to calls for service in unincorporated Dade County is 8:00 minutes, and for non emergency calls is 24:00 minutes. A. Galindo (personal communication November 17, 2009). These benchmarks were unofficially established by police departments around the nation to ensure the quickest response to call for service. Therefore, although the emergency response time for 2006 increased for this study, it is within the regional average for unincorporated Dade County. See Table 4-6 for a better illustration of the difference between the 2004 and 2006 comparison.

Table 4-6

<table>
<thead>
<tr>
<th>Three Months and Four Days Emergency Response Time Average in Minutes</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004</td>
</tr>
<tr>
<td>Average response times</td>
</tr>
</tbody>
</table>

Source: MDPD Calls for Service Reports

As depicted in the above table, the average response to emergency calls for service went up but not significantly when patrol time increased, a non expected conclusion. It could be assumed that uniformed preventative patrol officers in 2006 were more preoccupied with patrol and a slight increase in crime therefore, emergency response to calls for service remained higher. Characteristically, as more uniformed officers are assigned, patrol time increases, response to calls for service decreases but this study concluded the opposite in emergency response to calls for service. Emergency response to calls for service has a direct correlation with citizen trust and satisfaction with the police and faster emergency response times saves lives. Communities demand that uniformed police officers respond quickly to emergency calls for service such as an
accident with injuries, a sick or injured person or any other types of emergency that require the rapid response of an emergency management system. In fact, local fire departments depend on the police departments to help them arrive quickly at emergency scenes (Bayley, 1998).

Table 4-7

<table>
<thead>
<tr>
<th></th>
<th>2004</th>
<th>2006</th>
<th>Difference</th>
<th>D2</th>
</tr>
</thead>
<tbody>
<tr>
<td>January</td>
<td>39:09</td>
<td>16:32</td>
<td>-2277</td>
<td>5184729</td>
</tr>
<tr>
<td>February</td>
<td>42:46</td>
<td>17:17</td>
<td>-2529</td>
<td>6395841</td>
</tr>
<tr>
<td>March</td>
<td>40:56</td>
<td>17:16</td>
<td>-2340</td>
<td>5475600</td>
</tr>
<tr>
<td>April</td>
<td>48:54</td>
<td>13:59</td>
<td>-3495</td>
<td>12215025</td>
</tr>
<tr>
<td>Sum</td>
<td>17085</td>
<td>6424</td>
<td>903</td>
<td>815,409</td>
</tr>
<tr>
<td>Mean</td>
<td>4266</td>
<td>1606</td>
<td>2660</td>
<td>7,075,600</td>
</tr>
</tbody>
</table>

Source: MDPD Calls for Service Reports for 2004 and 2006

T=9.3884 P<.05, df=3, two tailed test

P value for group differences 0.0026

An independent samples paired t-test comparative analysis was conducted to determine the P value and statistical significance of the pre and post group of non-emergency calls for service between the years of 2004 and 2006. The mean of 2004 minus 2006 equaled to 2660.25 with a 95% confidence interval of this difference: from 1758.49 to 3562.01 with a Standard Deviation of 415.41 for 2004 and 169.42 for 2006. The two tailed P value equaled 0.0026 with a t-test value \( t=9.3884 \ P<.05, \ df=3, \ two \ tailed \ test \). The t-test significance variance was checked using Table A.3 (t-Distribution...
In the book by Gennaro and Blankeship *Statistical Analysis in Criminal Justice and Criminology* and by conventional criteria this difference is considered to be statistically significant (Gennaro and Blankenship, 2002).

Non emergency response times have a direct correlation with citizen customer satisfaction. As more uniformed patrol officers respond to non-emergency calls quicker the citizens of the area begin to build trust between the police and the community. As mentioned by Gaines, Kappeler, and Vaughn (1994), citizens will interact more frequently with the police when they perceive police patrols are responsive to their needs. As more interactions are recorded between the police and the community enhanced partnerships and trust develops allowing for more crime prevention. (Lab, 2004).

More uniformed patrol officers significantly reduced response to non emergency calls for service. As depicted in the above chart, Table 4-7, response to non emergency calls for service dramatically decreased each month when more officers were assigned to the city generating more patrol time. The differences reported are substantial demonstrating elevated variances of relationship between more patrol times to significant reductions in response to non emergency calls for service.
Main Analysis

The main analysis of the study was to explore the significance of more uniformed patrol officers generating patrol time and the crime reduction of robbery, residential burglary, commercial burglary, and auto theft and response times. The existing body of research found within the literature review suggested that many studies were not able to conclusively determine whether more uniformed patrol reduced crime or whether more uniformed patrol officers reduced response times. Many of the other existing studies assumed that uniformed preventative patrols had no impact on crime reduction or response to calls for service. (Fyfe, et al., 1997). This study sought out to establish an accurate benchmark by actually testing whether more patrol time reduced the crimes of robbery, residential burglary, commercial burglary, and auto thefts and whether more patrol time reduced response to calls for service. This analysis examined the impact of increased uniformed officers, consequently patrol time on robberies, residential burglaries, commercial burglaries and auto thefts and reduction in response times. This study recorded and examined the impact of patrol time on robberies, residential burglaries, commercial burglaries and auto theft reduction. Hence, this study measured
the variations of patrol time and emergency and non-emergency response to calls for service.

Table 4-9 summarizes the results of 2004 and 2006 comparison between patrol time and the change in robberies, residential burglaries, commercial burglaries and auto thefts. It illustrates that more patrol time notably reduced commercial burglaries. In fact, there is an indirect relationship between patrol time and the crime of commercial burglary, as patrol time increased, commercial burglaries decreased while residential burglaries remained the same, and no change occurred. However, with robbery and auto thefts, the opposite took place as patrol time increased robberies and auto thefts increased indicating a direct relationship between more patrol time and an increase in robberies and auto thefts.

Table 4-9

<table>
<thead>
<tr>
<th></th>
<th>2004</th>
<th>2006</th>
<th>Percent Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patrol Time</td>
<td>82,006</td>
<td>117,246</td>
<td>+43%</td>
</tr>
<tr>
<td>Robbery</td>
<td>6</td>
<td>12</td>
<td>+100%</td>
</tr>
<tr>
<td>Residential Burglary</td>
<td>26</td>
<td>26</td>
<td>0%</td>
</tr>
<tr>
<td>Commercial Burglary</td>
<td>50</td>
<td>40</td>
<td>-20%</td>
</tr>
<tr>
<td>Auto Theft</td>
<td>66</td>
<td>82</td>
<td>+24%</td>
</tr>
</tbody>
</table>

Source: MDPD Worksheets and Compstat Reports

The inferential statistics revealed that as patrol time increased robberies, and auto thefts also increased, a finding somewhat different from the Kansas City Preventative
Patrol Experiment. However, commercial burglaries decreased as patrol time increased in the city of Doral, also a different finding from the Kansas City Preventative Patrol Experiment. When patrol time increased, residential burglaries remained the same. Now this finding is very similar to the conclusions of the Kansas City Preventative Patrol Experiment (1972) in which it concluded that no matter the increase or decrease of uniformed officers’ crime remained the same.

The Kansas City Preventative Patrol Experiment (1972) demonstrated the need to incorporate visibility omnipresence patrol to impact crime. Although the findings of the experiment were considered in their most generalized form, without statistically significant conclusions the results concluded that more scientific testing was necessary to determine the validity of uniformed preventative patrols and crime. The experiment concluded that in one case, officers were added to a particular sector and crime remained consistent. Then when officers were removed from the same area, crimes remained the same. The range and variation of the data was tested to no specific conclusion about uniformed patrols and crime rate reduction. Problems with the experimental design included the risk factors associated with adding and removing uniformed preventative patrol officers in a giving area. This study however had no such limitations. The comparative design was already in place for the analytical comparative analysis of post data in the form of patrol time, the crimes of robbery, residential burglary, commercial burglary and auto theft and calls for service.

