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# A CROSS-SECTIONAL ANALYSIS OF MURDER CLEARANCES IN DETROIT: 1994-1995

By

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ABSTRACT

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Homicide clearance rates have been steadily decreasing over the past thirty years. Researchers have hypothesized that changes in the nature of crime caused by sociological phenomena such as the drug industry are at least partly responsible for lower clearance rates. The current research entails an analysis of two-hundred homicide incidents that occurred in the city of Detroit between 1994 and 1995. Data indicate similar findings between the victim and offender demographic information and previous research. African-American males are overrepresented among both homicide victims and offenders, and homicide victims tend to be younger than homicide offenders. Where the victim-offender relationship was known, most incidents involved victims and offenders who knew each other prior to the incident. When victim-offender relationship information was excluded from the multivariate analysis, victim's violent criminal history, incident location, time reported, victim culpability, and drug-motivated circumstances developed as the most significant predictors of homicide clearance.

To my family, especially my parents, whose loving support and encouragement are the sole reason this work was completed. Dad, you are perpetually in our thoughts and prayers...

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# Chapter 1

## INTRODUCTION

Fear of crime, particularly violent crime, has been a fundamental political, economic, and social concern in recent decades. While it may be argued that interest in rising crime rates has always been high in the United States, the phenomenon has been pushed into the spotlight since the 1960's. The national interest has manifested itself in several different ways, most of which involve periodic times of relatively substantial levels of federal, state and local resources to attack a gamut of social issues. The past fifty years have been an era of such initiatives, including welfare programs and their modification, tens of billions of dollars for law enforcement assistance,[1] and numerous other projects that were both directly, and indirectly, developed to address these concerns.

The present research will focus on criminal homicides, and will attempt to determine what situational variables affect the ability of police to solve these crimes. Thus, the primary research aim will be to determine what factors, when present, are of the greatest importance to making an arrest for a particular murder offense. A secondary, yet significant aim focuses, on the nature of criminal homicides. The current analysis was influenced by Marvin Wolfgang's (1958) landmark analysis of homicides in Philadelphia

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[1] Assistance to local and state law enforcement agencies was begun as a large scale project in the 1960's with the federal government's Law Enforcement Assistance Agency. This program funneled large scale resources into local and state law enforcement efforts. The funds were primarily used for equipment, training, personnel, and education for law enforcement officers (Samaha, 1991). More recently, with the Violent Crime Control Act of 1994, the federal government has allocated nearly $10 billion for equipment, personnel, and overtime. In addition, the 1994 Crime Bill also made provisions for training projects, research, and the development of innovative strategies for dealing with crime issues (United States Department of Justice, 1994).

from 1948-1952. Findings from the Detroit sample will be compared with previous research to determine how the nature of homicide has changed.

The concurrent development of increasing criminal homicide rates and decreasing clearance rates (*see* Figure 1 in Appendix A) that occurred during the period from 1971 to 1990 sparked considerable interest among academicians and practioners alike.[2] From 1971 to 1990 there was a 33 percent increase in the number of known homicides that coincided with a 174 percent increase in the number of uncleared homicides (Cardarelli and Cavanagh, 1992, p. 2). There are three primary reasons why this should raise concern. First, the fact that offenders are not caught for nearly one-third of all homicide cases raises questions about safety and security, especially when it is considered that some of these incidents probably involve repeat offenders. Second, since crime rates and clearance rates are seen as measures of police effectiveness, evaluations of police operations are often negatively affected, which subsequently affects police morale. Finally, the criminal incident itself tends to have a traumatic impact on victims and their families that is only made worse when the offender is not arrested (Riedel and Rinehart, 1996, p. 84).

The literature review will address several topics that are essential to the understanding of homicide clearances. The first section of the literature review will be used to define terms and concepts that are necessary to gain an understanding of the

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[2] While a more detailed discussion will be presented on the definition of a "cleared" case, it will refer to those cases in which a suspect was arrested for the crime in question.

research at hand, and will include discussions on the legal classifications of homicides, and definitions of case clearances. Definitions of clearance rates will be supplemented with information on how they are developed, and how they are used by the criminal justice system will then be discussed. The first section of the literature review will present findings on patterns that exist in the homicide incident. It will address several facets of the victim-offender interaction, and other general incident characteristics. Finally, findings from previous research will be used to determine what victim and situational characteristics have been shown to affect case clearance. Offender characteristics will not be discussed in the analyses because as logic implies, offender information is not readily available for most open cases. Exceptions to the rule will occur in those cases in which a suspect has been identified, yet has not been taken into custody. Such cases are technically still uncleared cases. Finally, a bivariate and multivariate statistical analysis will be conducted to determine the relationship between particular situational and victim characteristic variables and final status.

The current research has both theoretical and practical implications to academics and practioners alike. The discipline of sociology, and more recently the field of criminal justice, have invested a substantial amount of time and energy in determining what patterns actually comprise criminal incidents, and secondly how these patterns relate to the causal factors of crime. It is only by understanding the nature of crime, in this case criminal homicide, that theorists and/or public policy makers can attempt to develop prevention or intervention programs that effectively deal with the underlying causal

factors. Accordingly, Chapter 2 presents findings from previous research about the characteristics of criminal homicide in the city of Detroit. Notwithstanding the objective value of establishing patterns in crime, Chapter 2 is also intrinsically related to Chapter 3 in that it begins to explain the effect that victim and situational characteristics have on homicide clearances. In determining how the nature of the crime itself might have changed, if at all, it allows the reader to conceptualize a relationship between any apparent changes and their relationship to decreasing homicide clearance rates.

This research is potentially valuable to police managers or executives who are considering the implementation of a case screening model that allocates resources more effectively. Dwindling police department budgets in conjunction with more competition for the limited resources that are available have prompted managers to develop strategies that identify and give priority to cases that have higher probability of successful clearance (Greenberg, Elliot, Draft, and Procter, 1977). Although it seems apparent that the serious nature of criminal homicide requires a substantial amount of investigative effort to all cases, it is still possible to develop procedures that focus attention to cases having a higher probability of clearance.

Chapter 2

# LITERATURE REVIEW

The scope of this research project is limited to criminal homicide and focuses on determining what factors are relevant to the clearances of these crimes. Research focusing on one type of crime is pivotal to gathering a more accurate understanding of the dynamics that occur during the interaction between the participants of that crime. Albert Morris (1955) argued the "serious investigator" errors by studying crime as a whole, as it would be more beneficial to study the "patterns, similarities, and repetitions" of specific crimes, so that we may develop "effective control, prevention, and treatment" efforts (p. 3). Other researchers have supported this contention and point out that research on one particular type of crime, including victim-offender characteristics, is relatively rare (Wolfgang, 1958, p. 4). For these reasons the scope of this research has been limited to one crime, namely criminal homicide.

For purposes of this research, clearance refers to those instances where an offender has been identified and arrested or detained[3] for a particular crime. This is an important definition because the term "cleared" often has different formal and informal operational meanings. For crimes such as burglary and robbery some agencies determine a case to be cleared if detectives are able to match the modus operandi of a suspect in custody with that of other crimes (Cordner, 1989). Other agencies do not consider a case

[3] In many jurisdictions juveniles cannot legally be arrested, and are technically "detained" when they are taken into police custody for violations of the law.

cleared unless at least one perpetrator is taken into custody, which is consistent with the definition used here (Bottomley and Pease, 1986). Still others argue that a case is not cleared unless all suspects are taken into custody (Greenwood, Chaiken, and Petersilia, 1977).