**Hypotheses**

This study investigated whether there is a reduction in the amount of crime when uniformed preventative patrol time increased. In addition, it tested whether more patrol
time reduced emergency and non emergency response to calls for service. This study measured the differences of patrol time and its impact on the crimes of robbery, residential burglary, commercial burglary, and auto theft and response times.

**First Hypothesis**

Hypothesis one (H1) proposed that the crime of robbery will decline when there is an increase of uniformed officers patrolling (patrol time) the City of Doral. The data indicates that as uniformed patrol officers increased, patrol time increased but, the level of robberies reported also increased. Therefore, H1 was rejected. The researched data revealed that 83,257 minutes were reported for patrol time in area one in 2004 compared to the City of Doral who reported 117,328 minutes of patrol time in 2006. Six (6) robberies were reported in area one during the months of January 1, 2004 thru April 4, of 2004. Twelve (12) robberies were reported in the City of Doral during the same time period in 2006. For that reason, as patrol time increased, the visibility of uniformed police officers increased but the level of robberies also increased by 100 percent. A noted difference that was different than the logical assumptions made by numerous renowned scholars in the field of policing, such as Vollmer (1972) Wilson (1977) Wilson (1995) Walker (1992) was that more omnipresence of patrol officers deter crime and ultimately reduce crime (Kelling, 1988).

Huge budgets are spent each year hiring more police officers and assigning most of them to uniformed patrol to create omnipresence of police visibility to reduce violent crime. As a different finding from the Kansas City Preventative Patrol Experiment, in this study the crime of robbery in fact went up when patrol time increased. This researcher is prepared to declare that the logical and general assumption of more uniformed
preventative patrols alone does not reduce robberies, a violent crime. Additionally, to reduce robberies patrol time must be used for more than uniformed preventative patrols such as directed and hot spot patrols and community oriented policing.

**Second Hypothesis**

Hypothesis two (H2) proposed that the crime of residential burglary will decline when there is an increase of uniformed officers patrolling (patrol time) in the City of Doral. The data indicates that as uniformed patrol officers increased, patrol time increased but, the level of residential burglaries remained the same. Therefore, H2 was rejected. The researched data revealed that 83,257 minutes were reported for patrol time in area one in 2004 compared to the City of Doral who reported 117,328 minutes of patrol time in 2006. Twenty six (26) residential burglaries were reported in area one during the months of January 1, 2004 thru April 4, of 2004. Twenty six (26) residential burglaries were reported in the city of Doral during the same time period in 2006. Therefore, as patrol time increased, the visibility of uniformed police officers increased but the level of residential burglaries remained the same. A similar finding of the Kansas City preventative Patrol Experiment that whether an increase or decrease of uniformed officers and patrols crime remains the same. (Kelling et al., 2003).

**Third Hypothesis**

Hypothesis three (H3) proposed that the crime of commercial burglary will decline when there is an increase of uniformed officers patrolling in the City of Doral. The data indicates that as uniformed officers increased, patrol time increased, and the level of commercial burglaries reported decreased. Therefore, H3 was not rejected. The researched data revealed that 83,257 minutes were reported for patrol time in 2004
compared to the City of Doral in 2006 who reported 117,328 minutes of patrol time. Fifty (50) commercial burglaries were reported during the months of January 1, 2004 thru April 4, 2004. Forty (40) commercial burglaries were reported in the City of Doral during the exact time period in 2006. Therefore, as patrol time increased, the visibility of more uniformed police officers increased thereby the level of commercial burglaries decreased by 20 percent, a moderate difference.

Fourth Hypothesis

Hypothesis four (H4) proposed that the crime of auto theft will decline when there is an increase of uniformed officers patrolling in the City of Doral. The data showed that as uniformed officers increased, patrol time increased but, the level of auto thefts reported also increased by 24 percent. Therefore, H4 was rejected. The researched data revealed that 83,257 minutes were reported for patrol time in area one in 2004 compared to the City of Doral who reported 117,328 minutes of patrol time in 2006. Sixty six (66) auto thefts were reported in area one during the months of January 1, 2004 thru April 4, 2004. Eighty two (82) auto thefts were reported in the City of Doral during the same period in 2006. Therefore, as more uniformed officers increased patrol time, the visibility of uniformed police officers increased but auto thefts also increased by 24 percent. In this case, increased police presence in the form of patrol time did not reduce auto thefts.

Fifth Hypothesis

Hypothesis (H5) proposed that more uniformed officers assigned to the City of Doral respond slightly quicker to emergency calls for service Therefore, the hypothesis is rejected. The researched data revealed that 83,257 minutes were reported for patrol time
in area one in 2004 compared to the City of Doral who reported 117,328 minutes of patrol time in 2006. An average of 7:05 minutes for emergency response to calls was reported in area one during the months of January 1, 2004 thru April 4, 2004. Seven minutes and six seconds \( (7:06) \) of emergency response times were reported in 2006 slightly increasing emergency response to calls for service. In other words, as more uniformed officers were assigned to the City of Doral in 2006 emergency response to calls for service increased by one second, a not statistically significant finding.

**Sixth Hypothesis**

The data indicates that as more uniformed officers are assigned, patrol time increased, and the response to non-emergency calls decreased dramatically allowing for faster response to calls for service. Therefore, the hypothesis was not rejected. Forty one minutes and 21 seconds \( (41:21) \) of response to non-emergency calls for service was reported in area one in 2004. Sixteen minutes and 54 seconds \( (16:54) \) was reported for non-emergency calls in the City of Doral in 2006. As more uniformed officers were assigned to the City of Doral, patrol time increased, the level of response to non emergency calls for service decreased dramatically by over 60 percent, a very statistically significant finding.

**Research Questions**

**First Question**

The first question asked does robbery, residential burglary, commercial burglary and auto theft increase or decrease when there is a change in uniformed preventative patrol officers and patrol time in the City of Doral.
This study tested the increase of patrol time and its effect on the increase or reduction of the crimes of robbery, residential burglary, commercial burglary, and auto theft. The results revealed that as patrol time increased, robberies, and auto thefts increased commercial burglaries decreased but residential burglaries remained the same. The results indicate that increased patrol time only resulted in the decline of commercial burglaries. It was also indicative that more uniformed officers assigned to the City of Doral increased the patrol time that uniformed preventative patrol officers had to conduct visibility patrols. For patrol time, the following is the paired t-test results: \( t=1.7060 \ P<.05, \ df=3, \ two\ tailed\ test \) and the two tailed P value equals 0.1865 with a standard error of difference = 4992.798 and the mean of group one minus group two equals -3.00 with a standard deviation of 14444.94 for 2004 and 16407.06 for 2006. By conventional criteria and as established in table A.3 (t Distribution chart) in the appendix section of the Statistical Analysis in Criminal Justice and Criminology, a user’s guide book (2002) the difference is considered to be not statistically significant (Gennaro & Blankenship, 2002).

For the reported crimes, between the groups of 2004 and 2006, the following is the paired t-test results: \( t=0.5508 \ P<.05, \ df=3, \ two\ tailed\ test \) and the two tailed P value equals 0.6201 with a standard error of difference = 5.447 and the mean of group one minus group two equals -3.00 with a standard deviation of 26.41 for 2004 and 30.24 for 2006. By conventional criteria and as established in Table A.3 (t-Distribution chart) in the appendix section of the Statistical Analysis in Criminal Justice and Criminology, a user’s guide book (2002) the difference is considered to be not statistically significant (Gennaro and Blankenship, 2002).
Second Question

The second research question determined if more patrol time reduced the time that it takes an officer to respond to an emergency and non emergency service call? The study measured the change of more or less uniformed patrol officers, patrol time and the rapid response to calls for service. More patrol time demonstrated an enormous reduction in response to non-emergency calls for service a statistically significant finding. However, emergency calls for service increased by one second in 2006, not statistically significant. For emergency response to calls for service, the following is the paired t-test results: \( t=0.5050, P<.05, df=3, \text{two tailed test} \) and the two tailed P value equals 0.6483 with a standard error of difference =140.093, with the mean group one minus group two equals -70.75 with a standard deviation of 148.69 for 2004 and 179.28 for 2006. By conventional criteria and as established in table A.3 (t Distribution chart) in the appendix section of the Statistical Analysis in Criminal Justice and Criminology, a user’s guide book (2002) the difference is considered to be not statistically significant (Gennaro & Blankenship, 2002).

For non emergency response to calls for service, an independent samples paired t-test comparative analysis was conducted to determine the P value and statistical significance of the pre and post group of non emergency calls for service between the years of 2004 and 2006. The mean of 2004 minus 2006 equaled to 2660.25 with a 95% confidence interval of this difference: from 1758.49 to 3562.01 with a Standard Deviation of 415.41 for 2004 and 169.42 for 2006. The two tailed P value equaled 0.0026 with a t-test value \( t=9.3884 P<.05, df=3, \text{two tailed test} \). The t-test significance variance was checked using Table A.3 (t-Distribution chart) in the book by Gennaro and
Patrol Time Comparison

The study showed the significant differences between less uniformed officers, and patrol time in area one in 2004 as compared to the City of Doral in 2006, the pre and post comparison of data. The data demonstrates the disparity between more uniformed police officers which equate to more patrol time and faster response to emergency and non emergency service calls compared to less uniformed police officers which typically equate to less patrol time. But an increase in patrol time did not notably reduce response to emergency calls for service, an unexpected finding that is different than prior research. As a police chief and a scholar in the area of policing, respectively, Wilson (1985) and Vollmer (1977) theorized and strongly believed that motorized, radio-directed preventative uniformed patrols provided a quick response to crime and thus created a sense of omnipresence for police (As written by Fyfe, et al., 1997). Furthermore, they exclaimed that omnipresence of uniformed police personnel creates visibility and quick response to calls which in turn eliminates the opportunity for the suspect to commit a crime. Although the data supported this ideology for a reduction in commercial burglaries, it did not support it for robberies, residential burglaries and auto thefts.

Crime Comparisons: A Summary

The study demonstrated that as more uniformed officers were assigned and patrol time increased, commercial burglaries decreased but robbery, and auto thefts increased
and residential burglaries remained the same. Table 4-10 demonstrates the differences of more patrol time versus less patrol time and the decrease of commercial burglaries. The study clearly indicated that as patrol time increased the level of commercial burglaries decreased moderately. More police officers assigned to an area generate more patrol time as calls for service or other obligated time is distributed uniformly allowing for more visibility of uniformed preventative patrol officers. This viewpoint was supported by the response to calls for service data on non emergency calls. As discussed by Lab (2004), if officers are given time to prevent crime by utilizing visibility patrol and time to interact with the community, crimes will decrease.

Table 4-10

<table>
<thead>
<tr>
<th>Patrol Time and Commercial Burglary 3 Months , 4 Day Periods</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004</td>
</tr>
<tr>
<td>--------------</td>
</tr>
<tr>
<td>Patrol Time</td>
</tr>
<tr>
<td>Commercial Burglary</td>
</tr>
</tbody>
</table>

Source: MDPD worksheets and Compstat Reports for 2004, 2006

In the commercial burglary and patrol time comparative analysis, deterrence and prevention were evident that more uniformed preventative patrol officers reduced this particular crime by 20 percent. This is a significant finding because business owners, politicians, law enforcement and insurance companies are very interested in a crime prevention formula that would prevent and ultimately reduce commercial burglaries. Millions of dollars are stolen each year in commercial burglaries impacting direct and indirect costs, such as insurance rates, operating costs and ultimately the loss of
employment. The local communities depend on the commercial business industry to provide jobs and revenue for the local and state economies (Grant and Terry, 2005).

**Summary**

The data illustrated that although the group differences between 2004 and 2006 could have occurred by chance, additional uniformed preventative patrol officers generating more patrol time in 2006 significantly reduced non emergency response to calls for service and reduced commercial burglaries by 10 cases. In addition, more patrol time did not reduce the crimes of robbery and auto thefts a similar finding in the Kansas City Preventative Patrol Experiment. In fact, additional patrol time did not impact residential burglaries as they remained the same for both years.

Table 4-11

*Patrol time, calls and crime comparative percentage differences between 2004 and 2006*

<table>
<thead>
<tr>
<th></th>
<th>2004</th>
<th>2006</th>
<th>Percent Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patrol Time</td>
<td>82,006</td>
<td>117,246</td>
<td>+43%</td>
</tr>
<tr>
<td>Robbery</td>
<td>6</td>
<td>12</td>
<td>+100%</td>
</tr>
<tr>
<td>Residential Burglary</td>
<td>26</td>
<td>26</td>
<td>0%</td>
</tr>
<tr>
<td>Commercial Burglary</td>
<td>50</td>
<td>40</td>
<td>-20%</td>
</tr>
<tr>
<td>Auto Theft</td>
<td>66</td>
<td>82</td>
<td>+24%</td>
</tr>
<tr>
<td>Non-Emergency Calls</td>
<td>41:21</td>
<td>16:54</td>
<td>-60%</td>
</tr>
<tr>
<td>Emergency Calls</td>
<td>7:05</td>
<td>7:06</td>
<td>+1.4%</td>
</tr>
</tbody>
</table>

Source: MDPD Worksheets, CAD Reports and Compstat Reports
CHAPTER V

DISCUSSION

The purpose of this comparative study was to determine the significance of more or less uniformed preventative patrols and its impact on crime reduction for robbery, residential burglary, commercial burglary and auto theft and response to calls for service reduction times. This was one of many compelling reasons for the study: to examine the effectiveness of assigning more uniformed officers to an area doing more preventative patrol to reduce the aforementioned crimes and respond to calls for service quicker. The study recorded and analyzed actual patrol time and compared it to crime statistical data and response to calls recorded data in Miami-Dade County, City of Doral, Florida. Each worksheet was analyzed to ensure accurate numerical significance between obligated times and patrol time in the City of Doral. The criminal statistical data for robberies, residential burglaries, commercial burglaries and auto thefts were recorded and analyzed. Response to calls for service monthly statistical reports were also analyzed and actual response times were selected and recorded.

Many previous studies had relied solely on theoretical and logical assumptions that the omnipresence of uniformed preventative patrols reduced crime (Fyfe, et al., 1997). Studies such as the Kansas City Preventative Patrol Experiment attempted to discern the true significance of uniformed preventative patrols and crime. The findings suggested that a serious challenge to the commonly held belief that random patrols reduce crime rates existed. The Kansas City Preventative Patrol Experiment was the most comprehensive study on routine preventative patrol and crime ever undertaken. "The findings of that study concluded that either decreasing or increasing uniform patrols had
no significant impact on the level of crime” (Klockars, 1983, p. 130). Wrobleski and Hess (2006) asserted that the results of the Kansas City Preventative Patrol Experiment indicated that “it makes about as much sense to have police patrol routinely in cars to fight crime as it does to have firemen patrol routinely in fire trucks to fight fires.” (Wrobleski & Hess, 2006, p. 185). Furthermore, the findings also suggested that the reason for the deterrence failure of routine patrols was the certain reality of the Criminal Justice System which includes the State Attorney’s Office and the Courts in providing a swift and accurate punishment to the crime.