One scenario presents itself as an exception to the above definition. It was previously stated that the offender must be taken into custody in order for the case to be considered cleared. Most departments allow for the status of "exceptional clearance." There are instances, however, where an offender has been identified, yet it is not possible to apprehend the suspect. Examples are when a victim refused to cooperate (generally not an issue in homicides), the suspect was prosecuted by another jurisdiction, the suspect died, or the suspect was already in custody (Cawley, Miron, Araugo, Wasserman, Mannello, and Huffman, 1977; Stephens, 1996). Many police departments include these cases in calculations as cleared cases because exclusion underestimates police effectiveness (Rinehart, 1994).

Clearance rates are generally used as a measure of police effectiveness in police operations. The reader should exercise caution when interpreting these rates because it is widely accepted that official statistics on known offenses often substantially under represent victimization rates as reported by the National Crime Survey (NCS). Of all crimes reported to police, it is logical to assume that the number of known homicides are more representative of actual victimization rates versus other crimes such as burglary,

larceny, or assault. One factor influencing the reliability of homicide victimization rates, however, could be the manner in which departments determine whether the crime is actually a criminal homicide versus a crime that is justified by citizen, natural causes, or suicide. Misclassifications have the potential to inflate or deflate both homicide and clearance rates.

Police managers have historically used clearance and other arrest-based statistics as a measure of police effectiveness. There are two primary reasons for using clearance rates. First, arrests are easy to count. Second, because the police have direct control over their production. A result of the apparent overemphasis on arrests and clearance rates is that the arrest itself often becomes the objective rather than solving the crime problem the arrest is supposed to address (Bayley, 1996; Stephens, 1996).

A principal of the Total Quality Management (TQM) model suggests that to measure quality, managers should focus on outcomes, not outputs. Output measures are measures that merely count the frequency of particular activities/events (e.g., number of meetings attended by personnel, number of arrests). Conversely, outcome measures are used to determine an organization's success in achieving a particular organizationally defined goals (e.g., decrease in juvenile crime in a particular geographical location), and usually involves a predefined method of evaluating effectiveness. Outcome measures differ from output measures in that personnel activities do not become goals, yet the effect of personnel activities are. Policing has often used output measures such as

"simplistic tallies of arrests, citations, field interrogations, and ... clearances to measure the adequacy of police performance on both the individual and agency level" (Hoover, 1996, p. 17) even though it is commonly held that these alone do not measure how well police respond to citizens. Police executives may be reluctant to use outcome measures such as the number of cases in which charges are filed, or number of convictions that result from an arrest because it is often argued that they have no control over whether a prosecutor decides to file charges, if a grand jury decides to indict, or if a jury finds a suspect guilty. Police can reasonably argue that even in ideal circumstances, these outcome measures would not be an effective and reliable measure of performance.

There is growing criticism directed toward the use traditional measures of police effectiveness such as clearance rates (Bayley, 1996; Cook, 1979; Hoover, 1996). One possible reason is that effectiveness of the criminal justice system can often be mediated by the choice behavior of criminals. There is a relationship between the choice behaviors of criminal, such as the level of caution used by a burglar in choosing their modus operandi. So, it is argued clearance measures are merely a reflection of the relationship between police strategies and personal choices of criminals, and not some abstract measurement of police effectiveness (Cook, 1979).

## Nature and Patterns in Criminal Homicide

In determining the impact that victim and situational characteristics have on the clearance of homicide cases it is first important to understand the patterns that exist in the

typical homicide incident. This is important because many researchers have argued that crime is a social phenomenon which often follows predictable patterns in both victim and situational characteristics (Block, 1976; Block and Christakos, 1995; Blumstein and Heinz III, 1995; Daly and Margo, 1982; Lee, 1995; Rojeck and Williams, 1993; Segall and Wilson, 1993; Wolfgang, 1958), behavior (Bernard, 1993; Levi, 1980; Luckenbill, 1977; Messner and Tardiff, 1985), and victim/situational characteristics.

The recognition of these patterns and interactions has resulted in the development of sociological theory to explain the reasons for their existence. The causal factors of crime, and subsequently the nature of crime itself, have traditionally been explained using one of two paradigms. The positivistic school argues the propensity to commit crime is largely determined by forces outside the control of the individual. Conversely, the deterministic school argues criminals are differentiated from noncriminals in the extent to which the individual restraints himself/herself from committing crime (Gottfredson and Hirschi, 1990). The deterministic school argues the individual is responsible for committing crime, versus being encouraged to commit crime by other factors such as economic inequality.

The patterns that exist in criminal homicide can be explained using nearly every criminological theory. Although multiple criminological theories are relevant, one of the most applicable theories to this study is the "routine activities" theory. The theory posits the nature of the victim-offender relationship is the most important factor in determining

the participant's socio-demographic characteristics (e.g., age, sex, race, marital status, and employment status) and the temporal characteristics (e.g., time of day, day of week, and time of year) of the incident. The structure of the participant's daily activities dictates the characteristics of the crime. For example, crimes occurring in the home are more likely to involve family members because interaction between family members is greatest in this location (Messner and Tardiff, 1985).

The nature of homicide has remained rather steady over time while homicide rates have fluctuated, thus characterizing homicide as both a stable and changing phenomenon (Block, 1976). Generally, homicides have been classified as intraracial (Walker, Spohn, and DeLone, 1996), mostly between close acquaintances (Maxfield, 1989), and committed by those who have essentially no criminal career (Wolfgang, 1958). The next section of chapter two will present previous findings about the patterns that exist in homicide incidents.

## Patterns in Race and Sex Characteristics

Marvin Wolfgang (1958) was one of the first researchers to analyze patterns in a particular type of crime. He thoroughly scrutinized characteristics of the victim, offender, and situation, presenting a descriptive analysis of these characteristics. Wolfgang's study focused on age, sex, race, and previous record differences of both the victim and offender, and also situational characteristics such as weapons used for inflicting death, temporal patterns, spatial patterns, alcohol use, motives, and victim/offender relationship. In

addition, Wolfgang's research also examined the effect of multiple victim/offender characteristics on situational characteristics (e.g., the weapon of choice for black males, versus white males).

The most striking feature of race and sex distributions in criminal homicide is the extent that percentages for victimization and offending for blacks exceed those of whites, and the extent that rates for males far exceed the rates for women (Wolfgang, 1958). The Philadelphia study revealed that while Blacks comprised only 18 percent of the U.S. population in 1950, they accounted for 73 percent of homicide victims and 75 percent of homicide offenders. Black males were 36.9 times more likely to be homicide victims, and 41.7 times more likely to be homicide offenders than white males (Wolfgang, 1958, pp. 33-34).

Since the 1950's, other researchers have arrived at similar findings. Substantial support has been found for the conclusion that African American males face a much greater risk of death by homicide than do whites. More recently, it was determined that the homicide victimization rate for African American males was 72 per 100,000, while the rate was 9.3 for white males (Walker, Spohn, and DeLone, 1996, p. 34).