Several researchers including Kelling (2003) Wilson (1985) Wilson (1995) have tried to study the effects of patrol on crime however; they were hesitant to implement the experimental conditions and design in a manner conducive to a valid and safe study. Police organizations and researchers are reluctant to recommend reduced patrols to test the effects of less patrol time and crime because it can lead to more crimes and fewer officers on patrol could propose an officer safety issue. The pre and post data in the form of patrol time, response times and statistical crime reporting was available for this study which eliminated any concerns of officer and citizen safety issues. A before and after comparison was done to effectively determine whether more patrol time reduced robberies, residential burglaries, commercial burglaries and auto thefts and if more patrol time impacted response to calls for service.

The researcher observed the significant high levels of patrol time and its relationship with a decrease in one particular crime, commercial burglary. Similarly, as patrol time increased the level of response to non emergency calls for service decreased considerably. In reviewing each worksheet, it was evident that more police officers
assigned to an area generated more actual patrol time which translated into additional omnipresence of uniformed police officers in the City of Doral in 2006. The statistical crime data review indicated a decrease in commercial burglary but an increase in robberies, and auto thefts (residential burglaries remained the same) when more patrol time was prevalent. Hence, as patrol time increased, more uniformed preventative patrol officers responded faster to non-emergency calls but not in the case of emergency response to calls, uniformed patrol officers were slightly slower in their response to these calls.

**Patrol Time**

As mentioned by many scholars in policing, including Vollmer (1972) and Wilson (1972) routine uniformed patrol services are the backbone of policing agencies. O. W. Wilson (1972) a renowned scholar and police chief in the field of patrol, clearly illustrated the benefits of rapid response to crime and in some cases the prevention of crime by the quick response of uniformed patrols (Fyfe, et al., 1997). Police departments around the country employ vast amounts of resources to maintain and operate uniformed patrol forces. Police protection in the United States is a very expensive. In 1990, local governments spent $31.8 billion for police protection (Lindgren, 1992). Most departments assign the majority of the sworn officers to patrol and they are responsible for primary and secondary crime prevention and response to calls for service. But in some cases, large departments are re-deploying sworn personnel to investigative entities because there is an un-tested assumption that more investigative follow-up involvement and hours devoted to it reduces crime. In today’s policing, uniformed patrol officers are responsible for the following primary police tasks:
1. Respond to calls for service (their primary function)
2. Prevent crime
3. Conduct preliminary investigations
4. Engage in problem solving
5. Maintain order, or restore it
6. Aid persons in need of assistance
7. Engage in conflict resolution
8. Control traffic, enforce traffic laws, and write tickets
9. Issue warnings
10. Make arrests and write reports
11. Use physical force to include deadly force to apprehend suspects/criminals (Fyfe, et al., 1997)

These activities account for most of the contacts between the police and citizens, and their presence in the community has been coined as the most important activity a government representative can perform (Wilson and Pertesila, 1995). Citizens formulate a lasting opinion of government from the contacts they make with uniformed police officers. These officers as first responders have a mammoth task in preventing crime and they try to quickly and efficiently respond to calls for service as mandated by citizen requests. These factors alone make the patrol officer the most important decision-maker in the police department. As previously mentioned, the functions of patrol involve a multi-tasking variety of generalized responsibilities. Needless to say, patrol officers must juggle a variety of duties and perform services that no other governmental agency would want to perform on a 24 hour, 7 day a week basis.
Crime

Criminology could be interpreted as a discipline stemming from sociology and is the study of criminal behavior, its impact on crime and society, and its causes and definition. Prominent scholars Sutherland (1939) and Cressey (1969) define the following dimensions as the foundations to the definition of criminology: "(1) the development of criminal law and its use to define crime, (2) the causes of law violations, (3) the methods used to control criminal behavior which can also include crime prevention the front-end approach to combating crime" (As cited by Siegel, 2006, p. 126). A most difficult undertaking is the historical investigation of why people commit crimes; it has been the subject of study and critical analysis of most theoretical and empirical literature by various scholars in criminology. Learning how criminology evolved facilitates a holistic assessment of the data, it makes it easier to determine which variables to examine interrelationships with police patrols. In addition, if it’s true that if offenders are afraid of getting caught while committing a crime, then the study of why people commit crime is important. Routine preventative patrols generate a certain type of police omnipresence which can create a fear of being apprehended; conversely, no police presence encourages crime because the likelihood of apprehension is lower.

As cited by Seigel, Welch and Senna (2003), Cessare Beccaria’s (1764) essay on crimes and punishment indicated that he subscribed to the moderate approach of utilitarianism which emphasized that criminal behavior occurs when it benefits the perpetrator and he or she considers it useful, purposeful, and reasonable. Beccaria believed that people want to achieve pleasure and avoid pain (As cited by Paolucci,
Therefore, it would seem logical that crime can be eliminated if people begin to view crime as a problem instead of as a benefit. The argument by Vollmer (1921) Wilson (1995) and other scholars in the criminal justice field support the concept that if the criminal offender believes’ that he or she will get caught because of the omnipresence of police patrols, it creates a crime prevention atmosphere and deterrence which ultimately leads to a reduction in crime.

Response Time

“A timely and rapid police response to calls for service has long been an important strategy for patrol” (Gaines, Kappeler & Vaughn, 1994, p. 164). Rapid police response will accomplish the following objectives: it will serve a deterrent to criminal activity, if the offenders knew that the uniformed preventative patrol officers had the capabilities to respond quick to calls for service, in turn the quicker response should increase the apprehension of offenders, and finally a rapid response will increase citizen confidence in law enforcement which ultimately will promote crime prevention. As more patrol time is accumulated by more uninformed patrol officers, they have extra available time to involve the community in problem solving and crime prevention. As crime prevention activities increases, crime and response to calls for service will decline creating a foundation for deterrence, crime prevention and crime control.

Review

Dating back throughout history, the reality of getting caught and receiving a swift and high penalty for the crime are not enough in a democratic society, such as the United States to reduce crime. However, it still stands to reason that an offender will consider the probability of getting caught before he or she commits a crime. This
statement is important in the analysis of police uniformed omnipresence in the community. In 1972, with the funding assistance of the Police Foundation, the Kansas City Police Department launched a wide-ranging case study to test the effects of police patrols and crime. The experiment continued through 1973 and it was administered by the Kansas City Police Department and supervised by the Police Foundation.

Major findings of the experiment included that: the citizens did not notice the differences as the level of patrol was changed. In fact, the increase and decrease of patrols had no significant effect on crime. However the findings failed to demonstrate the association of a highly visible police presence and crime prevention, and in some cases, the causation of crime (Kelling et al., 2003). Police preventative patrols are considered the backbone of police work (Fyfe, et al., 1997). Billions of dollars are spent each year to maintain and support patrol forces capable of rapid deployment to emergency scenes and quick response to calls for police service.

To quantify the research, an extensive search on the subject of patrol and crime was conducted and very few studies were found on the subject. The articles and journals reviewed only validated the obvious, that no empirical study has been done since 1972 on motorized preventative patrols and crime prevention. In recent years the choice of policing strategy used by most police departments to combat crime involved the use of directed patrols, a temporary but an efficient solution to crime rate reductions. Since the data on general policing strategies and crime rate reduction is inconclusive, more police departments are changing their policing tactic to incorporate more uniformed preventative patrols to reduce crime.
General Findings

This study exposed that as more police officers were assigned to the City of Doral the patrol time increased moderately but not a statistically significant finding. It appears that as more uniformed patrol officers work an area, service calls are distributed evenly to personnel generating more patrol time. As patrol time increased by 43 percent in the City of Doral, the crime of commercial burglary decreased by 20 percent. On a different note, but theoretically predictable, as patrol time increased the crime rates for residential burglary remained the same and robberies increased by 100 percent, similarly, auto thefts increased by 24% when uniformed preventative patrol time increased. In addition, response time to calls for service dramatically decreased for non emergency calls for service when patrol time increased in the City of Doral in 2006, a statistically significant finding. As patrol time increased, emergency calls for service increased ever so slightly; defeating logical understanding and interpretation of patrol time and response times such as more patrol time theoretically equates to faster response times. On average, for the comparison of 2004 and 2006, emergency response time to calls for service increased by one second when patrol time increased by 43 percent. On the contrary, non emergency response to calls for service decreased in 2006 by 138 percent overall when patrol time increased by 43 percent.