## Age Patterns

A significant[4] relationship has generally been found between criminal homicide offending rates and age, however this relationship is relative to the offender or victim age and race. Black male offenders tended to be younger than white male offenders. The highest offending category for black males was the 15-19 group (92.5 per 100,000), and the highest category for white males was the 20-24 group (8.2 per 100,000) (Wolfgang, 1958). The data reveal that the offending rates for white males are also proportionately much smaller.

Offending patterns women are different from that of men as they tend to commit much less crime. White female offenders tend to be younger than black females, and they proportionately commit much less homicide.[5] The highest offending rate for black females was in the 25-29 age group (22.3 per 100,000).

Patterns in victimization rates tend to be consistent with offending rates. However homicide victims generally are slightly older than offenders (Wolfgang, 1958; Segall and Wilson, 1993). The Philadelphia data revealed that victimization rates were highest for blacks in every age group, with the highest being for black males in the 35-39 group (69.4 per 100,000). Rates for white males were highest in the 30-34 group, and this rate of 4.0 is again substantially lower than that of black males.

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[4] "Significant" will refer to those instances when a test for significance was conducted, and a value for p is less than .05 (Wolfgang, 1958, p. 18).

[5] The highest category for white females was the 15-19 group, and the offending rate was 1.2 per 100,000.

It appears that a more recent trend has been for homicide offenders and victims to be younger than was previously the case. Analyses of Chicago homicides from 1970-1993 revealed that while similar patterns were present, the findings differed in relation to the age groups that experienced the highest offending rates. Offending rates for Chicago's 15-24 age category were consistent with the 20-24 category in Wolfgang's (1958) research until the 15-24 category's rates dramatically increased after 1985 (Block and Christakos, 1995)

It is not clear what cultural or structural changes have affected these patterns in offending and victimization levels, but Decker (1996) suggested that the crack cocaine epidemic that hit many major cities in the 1980's has changed the dynamics of homicide. This epidemic has created instrumental motives (e.g., robbery and rape)[6] within primary relationships (e.g., family), and has diminished the traditional protection that such relationships previously provided. Primary relationships were thought to shield family members from crimes having instrumental motives. Evidence suggests this insularly dynamic is no longer as prevalent. Case narratives collected by Decker (1996) also suggest that "homicide networks" might actually facilitate the contagious spread of violence (p. 441).

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[6]Incidents involving expressive motives are those where the homicide incident itself is the primary motivation. Instrumental motives are present when the primary reason for the criminal act is to achieve some other ends, for example the presumed financial reward from a robbery. While the two motives can overlap, the primary motivation for the incident is emphasized.

Several connections have been established between drug-markets and violent crime. Drug markets have altered the levels and type of lethal violence in the United States (Block and Christakos, 1995; Blumstein, 1995; Blumstein and Heinz III, 1995; Decker, 1996; Rosenfeld, 1989). Goldstein (1985) identified a tripartite framework that encapsulates the major subcategories of drug-related crimes. Drugs and violence are related in three ways: psycho-pharmacologically, economically compulsive, and systemically. The psycho-pharmacological model suggests short or long-term use of specific substances may result in persons becoming susceptible to violent behavior due to a prolonged state of excitability and/or irrationality. Economically compulsive crimes are those where the offender's primary motivation is to obtain money to support his/her drug habit. Finally, the systemic model suggests violent behavior is a natural outcome of the normal process of the sale, distribution, or use of narcotics. Violence is a means to streamline the drug business, and is often used to settle disputes over territory between rival drug dealers, enforce normative codes, retaliate (e.g., selling phony drugs, failing to pay one's drug debt), or to eliminate informers (Goldstein, 1989, pp. 24-30).

Another possible explanation is that changes in population demographics are linked to changes in homicide patterns. Since the 1950's, there has been an increase in the proportion of young people in the population, especially among 15-24 year olds who commit a disproportionate amount of crime (Markides and Tracy, 1977).

## Weapons and Methods of Injury Infliction

There are mixed findings about the importance that type of weapon plays in the homicide situation. It has been argued that the presence of a suitable weapon was the most significant factor in the homicide incident - - a revolver, a shotgun, a rifle, a hunting knife, a butcher knife, a heavy bottle, or a club (Topping, 1952). Others argue that the lack of a suitable weapon at the homicide scene does not always have a protective effect. In certain situations, participant(s) often leave the scene, acquire a firearm, and return to the setting (Lundsgaarde, 1977).

Depending on the motivation of the offender (instrumental versus expressive), the typical homicide is usually quick, brutal, and the weapon is usually simple and commonplace (Wolfgang, 1958). It is not altogether clear what Wolfgang (1958) meant by "commonplace," but it can be inferred that he proposed a relationship between types of weapons and cultural orientation. It has been argued that historical circumstances, such as frontier violence, racial segregation, and arming of the populace, are important to the study of American crime (Block, 1981). These particular historical and/or cultural orientations might relate to what has been referred to as the "subculture of violence." The "subculture of violence" thesis argues that cultural differences make presence of weapons, violence, and use of violence to solve conflict, as more or less acceptable (Wolfgang, 1958). Wolfgang (1958) cites the Royal Commission on Capital Punishment's following statement as further support for this idea: "Irish immigrants in

the United States used to get into all sorts of fights, but their homicide rate was always low because they fought with their fists and brass knuckles, and not with knives or revolvers" (p. 80).

A significant relationship between race, sex and weapon preference has been found, and these preferences are probably due to socialization that certain groups have to a specific kind of weapon (Wolfgang, 1958). For every age and race category, "pistol, revolver" had the highest proportion of involvement in criminal homicide incidents, followed by "knife." This pattern remains when analyzed for the offender, as well as the victim.

## Temporal Patterns

Criminologists have long assumed a relationship between crime, especially violent crime, and season (Tennenbaum and Fink, 1994). Emile Durkheim (1951) was the first to study this from the approach of determining the social structural factors which influence this phenomenon, and argued that behaviors such as suicide and homicide are actually a result of temporal factors, versus individual choice. Some have of hypothesized that crimes against the person are highest in the summer because people are frequently in contact with each other, and the consumption of alcohol is high (Sutherland and Cressey, 1978). The Philadelphia data did <u>not</u> reveal significant associations. However, most homicides did occur during the months of May, June, July and August (36 percent), which are followed closely by the months of March, April, September, and

October (35 percent) (Wolfgang, 1958, Table 8). Other studies have made similar findings, but added that homicide is cyclical in nature and that the patterns are sometimes masked by temporary trends or influences (Tennenbaum and Fink, 1994).

Temporal influences are not only apparent when analyzed from the most deadly months, but significant relationships have also been found to exist between days of the week, as well as time of the day. The Philadelphia data reveals that for both races and sexes, Saturday is the most deadly day of the week (31.8 percent), followed by Friday (17 percent) and Sunday (16.8 percent) (Wolfgang, 1958, Table 8).

## Patterns in Alcohol Influences

Although the social and economic costs of alcohol use and abuse are well documented, fifty years after the abolitionist era the exact role of alcohol in our culture is not clearly defined. There is a well established relationship between the use of alcohol and criminal activity, yet this phenomenon appears to be particular to the United States (Parker, 1995). Since there is not a significant difference in the genetic pool between the United States and other countries, there must be social structural conditions that influence this relationship between alcohol and crime (Ibid.).

Although the alcohol/crime nexus has been investigated from multiple viewpoints, Wolfgang's Philadelphia study is still the classic piece of literature that addresses alcohol and its relationship to violent behavior (Ibid.). Wolfgang (1958) found that alcohol was present in 63.6 percent of all criminal homicide situations, 43.5 percent

of which involved the presence of alcohol in both the victim and offender (p. 136, Table 14). The Philadelphia data revealed significant relationships between race, sex, and alcohol. Alcohol was present on average in 57 percent of all homicide incidents, and was most prevalent among victims and offenders who were black males.

It has been argued certain features of alcohol justify an investigation of this topic separate from that of other substances such as drugs. Drug-related violence is usually a direct result of the sale and distribution of drugs, not the use of drugs per se. Alcohol differs in that the mere use of alcohol is associated with violence. It is argued that this difference requires a unique conceptual understanding of drug-related violence, and the result that this violence has on the victim-offender interaction (Parker, 1995, p. xiii).

Analyses of 689 of the homicides from St. Louis that occurred between the years 1985-1989 revealed over one-quarter were reported to be drug-related. Drug-related was defined as any drug involvement in the homicide incident, including drug use by either the victim or the offender the day of the incident. Drug-related homicides tended to involve a larger percentage of blacks, males, guns and acquaintance relationships than non-drug-related homicides (Rosenfeld, 1989, p. 12).

## Previous Record

Information on victim's and offender's previous criminal record has primarily been gathered from one of two sources, either court/commitment records or arrest records. The source of this information is important because the data sources do not

necessarily reflect the same information. Court/commitment records not only reflect the decision of the police to arrest, but also reflect an evaluation of guilt, and/or a court's decision to incarcerate. Researchers often incorrectly refer to an offender's or victim's "criminal history" when discussing the number of arrests attributable to that individual. This information only reflects arrest records and is not necessarily a reflection of criminal history (Wolfgang, 1958). Wolfgang's (1958) criticisms appear to be too critical in nature because he follows a very legalistic approach. Arrest records are one of the mostly widely available pieces of information that measure previous criminal records. When interpreted correctly, they provide an accurate picture of a victim or offender's prior criminal history. For these reasons it is argued here that arrest records are the most accurate source of information about the victim and offender's previous criminal record.

In general, research prior to 1958 found that most offenders had no previous record of any kind before the criminal homicide incident.[7] These findings were contradicted by the Philadelphia data that revealed offenders (and probably victims) in criminal homicide appear to have previous arrest records in greater proportion than elsewhere reported in the literature (Wolfgang, 1958). Results indicate a significant relationship between previous arrest record, and the race and sex of the offender and victim. Sixty-eight percent of blacks offenders had a previous criminal record, compared

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[7] Lewis Lawes' found that 90 percent of those committed to Sing Sing for murder had no previous record. Lawes, Dublin, and Bunzel found that 75 percent of those admitted on a charge of homicide were classified as first time offenders, however, they also warn that available data might not adequately evaluate a person's criminal career (as cited in Wolfgang, 1958, pp. 169-170).

to 53 percent of white offenders. Fifty-four percent of blacks victims had previous records, compared to 28 percent for whites (Wolfgang, 1958, Table 19).

A significant relationship also exists for sex. Sixty-eight percent of male offenders and 54 percent of male victims had a previous record, compared to 48 percent of female offenders and 25 percent of female victims (Wolfgang, 1958, Table 19). Race and sex differences not only have a significant impact on previous record, but also on the type of crime previously committed. The Philadelphia data revealed that 66 percent of offenders, and 54 percent of victims had a previous record for an offense against the person. In addition, 34 percent of offenders, and 46 percent of victims had previous records for crimes against property (Wolfgang, 1958, pp. 178-179).

## Motives

Researchers have continually cited the motivation for criminal homicides as important to understanding of the criminal event, and that it is this characteristic that distinguishes criminal homicide from other crimes (Wolfgang, 1958). It is difficult to undertake a discussion on the role of motives without also presenting a discussion on the intimate connection between motives and the victim-offender relationship. While this discussion will touch on this connection, a more detailed discussion on the victim/offender relationship will follow.

Criminal motives, especially motives for criminal homicide, have long been dichotomized into two categories. The names or labels associated with those two

groupings have varied slightly, yet the fundamental distinction has remained rather consistent. The distinctions have been referred to as "felony" versus "nonfelony" (Levi, 1980; Luckenbill, 1977-1978; Wolfgang, 1958), "instrumental" versus "expressive" (Block and Christakos, 1995; Decker, 1995; Decker, 1996), or "instrumental" versus "impulsive" (Block, 1981). Whatever label is assigned to the terms, felony/instrumental homicides are those that result during the commission of another crime, and generally occur as a result of the offender attempting to achieve some level of personal gain (e.g., when a store owner is killed during the commission of a robbery). Conversely, nonfelony/expressive homicides are those incidents that involve an expression of some immediate or long term outrage, yet bring no personal gain to the offender.[8]

Previous research indicates the most significant factor influencing the motive of the incident is the victim-offender relationship. Expressive motives are most prevalent in homicides involving family, friends, or other acquaintances, and instrumental homicides are most prevalent between strangers (Decker, 1995).

A distinction has also been make between "normal" and "deviant" homicides (Decker, 1996). "Normal" homicides are those fit into the generally accepted conceptualization of "acceptable" homicides, those where the motivation is consistent

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[8] It is generally accepted that expressive homicides do not include an aspect of personal gain. However it could be argued that the mere confrontation brings some level of personal gain to the offender and/or victim. Meaning, the confrontation itself could be a mode of relieving some level of stress or emotion within either party. The type of personal gain suggested as part of an instrumental crime generally refers to material or financial gain, as in the case of robbery, or the sexual gratification in the case of a rape. In expressive homicides, the goal is the violence itself, other motives are secondary (Block and Christakos, 1995, p. 28).

with the victim-offender relationship. Examples would be expressive violence between family, friends, or acquaintances, or instrumental violence between strangers. "Deviant" homicides are those incidents that do not fit into this conceptualization. Examples of deviant homicides would be instrumental violence between intimates, and expressive violence between strangers (Decker, 1995).

Notwithstanding the victim/offender relationship, previous research has found that the nonfelony/expressive homicide is most common. While it is not completely clear if Wolfgang's (1958) classifications of homicides are consistent with that of other research cited here,[9] the Philadelphia data reveal that only 7.9 percent of offenders had instrumental motives.[10] Similarly, Maxfield (1989) found that 11 percent of homicides were instrumental, with robbery being the most common motive (p. 674). Thus, expressive homicides are much more prevalent than instrumental homicides.