The omnipresence of more uniformed patrol officers reduced commercial burglaries in 2006 and uniformed preventative patrol officers responded faster to calls for service for non emergency calls. As explained by Vollmer (1972) and Wilson (1972) police omnipresence deters criminals from committing crimes but, as stipulated by
Wrobloski and Hess (2006) omnipresence of police does not impact crime. But the study found that commercial burglaries declined when more patrol time increased.

The study also found out that when patrol time increased by 43 percent, robberies, and auto thefts increased by a cumulative 120 percent and residential burglaries remained the same. Comparatively, when less uniformed officers were assigned and patrol time decreased, commercial burglaries increased by 20 percent and it took officers much longer to respond to non emergency calls for service, a very statistically significant finding.

Peel (1901), the architect of modern policing in England, put it very basically; the primary function of the police was crime prevention. As such, keeping the peace by peaceful means was the central duty of uniformed police officers. To prevent crime, the police would be deployed throughout the city and their presence was conspicuous to the entire population. The indirect conclusions of Peel (1901) suggest, uniformed police units responding to crimes in progress and making arrests could be a primary deterrence to criminal behavior. A secondary result was that potential offenders were deterred through the knowledge that other persons were arrested for criminal behavior. Consistent uniformed preventative patrol was believed by some scholars in the field to be a form of crime prevention by the omnipresence of uniformed police patrols (Kelling and Coles, 1996).

**Theoretical Consideration**

There are limited empirical studies about uniformed patrol and crime, and the theoretical findings are inconclusive because existing studies have had flawed research designs, were not focused specifically on these research questions, or were simply
inconclusive. There is no question that a comparative relationship of patrols and the
cri mes of robbery, residential burglary, commercial burglary and auto theft have not been
studied enough. The Kansas City Preventative Patrol Experiment was the most
comprehensive study on routine preventative patrol and crime ever undertaken. “The
findings of that study concluded that either decreasing or increasing uniform patrols had
no significant impact on the level of crime” (Klockars, 1983, p. 130) Again, Wrobleski
and Hess (2006) stressed that the results of the Kansas City Preventative Patrol
Experiment were inconclusive at best and succinctly emphasized that it does not make
sense to have uniformed police officers routinely patrol to fight crime. Wrobleski’s and
Hess’s (2006) statement has some validity as this research study concluded that robberies
and auto thefts increased when more officers were doing more patrol time. Furthermore,
the Criminal Justice System was evaluated in the following statement indicating the
findings suggested that the reason for the deterrence failure of routine patrols was the
certain reality of the Criminal Justice System in providing a swift and accurate
punishment to the crime. The goal of deterrence was not attained because most criminal
cases take too long to prosecute and in most situations the penalty does not fit the crime.
Another contrasting view on the research involved the interpretation of the level and form
of preventative uniformed patrols and response to calls for service. According to
Wrobleski and Hess (2006), most often too little time is focused on the officers’ use of
patrol time which allows the officer to be in service waiting for a dispatched call for
service.

The focus of this study explored uniformed preventative patrols in detail to
compare patrol time and the crime reductions of robbery, residential burglary,
commercial burglary and auto thefts. Patrol-time does have a comparative association with crime prevention, that is, the time patrol officers have to use for preventative patrol if they are not busy answering a call for service. The research explained the differences of high visibility and low visibility patrols. High visibility patrol usually involves uniformed patrol officers in marked police vehicles and is incorporated into areas to deter criminal activity. Low visibility patrol, however, usually involves unmarked police vehicles and is used more as a surgical strategy to target certain offenders in a specific area to apprehend criminals involved in targeted crimes (Wrobleski and Hess, 2006). The authors conclude that the effectiveness or validity of high visibility and low visibility patrols in crime prevention has not been determined but this study concluded that high visibility patrol does have a moderate relationship with the reduction of commercial burglary and the impact lasted at least 3 months and 4 days.

As more officers are assigned to an area, faster response times are noted. According to Fyfe, et al., (1997), it is not whether police has kept its word to arrive quickly on calls for service but that the police department has implemented the capabilities to do so. Increased patrol time allows patrol officers to respond quicker to calls for service and in turn create high uniformed preventative patrol visibility in an assigned area. Citizen satisfaction increases significantly when they can deduce that police response times are quicker, and they seem to feel safer. (Fyfe, et al., 1997).

Community oriented policing provides a menu of crime prevention strategies which includes crime watch and more interactions between the police and citizens that promote citizen trust and satisfaction between the police and the communities. As policing continued its shift in strategy eras, policing began to evolve, police functions
changed from reactive policing in the reform era (1930 to 1980) to a modified strategy of community policing (1980 to present). This paradigm shift occurred over time and the latest shift (of community policing) was introduced to police departments in the hope of resurrecting the involvement and increasing contact with citizens in crime prevention, and provide more attention to problem-solving. By having more police involvement with the citizens they serve tends to result in crime reduction (Lab, 2004). Hence, the thought process for the strategy shift anticipated an increase of citizens’ participation that would lead to more teamwork between the police and the community. Its core operational component involved pro-active patrols with citizen input and assistance instead of random visible patrols that included both uniformed preventative patrols and directed patrol system that only targeted the security and safety needs of a neighborhood. In theory, this shift and new approach is feasible, but with fewer resources (fewer officers assigned to uniformed patrol doing random patrol which equates to more patrol time) deployed to the uniformed patrol division, and community policing does not function as intended.

Conclusions

The data for this study provided valuable conclusions in the field of criminal justice in particular uniformed preventative patrol strategies which can be used in the field of policing for years to come. The results of the study come at a critical time for policing as local, state and federal governments are faced with reduced budgets and increased demands for service. Too many police chiefs, government officials and other city leaders factor budget allocations based on the conclusions of the Kansas City Study without further analysis of the effectiveness of all patrol strategies to reduce crime. It is
important to understand that the Kansa City Experiment occurred in 1972 and the demographics of cities have changed considerably since then. Conversely, police departments around the country are now considering critical modifications and adjustments of their investigative capabilities to increase investigative units which equates to a decrease in uniformed patrol officers to satisfy an untested theory which stipulates that investigative follow-up activity reduces crime (Wrobleski and Hess 2003). They concluded that more uniformed patrol officers do not reduce crime and that more investigative follow-up is needed by detectives to reduce crime overall (Heath and Terry, 2005). However, a study done by the Bureau of Justice Assistance (BJA) in September 2005 stated that officers on the beat (doing routine patrol) are an excellent resource for gathering information on all kinds of potential threats and vulnerabilities to more effectively prevent and reduce crime (Gonzales, et al., 2005). The data showed that the presence of more uniformed preventative patrols moderately impacted the crime of commercial burglaries and uniformed patrol officers responded quicker to non emergency calls for service when they had more patrol time.