## Victim/Offender Relationship

Criminal homicide has been characterized as:

> "[T]he most personalized crime in our society. Because motives do not exist in a vacuum, the subject-object, doer-sufferer relationship is of prime importance in this particular crime... .[H]omicide is a dynamic relationship

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[9] Wolfgang (1958) made many more distinctions between motives then are present in any other piece of literature. He has distinguished between, among others, general altercations, domestic quarrels, jealousy, and robbery. It seems apparent to this author that this classification more accurately reflects homicide circumstances rather than motives. For example, it could be argued that it is completely possible to have a domestic quarrel which is motivated by some instrumental motive. While Wolfgang (1958) might have been aware of this problem and coded the most obvious motive, this limitation is not addressed in his research.

[10] The only motive that is clearly instrumental in nature included by Wolfgang (1958) is robbery.

> between two or more persons caught up in a life drama where they operate in a direct, interactional relationship" (Wolfgang, 1958, p. 203).

Relationships like motives, are often dichotomized by researchers. Relationship categories are usually specified as either nonstranger or stranger (Block, 1981; Riedel, 1981; Decker, 1995), or primary or secondary (Smith and Parker, 1980; Parker, 1989). Wolfgang's (1958) categorization of victim-offender relationship included 11 categories that can be grouped into the nonstranger/primary or stranger/secondary dichotomy.[11] Realizing the limitations caused by the dichotomous categories, Decker (1995) and others added the third category of friends/acquaintances.

Sixty-five percent of all victim/offender relationships in the Philadelphia sample fell in the primary contacts categories, and 35 percent of the incidents involved strangers. This distinction is even more pronounced when considering the significant impact that sex and race have on the victim-offender relationship. Categories that involve primary group contacts, when combined, constitute 59 percent of all relationships among males, but 84 percent among females. When specified to both sex and race, incidents involving white males tend to be between strangers, while the incidents involving black males tend to be among nonstrangers (Wolfgang, 1958, pp. 206-210).

These findings are consistent with a study that found 17 percent of homicide incidents involved strangers, while 47 percent involved either acquaintances or

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[11] Wolfgang's (1958) categories include: (a)close friend; (b)family relationship; (c)acquaintance; (d)stranger; (e)paramour, mistress, prostitute; (f)sex rival; (g)enemy; (h)paramour of offender's mate; (i)felon or police officer; (j)innocent bystander; (k)homosexual partner (p. 204).

spouses/lovers (Maxfield, 1989, pg. 673). Readers should exercise caution when analyzing relationship data because when no offender has been identified, the information is usually missing (Maxfield, 1975). Dealing with missing data, especially data that might be systematically missing, is a serious problem in the social sciences and is particularly problematic with homicide data sources. It has been argued that incidents with a substantial portion of missing offender data tend to involve strangers (Williams and Flewelling, 1987).

Historically, the family structure was thought to protect individuals from instrumental crime. Recent trends indicate that deviant homicide, as conceptualized by Decker (1996), is on the increase. The insularity protection of primary relationships has decreased (Decker, 1996). It has been argued that drugs, especially the crack epidemic, in conjunction with the breakdown of the family structure (Hacker, 1992; Decker, 1996), have tremendously altered this traditional protection.

## Conclusions

Prior research supports the conclusion that generally, criminal homicide follows specific patterns, which on the whole, have been relatively stable and consistent over time. The most significant results are:

- males and blacks have consistently been the highest proportion of both offenders and victims of criminal homicide;
- both victims and offenders tend to be relatively young, however, offenders tend to be slightly younger than their victims;

- alcohol has been shown, at least in the United States, to have a substantial impact on the nature of criminal homicide;
- the motives for most offenders tend to be more expressive, and;
- generally, victims and offenders tend to maintain some level of acquaintanceship before the criminal incident.

These findings are important because by understanding the nature of crime in any given population, the reader is better able to discern the relationship between these patterns and criminological theory. Routine activities theory is an appropriate model for conceptualizing the relationship between victim-offender sociodemographic characteristics and the nature of the crime. The theory is supported by the results presented above as stranger homicides tend to involve males, especially white males. Since the socioeconomic status of white males is generally higher than that of black males, it would follow that the social mobility of white males is greater. Higher incomes provide more flexibility "for the dispersion of activities across physical and social space (social mobility), while low incomes serve to constrict activities around the immediate household" (Messner and Tardiff, 1985, p. 245-246). This increased social mobility would bring white males in greater contact with strangers, thus increasing the chances that they would be involved in fatal assaults involving strangers. Since the social mobility of women, especially when Wolfgang's research was conducted, is substantially lower than that for men it would stand to reason that they would more often be killed by a family member or acquaintance. This conclusion is again supported by the data.

Finally, by comparing these findings with data obtained from Detroit, it allows the reader to discern how the nature of homicide has changed. One can then hypothesize a relationship between any changes or similarities and homicide clearances.

# Chapter 3

## CORRELATES OF POLICE CLEARANCE RATES

Research on correlates of criminal homicide clearance rates have been taken from numerous perspectives, including the impact of situational factors, police organizational factors, and social structural influences. Clearance rates are commonly used as a measure of police productivity. However, numerous theorists and practitioners have argued that this rate has limited utility (Bayley, 1996; Cook, 1979; Stephens, 1996). A negative relationship has been reported between crime rates and clearance rates. While there is controversy as to the usefulness of the clearance rate figure, the present research will not question the legitimacy of using it as a measure of effectiveness. Since the figure is commonly cited, and is often used both practically and strategically in police planning and operations, however erroneously, its utility will be assumed.

Most previous research pertaining to the clearance of crimes focused on crimes other than homicide such as burglary and robbery, and these findings have subsequently been extrapolated and applied to criminal homicide. An examination of the relationship between victim characteristics and homicide clearance was conducted to determine if particular variables including victim sex, race, age, or previous criminal record are correlated with case clearance. Situational variables such as the presence and type of weapon, felony circumstance,[12] and victim-offender relationship, which have previously

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[12] Felony versus nonfelony homicide: An assessment was made to determine if the homicide event took place during the commission of a concurrent felony act such as a robbery, rape, burglary, or arson.

shown to be significant correlates, are included in the analysis to determine their relationship to case clearance. In addition, the relationship between spatial/temporal characteristics (season, time of day were, and physical location) will also be assessed. Subsequently, this research determines if the presence of physical evidence and witnesses at the scene have an appreciable effect on case clearance.

Previous research has also demonstrated that seriousness of the offense is often related to clearance of crimes (Bynum et al., 1982;[13] Riedel and Rinehart, 1994; Waegel, 1982). However since this study is limited to one type of crime, and since criminal homicide is generally considered to be the most serious of all crimes, it would be nearly impossible to define the idea in such as way as to achieve a significant level of variability. Although it is anticipated that this variable would have limited value in this instance, the relationship might be more significant in cases where the crime was particularly heinous.

Finally, this research assesses the relationship between victim culpability and case clearance. Previous research suggests victims often play some active role in their own demise ( Levi, 1980; McDonald, 1976; Wolfgang, 1958; Wolfgang, 1967). While victim

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[13] Consistent with other studies, Bynum et al. analyzed the impact that particular characteristics had on court decisions and outcomes. It can be argued that these studies are relevant for several reasons. First, the decision to prosecute, and the subsequent disposition of the case, are contingent upon police discretion. It is argued that these factors, while important at later stages of the crime processing system, are originally deemed relevant or irrelevant at the commencement of the process, the investigation. These decisions often set the stage for future determinations by representatives of the criminal justice system (Bynum et al, 1982; Gaines, 1983)

culpability is difficult to quantify, it will be assessed according to particular situational variables present.

## Victim Characteristics

Victim traits seem to be more useful in explaining police decisions to investigate versus offender characteristics (Bynum et al., 1982). These influences can be broken down into two categories, physical (e.g., victim age, sex, and race) and situational (e.g., victim-offender relationship, and the interaction between the two in the criminal incident) (Denno and Cramer, 1976). For property offenses, none of the personal characteristics of the victim were shown to be significantly related to the level of investigative effort except for victim's income, which was marginally significant (Bynum et al., 1982). Personal offenses differed in that none of the victim's personal characteristics have been shown to be significantly related to investigative effort. A nonlinear relationship has been observed between victim age and investigative effort, indicating cases involving the very old and very young were more intensely investigated (Bynum et al., 1982; Boris, 1979).

When a suspect was not immediately identified for burglary cases, social characteristics of the victim, particularly the victim's class position and race, had a decisive impact on the particular handling strategy adopted (Waegel, 1982). These strategies primarily refer to the investigative techniques adopted, such as canvassing a neighborhood for information, or processing a scene for latent prints. The use or non-use

of particular strategies is important because they can have a tremendous impact on the likelihood of a follow-up investigation being conducted.[14]

While the impact of victim characteristics is not clear, the majority of evidence suggests the impact of these variables is negligible at best. Furthermore, the affect of victim characteristics appears to be specified to property crime versus personal crime suggesting that burglary victims from higher socio-economic statuses, for example, are perceived to be deserving of more intensive investigative effort (Bynum et al., 1982). The just world theory is one possible explanation for this relationship. The theory argues people get what they deserve, either rewards or punishments. In instances where it is perceived that this natural balance is violated, meaning an individual received an undeserved "punishment," efforts are required to rectify the apparent injustice. Based on this theory, in certain situations police may view victims as more or less deserving of police attention (McDonald, 1976). Others have argued that police often use some sense of perceived victim vulnerability to determine the appropriate level of effort (e.g., some police may view women as inherently more vulnerable than men, subsequently more deserving of intensive effort) (Bynum et al., 1982).

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[14] Many departments, whether informally or formally, use "case screening" to identify those cases that are most likely to be cleared with a moderate amount of investigative effort. Waegel (1982) argues that detectives use informal "interpretive schemes" to screen out low solvability cases in order balance the practical problems of deadlines and making arrests (p. 453). "Part of the detective's interpretation of a case is based upon his understanding of the victim's lifestyle, racial or ethnic group, class position, and possible clout or connections..." (p. 454). Case stereotypes for particular crimes such as rape, assault, and homicide provide "recipes" for handling cases (Waegel, 1982, p. 464).

## Weapon

In an attempt to develop an effective case screening model, Gaines, Lewis, and Swanagin (1983) found that of the 11 variables included in a model, presence and type of weapon was one of five variables considered to have a significant impact on case clearance.[15] The relationship between the presence and type of weapon and case clearance has been supported by some researchers (Cardarelli, 1993; Cardarelli and Cavanagh, 1992; Rinehart, 1994), and others found little support for the relationship (Riedel and Rinehart, 1996). In addition, Oakland Police Department's case screening model includes weapon used as one of thirteen significant factors (Greenberg and Wassherman, 1979, p. 36).

One factor influencing the usefulness of weapon information is in the ability of the department to systematically analyze and search records pertaining to weapons. The problem might be similar to that latent fingerprints left at crime scenes, which will be discussed in greater depth later. Most police departments rarely conduct "cold searches" on latent prints. Latent prints are usually only used to match an identified suspect to a crime scene (Chaiken, Greenwood, and Petersilia, 1977; Seamon, 1990). Similarly, the value of information provided by ballistic evidence is greatly diminished by not conducting "cold searches" on ballistic findings.

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[15] For this model, the following factors and weights were found to be significant: suspect associate named (508); clothing evidence only (335); clothing match (670); weapon evidence only (348); weapon match (696); property (473); license (431) (Table 4, p. 27). The "scores" are added up and if the total exceeds 1000, then the case is determined to be solvable.

Others have found that the type of weapon to be associated with the social distance between the victim and the offender. As the social distance became greater, the use of personal weapons decreased, and the use of guns increased (Rinehart, 1994). This information is valuable as it could assist investigators in limiting the field of likely suspects. Even with the inconsistencies, it appears as if there is limited support for the argument that presence and type of a weapon are related to case clearance, and the relationship is negative when the weapon is a gun (Rinehart, 1994).

## Previous Criminal Record

Surprisingly, there is little previous research that analyzed the relationship between the previous criminal record of the victim or the offender and case clearance. There might be numerous explanations for this, one of which might be that the data is not readily available because the offender's prior criminal record is not known in instances where an offender has not been identified. Prior criminal record has, however, been shown to be significantly related to overall decisions made by the criminal justice system. The findings suggest that the fewer violent and property crime convictions a victim has, the greater the odds of prosecution, and the more aggravated assault convictions an offender has, the harsher the case disposition (Boris, 1979).

Like presence and type of weapon, it seems reasonable to assume that the previous record of the offender could play a more prominent role in the solvability of crimes if more cold searches were done on latent prints collected at crime scenes. As

previously stated, numerous studies found that many homicide offenders have previous criminal records (see Chapter 2). A study conducted in Philadelphia revealed that useable latent prints were lifted at 17.2 percent of all burglary scenes. Of those, 25 percent that were fed into a system such as AFIS[16] were identified and matched to a suspect (Seamon, 1990, p. 49). Thus, it is plausible to argue that the usefulness of the offender's criminal record is related to the availability of automated information systems.

## Felony Circumstances

The presence of felony circumstances has been shown to be clearly associated with case clearance. Some argue this is the case because felony related incidents tend to occur in settings where they are likely to be observed by others (Riedel and Rinehart, 1996). It has also been argued that felony circumstances plays such an important role in case clearance because they are so intimately related to the victim-offender relationship (Riedel and Rinehart, 1996). As previously stated, family and acquaintance relationships tend to offer protection to victims from felony-related homicides, although this traditional protection does not seem as strong (Decker, 1996).

In nonfelony homicides, the proximity of the victim-offender relationship usually means that people in the victim's life such as family and friends can lend assistance to the investigation although they might not have directly witnessed the crime. Taking this into

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[16] Automated Fingerprint Identification System.

consideration, it was found that when relationship was removed, felony circumstances developed as the most important predictor of case clearance (Rinehart, 1994) .

## Victim-Offender Relationship

Similar to felony circumstances, there is substantial support for the significant relationship between victim-offender relationship and clearance. It has been argued detectives use a combination of victim-offender prior relationship and information available from the crime scene to develop an interpretative scheme of the case, that is the subjective framework that detectives use to assess the importance of a case (Waegel, 1982). Victim-offender relationship has consistently demonstrated to be significant to the clearance of crimes (Bottomley and Pease, 1986; Rinehart, 1994). Homicides involving families were had a strong positive relationship to homicide clearance, and homicides involving strangers were had a strong negative relationship to clearance (Rinehart, 1994).