One way for police to improve their crime prevention strategies is to deploy more officers to uniformed preventive patrols and utilize the patrol time to promote community oriented policing. Although investigative and proactive law enforcement assignments are necessary, the majority of sworn personnel should be assigned to uniformed patrol. As more officers are assigned to uniformed patrol, more time could be invested with the citizens of the area to work on problem solving and crime prevention. The application of crime prevention is integral in the study of police patrols and the crimes of robbery, residential burglary, commercial burglary, and auto theft as it relates to opportunities to
commit crimes and offender interaction with police. According to Walker (1992) the main reason a city would engage in more crime prevention strategies and practices is to allow for more officers assigned to uniformed preventative patrols creating more presence in the patrol areas through increased patrol time.

**Crime Prevention**

Increased patrol time by assigning more patrol officers to a city equates to more patrol time and the opportunity for police officers to interact more with the citizens they patrol; in essence generating good exchange of information and trust between both the officer and the citizen which leads to effective crime prevention as the flow of information is enhanced. Surveillance by citizens from their own homes is an effective means to prevent crime. When more patrol officers are assigned to an area and are more involved with the citizens in crime prevention, they have more free time (patrol-time) to engage citizens while on patrol. General deterrence also is factored into the model of Primary Crime Prevention which includes a good arrest and conviction ratio coupled with effective sentencing methods and this helps serve as a deterrent to criminal acts (Lab, 2002). Public education is also a critical dimension associated with Primary Prevention, if officers have enough in service time (patrol time) to educate the citizens on crime prevention techniques, the concept can work best. The deterrence perspective also is explained by Robert Kane who states, “That as legitimate criminal sanctions increase, the probability of offenders committing crime decreases” (Kane, 2006, p. 8).
Limitations

This study was limited to one city in Miami-Dade County Florida, narrowing the scope of the study to a particular area in the center of Dade County, the City of Doral. The selected location was necessary for the accurate comparison of 2004 and 2006 in patrol time and the crimes of robbery, residential burglary, commercial burglary, and auto theft and response times. In addition, the selection of the location afforded a safe and fluid experimental design that was in place in 2004 and beyond. Officer safety and citizen safety concerns were not impacted as all the post data existed prior to the study to make the appropriate comparisons. The demographics of the area remained mostly the same in 2004 and 2006 for the comparison of data.

The worksheet is not a scientific instrument and uniformed patrol officers could make mistakes in mathematics and recording incorrect times. However, the worksheet is the best instrument to record and analyze patrol time. The accountability factor for approval or disapproval of the worksheet by the sergeant and lieutenant of each shift is sufficient to ensure a valid instrument of analysis.

An overall six month and eight day analysis covering two separate years 2004 and 2006 was conducted. To better compare accurate data, this time period was necessary to illustrate a valid comparative analysis of the pre and post data. Only the crimes of robbery, residential burglary, commercial burglary and auto theft were studied. Although the crimes studied are limited to four types, the citizen reporting of these crimes is better than other class one crimes. Most of the time, robberies are reported and recorded accurately by uniformed patrol officers. In addition, residential and commercial burglaries are reported most often as the victims want to be reimbursed by their insurance
companies to off-set the loss of property. Auto theft is also reported frequently and most of the time accurately because insurance policy functionality and capabilities are also considered to be strong factors in the reporting of all crimes but in particular auto thefts. As with all crime reporting, citizens can defer and not call the police or citizens can fabricate the facts and the reporting and documentation of the crime is not accurate. In other cases, officers can record the wrong type of crime, such as a robbery, whereby the elements of a robbery was overlooked and recorded erroneously as a theft. These reporting limitations can occur but the analysis of the crimes in this study minimizes these types of errors.

As more uniformed preventative patrol officers are assigned to an area there is a possibility that an increase of crime is reported (Kelling, 1988). Citizens feel comfortable in reporting crime as additional officers are engaged in more interactions with the community (Zhao and Lourich, 2003). This helps to explain the increase in the crimes of robberies, and auto thefts when patrol time increased. Moreover, it also helps to explain the same level of residential burglaries reported in 2004 and 2006, the comparative periods.

Response to calls for service recording time during the before period (January 1, 2004 to April 4, 2004) could have minimal variations of arrival times. In 2004, officers were allowed to take arrival times via the police radio and then their times were entered into the computer by the dispatcher. Despite this limitation, uniformed patrol sergeants were trained and instructed to ensure patrol officers took accurate arrival times. This was very important to the Miami-Dade Police Department for the evaluation of performance measure of arrival times and it also provided a management tool for the accurate re-
allocation of personnel throughout the department. In other words, the departmental staff has a vested interest in accurately recording arrival times. In 2006, this system of call taking and recording was changed to a fully implemented computer system whereas each dispatch and arrival time was systematically entered into the computer eliminating variations in arrival times, T. Gross (personal communication November 17, 2009).

**Future Research**

This study offers insight for future research in uniformed preventative patrol studies and the crimes of robbery, residential burglary, commercial burglary and auto theft. The research presented here provides a foundation for future studies in all related law enforcement tactics from uniformed preventative patrol hot spot patrols, community oriented policing to investigative approaches to reduce the crimes of robbery, residential burglaries, commercial burglaries and auto theft. This research can guide others into the necessary policing patrol studies which can find future solutions to this decades old problem of uniformed preventative patrols, crime and response to calls for service. Future research should be done in Miami-Dade County, Florida to analyze the data in this study along with the previous theoretical implications of patrol time and crime. In addition, it is recommended that this study be replicated on a national scale and be compared to the previous data to see if the data is consistent.

**Implications**

This research investigated and emphasized the issue of uniformed preventative patrols as a serious crime prevention strategy, crime control policy and response to calls for service emphasis on personnel allocation strategies throughout the United States of America. Further data in other counties of Florida and other states should be gathered and
compared to this data for evaluation to validate these findings. In addition, studies should be conducted in other countries as they are also dealing with issues of crime prevention, the fear of crime, crime control and calls for police service with reduced policing budgets.

**Final Thoughts**

From the start of this process, the researcher made the distinction on how patrol time data was collected, and recorded. Previous research has analyzed and documented the existence of uniformed patrol (not actual patrol time) as a crime prevention strategy, response times allocations and crime reductions. Enacting national guidelines for the appropriate and effective deployment of uniformed preventative patrol personnel to prevent crime should be the first step in promoting functional crime prevention and crime control strategies in the United States (Lab, 2004).

Crime prevention and crime control and faster response to calls for service under tight budgets continue to be salient issues that affect all police departments around the nation and for that matter around the world. For police departments to effectively deploy personnel to prevent and control crime there must be a paradigm shift in policing from the investigative follow-up approach, directed patrol strategies to the more traditional uniformed routine preventive patrols and community oriented policing. In addition, training efforts at all police department levels must be done to ensure a cultural change from reactive policing to a proactive community policing model and to further study the implications of more patrol time and quicker response times and crime prevention and crime control. A professional, better trained and better educated department is essential
in today's policing climate of providing more services to the community with shrinking law enforcement budgets.

Recommendations

In an effort to create an efficient paradigm shift in policing from a reactive patrol force to a proactive community oriented policing system, the following recommendations should be enacted.

1. Enactment of policy making crime prevention and 7 minute response times to emergency calls for service a mandatory performance measure. In addition, establishing a 14 minutes response time for non-emergency calls for service.

2. Require all police departments to closely monitor crime trends and crime prevention strategies to ensure reduced crime. Furthermore, establish an active strategic system and benchmark reporting system to monitor and track response times and crime.

3. The requirement for all policing administrators to have at least four hours of uniformed preventative patrol strategies training every year along with training in crime prevention, crime causation and include a review of current research in the area of community oriented policing and law enforcement strategies in general.

4. Initiate and establish a monitoring system for the early warning tracking system within the Active Strategy software to actively monitor crime trends, response times and crime prevention performance measures.

5. Require and provide sanctions to all law enforcement agencies to ensure that the appropriate training is enacted and enforced.
6. Require all policing agencies to have a written policy and mission statement on the importance and number one priority respectfully of crime prevention and service (quick response to calls for service).

7. Require 6 month after action reports on the effectiveness of uniformed preventative patrol and its impact on crime and response to calls for service.

8. All law enforcement administrators, supervisors and officers should seek out how to change public perception on uniformed preventative patrols, law enforcement tactics and demonstrate a systematic understanding of the impact of crime causation, crime prevention, crime control and response to calls for service.

9. Most importantly, departments around the nation should commit to a 79 percent personnel total allocation ratio to uniformed preventative patrols thus generating more patrol time.

10. Elevate the level of consciousness for all police administrators and police departments are recommended to increase patrol time and use it by instituting uniformed preventative patrols and in certain cases saturated hot spot patrols for temporary crime prevention and control and institute Community Oriented Policing for long term crime prevention and control.
REFERENCES


APPENDIX A

Institutional Review Board Approval and Consent
Principal Investigator: Oscar Vigoa

Project Title: The Casual Relationship between Routine Preventative Uniformed Patrols and Crime Reduction

IRB Project Number: 2009-020 REQUEST FOR IRB EXEMPTION of Application and Research Protocol for a New Project

IRB Action by the IRB Chair or Another Member or Members Designed by the Chair

Review of Application and Research Protocol and Request for Exemption Status: Approved X; Approved w/provision(s) ___

COMMENTS
Consent Required: No X Yes ____ Not Applicable ____ Written
Signed ___

Application to Continue/Renew is due:
(1) For an Expedited IRB Review, one month prior to the due date for renewal X

Name of IRB Chair Farideh Farazmand

Signature of IRB Chair ____________________________ Date: 8/5/2009

Cc. Dr. Farazmand
APPENDIX B

Permission and Approval to Conduct the Study
Date: April 23, 2009

To: Robert Parker, Director
    Miami-Dade Police Department

From: Oscar Vigoa, Assistant Director
    Departmental Services

Subject: Approval to Conduct Dissertation Research

RECOMMENDATION:

That this writer be granted permission to conduct research in the area of police uniformed preventative patrols and crime reduction and response times.

BACKGROUND:

In an attempt to further my education, I'm currently enrolled at Lynn University, Boca Raton, Florida as a Doctoral Candidate in Global Leadership with a specialization in Business Practices. I have finished my course work studies, and I'm in the process of completing my dissertation. I'm interested in conducting research on the causal relationship between uniformed preventative patrols and crime reduction. In addition, the study will evaluate the variances and differences between patrol time and response to calls for service. The study is comprised of a quantitative examination of data to examine linear comparisons of independent and dependant variables.

PLAN OF OPERATION:

The goal of this research is to establish the value significance of uniformed preventative patrols, response times and crime reduction. Upon approval, a Public Records request will be initiated and forwarded to the Police Legal Bureau to ensure legal sufficiency pursuant to Florida Statutes Chapter 119.

This study will use a quantitative, non-experimental, descriptive, exploratory (comparative), and correlation (explanatory) analysis research design to examine the relationships between quantitative variables, such as patrol time, response times, robberies, residential burglaries and auto thefts statistics over an 8 month period in 2004. The study will compare the relationship between patrol time and response times in addition to the reduction of robberies, residential and commercial burglaries and auto thefts, when there is an increase in uniformed officer patrols in a South Florida City.

QUESTIONS PRESENTED:

Does more uniformed preventative patrol reduce the crimes of robbery, residential and commercial burglaries and auto thefts? Does more patrol time (more assigned uniformed patrol officers) reduce the time it takes uniformed officers to respond to an emergency and non-emergency call for service?
Robert Parker, Director
April 23, 2009
Page 2

The research design will provide a quantitative examination of the variables involved in police deployment strategies to determine the impact of uniformed patrol officers performing routine preventative patrols on crime.

The study will test comparative results on the number of robberies, residential and commercial burglaries and auto thefts separately from the response times. Vehicle patrol-time is the focus of the analysis and the resulting arrest records will not be examined.

The collection of data will include public record documents such as work sheets, CAD information reports regarding calls for service and Crime Statistical Reports, from the Crime Information Warehouse for the City of Doral prior to the incorporation of 2004 from January to August.

This writer will not seek or disseminate confidential information.

The Miami-Dade Police Department and other police departments around the nation; and the world, stand to benefit in their succession plan from the results of this research study. A clear understanding of the causal relationship between patrol time, crime, and response times, will afford police administrators with an effective tool to adjust budgets and resources to combat crime and provide more efficient police services. The results of the research will create a knowledge base for the future of police organizations, regarding personnel allocations and deployment strategies.

APPROVAL

Robert Parker
Director

DATE

DISAPPROVED

Robert Parker
Director

OV/ov
APPENDIX C

First Public Records Request
Robert Parker, Director  
Miami-Dade Police Department  

Dear Director Parker:

In an attempt to further my education, I'm currently enrolled at Lynn University, Boca Raton, Florida as a Doctoral Candidate in Global Leadership with a specialization in Business Practices. I have finished my course work studies, and I'm in the process of completing my dissertation. I'm interested in conducting research on the causal relationship between uniformed preventative patrols and crime reductions. In addition, the study will evaluate the variances and differences between patrol time and response to calls for service. The study is comprised of a quantitative examination of data to examine linear comparisons of independent and dependant variables.

The following is a request for public records, made pursuant to Florida Statute 119.07, inspection and copying of records, photographing public records; fees; exemptions. I respectively request the following documentation; uniformed patrol Daily Activity Reports, worksheets, from January 2004 to August of 2004, an 8 month period; in the specific area only before and after the incorporation of the City of Doral. CAD reports that only depict emergency and non-emergency response times for the same area and time period. And Crime Statistical Reports (from the CIW) for the aforementioned area during the same time period. Please advise me of the appropriate fee as per statutory requirements.

Your quick attention to this matter is appreciated. If your staff has any questions on this request please call me at [number]

Sincerely,

Oscar Vigoa, PhD

[Signature]

[Approval stamp]
APPENDIX D

Second Public Records Request
Robert Parker, Director
Miami-Dade Police Department

Dear Director Parker:

In an attempt to further my education, I'm currently enrolled at Lynn University, Boca Raton, Florida as a Doctoral Candidate in Global Leadership with a specialization in Business Practices. I have finished my course work studies, and I'm in the process of completing my dissertation. I'm interested in conducting research on the causal relationship between uniformed preventative patrols and crime reductions. In addition, the study will evaluate the variances and differences between patrol time and response to calls for service. The study is comprised of a quantitative examination of data to examine linear comparisons of independent and dependent variables.

I'm requesting the following documents pursuant to Florida Statute §119.07: Uniformed patrol Daily Activity Reports, and worksheets, from January 2006 to April of 2006, in the City of Doral. CAD reports that only depict emergency and non-emergency response times for the same area and time period. Crime Statistical Reports (from the CIW) for the aforementioned area during the same time period.

I've been informed that the worksheets have been marked for destruction, in compliance with the Florida Department of State, State Library and Archives of Florida, General Records Schedule. I request that the original documents be transferred to my custody. Due to the nature of my research, Lynn University requires I maintain all records and documents used in my Doctoral course work for a period of not less than five (5) years. I will assume the custodial responsibility for the aforementioned documents, and will produce them in accordance with Florida Statutes when necessary.

Your quick attention to this matter is appreciated. If your staff has any questions on this request please call me at 786-351-7571.