Limitations of the data used by Riedel and Rinehart (1996) resulted in the researchers being unable to test this relationship because a large portion of open cases used in the analysis were missing information on the victim-offender relationship. Homicide data, especially offender information, is often missing from data files because the information is usually submitted at the early part of the investigation.

## Temporal Impacts

Month of incident does not appear to be correlated with case clearance. It does appear, however, to be related to the victim-offender relationship. Stranger homicides are

more common in the summer, while family/acquaintance homicides were more common in the winter. This is probably because there is greater interaction between strangers during summer months. One researcher also found support for a marginal relationship between the time of the incident and case clearance (Rinehart, 1994).

## Spatial Characteristics

The result of research on the relationship between spatial characteristics, such as whether the incident occurred in private or public, is mixed. Rinehart (1994) found that no significant relationship with case clearance existed in any of the individual eleven years from 1981-1991. Others, however, have found that if the crime occurs in public, there is a greater likelihood that witnesses will be present, and/or the police will discover the crime through strategies such as preventative patrol (Skogan and Antunes, 1979).

## Physical Evidence

There is a general consensus that the presence of physical evidence is more valuable in building a case against a suspect versus solving crimes. In their review of the literature pertaining to the usefulness of physical evidence, Horvath and Meesig (1996) made two primary conclusions:

> "Because... [detective] training in and knowledge of physical evidence and scientific analyses are limited, [they] tend to focus on the human aspects of investigations - primarily interviews and interrogations over which they have the most control. For these reasons, physical, scientifically analyzable evidence has little inherent meaning to detectives, and it plays a very subordinate role in the great majority of criminal investigations" (p. 965).

Although many researchers have found that latent prints can be raised from a substantial number of crimes scenes (Horvath and Meesig, 1996; Seamon, 1990), only 1 to 2 percent of all burglaries are solved from the collection of latent prints (Chaiken et al, 1977). Even though the value of physical evidence such as latent prints is not clear, several police departments[17] use the presence of significant physical evidence as one of twelve solvability factors used in a case screening model (Greenberg and Wassherman, 1970).

It appears as if a substantial amount of physical evidence is simply not collected at crime scenes, even when crime scene technicians are sent (Chaiken et al., 1990). It has been found that the collection and documentation of evidence is related to investigative effort. It has been argued that personal characteristics of the victim might lead to a more or less intensive initial investigation, and it is the intensity of the initial investigation that usually leads to the discovery of physical evidence (Bynum et al., 1982).

Although the literature indicates that the presence of physical evidence has little to no impact on the clearance of crimes, it does not appear as if this is not due to the inherent quality of physical evidence. As stated above, physical evidence is simply not collected at crime scenes. Even when the evidence is collected, it is rarely systematically assessed. The lack of automated information systems in most departments makes cold

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[17] For example, Rochester, NY, Oakland, CA and Montgomery County, MD.

searches of latent prints collected at crime scenes nearly impossible (Chaiken et al, 1977; Eck, 1983; Horvath and Meesig, 1996; Seamon, 1990). Since, many offenders in criminal homicides often have previous records, it is reasonable to assume that this success rate could be higher.

## Presence of Witnesses

There is general consensus that a relationship exists between the presence of witnesses and case clearance. Third parties who provide information are one of several key factors in the process of clearing murders (Riedel, 1995). Witnesses can take one of several roles in the homicide incident. Witnesses tend to play one of five roles in criminal incidents, depending on their level of involvement: surrogates; guardians; facilitators; precipitators; or bystanders (Decker, 1995).

A "surrogate" is a witness who was either the initial target or offender at the beginning of the incident, though in the final outcome was neither killed nor did the killing. A "guardian" is an audience member who exerts some effort to intervene in the situation. The "facilitator" is a witness who, in many cases, produced the circumstances surrounding the incident, but who did not directly create the motive for the killing. The "precipitator" differs from the "facilitator" in that they provide the motive through overt encouragement. Finally, the "bystander" is not involved in the criminal incident at all and generally is a mere observer (Decker, 1995).

Witnesses tend to provide the most pertinent information to investigations (Riedel and Rinehart, 1994; Rinehart, 1994), and their presence tends to be the best predictor of case clearance (Bloch and Bell, 1976; Bynum et al., 1982; Bottomley and Pease, 1986; Greenwood et al., 1977). One study found that nearly 50 percent of the homicide cases were solved due to information provided by a victim or witnesses (Greenwood et al., 1977)

## Conclusions

Evidence on the relationship between victim/situational characteristics and the clearance of crimes is mixed. While there are inconsistencies in the findings just presented, there is also a thread of agreement. First, there is limited support for the argument that victim demographic and social characteristics affect the outcome of an investigation. The evidence seems most compelling for property crimes (Bynum et al., 1982), yet there is some evidence that the relationship also exists for personal crimes (Rinehart, 1994).

Although the effect of the victim or offender's previous criminal record is not clear, both have been found to relate to the disposition of criminal cases (Boris, 1979). Weapon also appears to be related to case clearance as cases that involve more personal weapons (e.g., knife, hands/feet) tend to be solved more readily, and cases involving guns more frequently remain unsolved. Felony circumstance emerges as one of the best

predictors of case clearance as nonfelony crimes are cleared more often than felony related crimes. Victim-offender relationship is also a consistent and substantial predictor of case clearance because crimes involving family or acquaintances are solved more often than those involving strangers.

Findings have been presented that support the contention that case clearance is related to temporal and spatial variables. Crimes that occur during the winter months are marginally more likely to be solved, but this is likely to be related to factors such as the victim-offender relationship since crimes during the summer months tend to involve strangers. Also, since crimes that occur in public tend to have more witnesses, there is support that this is marginally related to case clearance.

Of all the variables included in this review, the relationship between the presence of physical evidence and case clearance is the most unclear. Most researchers have argued that the presence and type of physical evidence ha little impact on case clearance (Chaiken, 1977; Horvath and Meesig, 1996). This is disparate from the popular impression held by most people who often believe "detective's work...involves sleuthing out clues in sordid underworld dens, [involves] deductive reasoning based on speedy and accurate lab work and intuition, and nearly always [results in the apprehension of the] criminal" (Eck, 1992, p. 19). The reality appears to be that physical evidence is rarely collected, and when it is collected, it is usually only utilized to build a case against a

suspect once they have already been identified (Chaiken, 1977; Horvath and Meesig, 1996).

Finally, another consistent predictor of case clearance is the presence of witnesses at the scene. These participants tend to supply a substantial portion of the information which is utilized by investigators.

# Chapter 4

# METHODOLOGY

There are two primary purposes for this research. The first is to understand the nature of homicide, and compare the results from the Detroit sample with those of previous research. The second is to investigate the relationship between victim/situational characteristics and the clearance of homicides. The analyses employ a variety of statistical techniques to assess the relationships between variables. Descriptive statistics are compared to the existing literature, and are then followed by bivariate and multivariate analyses that assess the relationship between the victim/situational characteristics and case clearance.