Sincerely,

Oscar Vigoa
APPENDIX E

Burglary Crime Statistic Reports
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<th>Victim Gender</th>
<th>Victim Race</th>
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MIAMI DADE POLICE DEPARTMENT
DT - Crime Cases Detail by UCR
Report Fillers

Date Range: Between Jan 1, 2004 and Apr 4, 2004
For YTD to Month of:
For Prior YTD to Month of:
Clear Date:
Case Type:
Signal(s):
Signal Category:
UCR: BURGLARY
Justifiable:
UCR Hierarchy: 05- BURGLARY
UCR Part Indicator:
Grid(s):
District(s): R
Agency: 097 - CITY OF DORAL
Clear Type(s):
Commissioner(s):
Incident Type(s):
Day(s) of Week:
Patrol Area:
Quadrant:

Excludes Unfounded Cases
Excludes AOA Cases
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UCR Part Indicator:
Grid(s):
District(s): R
Agency: 057 - CITY OF DORAL
Clear Type(s):
Commissioner(s):
Incident Type(s):
Day(s) of Week:
Patrol Area:
Quadrant:

Excludes Unfounded Cases
Excludes AOA Cases
APPENDIX F

Emergency Response Time Reports
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<td>00:44:58</td>
</tr>
</tbody>
</table>
APPENDIX G

Non Emergency Response Time Reports
**MIAMI DADE POLICE DEPARTMENT**

58 - Response Time Report - adhoc City of Doral P/Area 1

Routine

Incidents Jan 1, 2004 - Apr 4, 2004

<table>
<thead>
<tr>
<th>Grand Total</th>
<th>HH:MM:SS</th>
<th>HH:MM:SS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Incidents: 1,976</td>
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</tr>
<tr>
<td>Total Complaint Oper. Handle Time:</td>
<td>34:18:16</td>
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</tr>
<tr>
<td>Total Call Holding Dispatch Time:</td>
<td>10:34:17</td>
<td>00:01:02</td>
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<tr>
<td>Total Communications Bureau Handle Time:</td>
<td>11:52:33</td>
<td>00:32:39</td>
</tr>
<tr>
<td>Total First Police Arrival Time:</td>
<td>25:04:24</td>
<td>00:33:42</td>
</tr>
<tr>
<td>Total Response Time Inc. Oper. Handle Time:</td>
<td>13:56:57</td>
<td>00:33:42</td>
</tr>
<tr>
<td>Total Response Time Exc. Oper. Handle Time:</td>
<td>13:38:41</td>
<td>00:40:18</td>
</tr>
<tr>
<td>Avg Complaint Oper. Handle Time:</td>
<td></td>
<td>00:01:02</td>
</tr>
<tr>
<td>Avg Call Holding Dispatch Time:</td>
<td></td>
<td>00:32:39</td>
</tr>
<tr>
<td>Avg Communications Bureau Handle Time:</td>
<td></td>
<td>00:33:42</td>
</tr>
<tr>
<td>Avg First Police Unit Arrival Time:</td>
<td></td>
<td>00:07:39</td>
</tr>
<tr>
<td>Avg Response Time Inc. Oper. Handle Time:</td>
<td></td>
<td>00:41:21</td>
</tr>
<tr>
<td>Avg Response Time Exc. Oper. Handle Time:</td>
<td></td>
<td>00:29:50</td>
</tr>
<tr>
<td>Avg First Handle Unit:</td>
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## Response Time Report - Adhoc City of Doral P/Area 1

**Routine Incidents Jan 1, 2006 - Apr 4, 2006**

### Grand Total

<table>
<thead>
<tr>
<th>Description</th>
<th>Total</th>
<th>Average</th>
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<tbody>
<tr>
<td>Number of Incidents: 2,338</td>
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</tr>
<tr>
<td>Total Complaint Oper. Handle Time:</td>
<td>34:05:22</td>
<td>00:00:52</td>
</tr>
<tr>
<td>Total Call Holding Dispatch Time:</td>
<td>36:42:40</td>
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</tr>
<tr>
<td>Total Communications Bureau Handle Time:</td>
<td>40:48:02</td>
<td>00:10:20</td>
</tr>
<tr>
<td>Total First Police Arrival Time:</td>
<td>25:00:21</td>
<td>00:06:34</td>
</tr>
<tr>
<td>Total Response Time Inc. Oper. Handle Time:</td>
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<td>00:16:54</td>
</tr>
<tr>
<td>Total Response Time Exc. Oper. Handle Time:</td>
<td>62:43:01</td>
<td>00:16:01</td>
</tr>
<tr>
<td>Avg First Handle Unit:</td>
<td></td>
<td>00:31:04</td>
</tr>
</tbody>
</table>
APPENDIX H

Robbery, Auto Theft Statistical Report
### MIAMI DADE POLICE DEPARTMENT

**85 - Part 1 Crimes**

*Incidents Between Jan 1, 2004 and Apr 4, 2004*

**097 - CITY OF DORAL - R - CITY OF DORAL**

<table>
<thead>
<tr>
<th>Part I Crimes</th>
<th>Number of Crimes</th>
</tr>
</thead>
<tbody>
<tr>
<td>03 - ROBBERY</td>
<td>1200 - ROBBERY</td>
</tr>
<tr>
<td></td>
<td>03 - ROBBERY</td>
</tr>
<tr>
<td>04 - AGGRAVATED ASSAULTS</td>
<td>130A - AGGRAVATED ASSAULT</td>
</tr>
<tr>
<td></td>
<td>130D - AGGRAVATED STALKING</td>
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<td>04 - AGGRAVATED ASSAULTS</td>
<td>15</td>
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<td>05 - BURGLARY</td>
<td>2200 - BURGLARY</td>
</tr>
<tr>
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<td>05 - BURGLARY</td>
</tr>
<tr>
<td>06 - LARCENY</td>
<td>230A - POCKET PICKING</td>
</tr>
<tr>
<td></td>
<td>230B - PURSE SNATCHING</td>
</tr>
<tr>
<td></td>
<td>230C - SHOPLIFTING</td>
</tr>
<tr>
<td></td>
<td>230G - SHOPLIFTING ALL OTHERS</td>
</tr>
<tr>
<td></td>
<td>230E - SHOPLIFTING FROM A COIN MACHINE</td>
</tr>
<tr>
<td></td>
<td>230F - SHOPLIFTING FROM A MOTOR VEHICLE</td>
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<td></td>
<td>230D - SHOPLIFTING FROM BUILDING</td>
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<td>06 - LARCENY</td>
<td>668</td>
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<td>07 - MOTOR VEHICLE THEFT</td>
<td>2400 - MOTOR VEHICLE THEFT</td>
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<td>07 - MOTOR VEHICLE THEFT</td>
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<td>Part I Crimes</td>
<td>Number of Crimes</td>
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<tr>
<td>--------------------------------------------------</td>
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<td>01- HOMICIDE OFFENSES 090A - MURDER  - NONNEG MANSLAUGHTER</td>
<td>2</td>
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<td>01- HOMICIDE OFFENSES 01</td>
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<td>02- FORCIBLE SEX OFFENSES 110C - FONDLING</td>
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<tr>
<td>110A - RAPE</td>
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</tr>
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<td>110B - SOCCMY</td>
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<tr>
<td>02- FORCIBLE SEX OFFENSES 02</td>
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<td>03- ROBBERY 1200 - ROBBERY</td>
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<td>04- AGGRAVATED ASSAULTS 130A - AGGRAVATED ASSAULT</td>
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<td>230G - SHOPLIFTING ALL OTHERS</td>
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<td>230F - SHOPLIFTING FROM A MOTOR VEHICLE</td>
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<td>07- MOTOR VEHICLE THEFT 2400 - MOTOR VEHICLE THEFT</td>
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</tr>
<tr>
<td>07- MOTOR VEHICLE THEFT 07</td>
<td>82</td>
</tr>
<tr>
<td><strong>Total Part I Crimes</strong></td>
<td><strong>678</strong></td>
</tr>
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</table>