## Location

The data were collected from Detroit, Michigan during the summer of 1997, and were part of a larger national study.[18] There are several advantages, and disadvantages to using information from one site. First, limiting the scope of the analysis to one site reduces the random error caused by variations in available information sources, and how incidents are documented between sites. In addition, there is less concern about variations in social structural variables that could be correlated with clearance. One could expect little variation in these variables to take place over a short period (Rinehart, 1994).

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[18] The data from Detroit, MI were made available by the National Institute of Justice under a grant awarded to the Justice Research and Statistics Association, Washington, DC. Sites included in the national study are Detroit, MI; Milwaukee, WI; Los Angeles, CA; Baltimore, MD.

A major disadvantage to limiting the scope of this study to one site is with the issue of generalizability. Generalizability refers to the ability to apply findings from one study to different times and populations, and serves as a fundamental principle of social science (Maxfield and Babbie, 1995, pp. 266-267). The purpose of social science is to apply findings from one site to another site that has similar characteristics. It is possible that local characteristics that do not exist in other populations, or exist in varying degrees, make these findings applicable only to this one time and place, adding little to the overall understanding of homicide clearances. Data obtained from the United States Census Bureau suggest that the population of Detroit is not representative of the United States, thus limiting generalizability. Detroit's 1990 population of 1,027,974 has been relatively stable in recent years, however, Figures 2 and 3 in Appendix A suggest that Detroit differs from the United States and Michigan in both race and sex composition. The figures suggest that Detroit's population has a higher concentration of both women and minorities than either the United States or Michigan. The higher concentration of minorities in Detroit also indicates higher proverty levels in the city because minorities tend to have lower socio-economic statuses. Figures 4 and 5 in Appendix A indicate that this relationship does appear to be present. They indicate that Detroit's residents are more concentrated among the lower educational levels,[19] and that on average, the mean

[19] Educational levels are for all adults over 25 years of age. Michigan had 5,842,642 residents over 25, and Detroit consisted of 612,078 residents over 25 (United States Census Bureau, 1990).

household income level is lower (see Figures 1-4 in Appendix A). These characteristics suggest that Detroit is not representative of the general population of either the United States or Michigan.

## Time Frame

Data were collected from homicides that occurred in the city of Detroit during the years 1994 and 1995. While this short time period does not allow the reader to make any longitudinal inferences, it provides a clear picture of the relationship between solvability factors and clearance rates at one point in time. Homicide clearance information for Detroit was available up to 1996, yet the scope of this research will be limited to the calendar years of 1994 and 1995. Using the calendar years 1994 and 1995 are an advantage to this study because it can be argued that if a case was likely to be cleared by arrest, the arrest would most probably occur in this two to three year follow-up period. This window of opportunity will provides detectives ample time to prepare and complete case files, and to prepare them for prosecution. This study will also control for the most common criticism of the Supplemental Homicide Report (SHR) data. The usefulness of SHR data has been questioned because the data are generally submitted at the early part of an investigation and are rarely updated at a later date (Maxfield, 1989). By using the police department's case file as the primary source of information, the

present research uses the most current data that exists on each case included in this analysis.

## Sampling Frame

The Homicide Unit of the Detroit Police Departments has limited access to automated information systems. Most of the information about detectives activities and criminal incidents are manually stored. Automated information systems are limited to criminal records and property management. This lack of automated information required research staff to manually collect necessary data, and to verify these sources against actual case documentation.

The Homicide Unit handles all incidents that involve suspicious deaths that occur in the city of Detroit. A synopsis of each case, including the incident type (e.g., murder, justified by police, justified by citizen), victim name, suspect name(s) (if available), and status was recorded on an index card and filed. A member of the research team went through each card and noted the internal case number and statuses of all cases that were ruled to be founded criminal homicides. These classifications were usually a result of information available from the initial investigation, and did not take into account changes in case classification that could have possibly happened at a later date. This was not a reliable source of information as departmental personnel had concerns that information such as case status (open versus closed) was not systematically updated.

Due to these concerns, research staff concluded that it would be necessary to verify case statuses in those instances where the case was recorded as open. It was reasoned that there was little chance of a case changing from closed to open, so it was unnecessary to verify these cases. Research staff pulled the files for all open cases to determine if an arrest had been made for the crime, and numerous misclassifications were found. Additionally, it should be noted that Detroit initiates an investigation into each homicide victim. The Homicide Unit creates an internal case number for each victim. If multiple homicide victims were present in a single incident, more than one internal case number is created which ultimately refers to the same incident. These case numbers were the basis for our sample selection. If multiple victims from the same incident fell into the sample, the first victim selected was chosen and the others were excluded. This occurred six times, and the population was resampled for six additional cases. The research design called for the recording of demographic information for all victims who were involved in the incidents that fell into the sample. The detailed situational variables were gathered for the primary victim only. Thus, information from each individual crime incident was captured only one time.

The total population of homicide cases for both 1994 and 1995 were combined, making probability of selection equal across years. A proportional stratified sampling technique was used to increase the sample's representativeness in relation to the proportion of cleared and uncleared cases. This would better ensure that the sample

chosen represented the actual population from which it is was drawn. Based on this information, a mean clearance rate of 72 percent was established for the two combined years. This clearance rate is slightly higher than the national average, probably because the data was collected two to three years after the incidents occurred. Once a list was created of all open and closed criminal homicides[20] that occurred in the city, the number of open and closed[21] cases where chosen in proportion to their existence in the entire population. Thus, 144 open cases, and 66 closed cases were chosen.[22] The sample represented nearly one-fifth of the total population of 1010 total homicide victims that occurred during the 1994 and 1995 calendar years.

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[20] It is probable that this sample included crimes involving less legal intent such as manslaughter. The data focused on the original classification made by the department, and did not include other factors such as charges filed by the prosecutor, and/or court disposition.

[21] From this point forward, the term open will be used interchangeably with not cleared, and closed will refer to cleared.

[22] When research staff verified case status by determining if an arrest was made, a very technical approach was taken. Staff analyzed the cases to determine solely if an arrest was made, but did not attempt to determine what the arrest was for. This could have entered error into the sample. There was a chance that a person was arrested during the investigation process who was neither implicated in nor charged with the crime. Common examples are those instances in which a hostile witness was arrested because he/she refused to show up for questioning. If it was determined that a case was misclassified during the full analysis of the incident, the file was left in the sample to limit the amount of systematic error. However, the correct information such as actual case status was recorded. In a very small number of cases, although an offender had been identified, no offender information was coded. This discrepancy only occurred in those cases that were clearly in error as researchers did not attempt to question case documentation on a systematic basis. An end result is that the proportion of open and closed cases is not completely consistent with their proportion in the actual population.

## Information Sources

An analysis was conducted on homicide files maintained by the Detroit Police Department. Information used to investigate these crimes was gathered from a variety of sources. Reviewers were instructed to read each file thoroughly because the department does not use many forms that systematically gather pertinent information. One of the primary sources of information for this study were Preliminary Complaint Reports (PCR) filed by all officers who respond to a scene or call. PCR's are the standard police report officers complete when they respond to the scene of a reported crime, or take any official police action. These reports include information such as the time a call was received, the time the officers arrived at the scene, precinct where incident occurred, summary of the incident, complainant identifying information, description of the scene, witnesses at the scene, and suspect information. PCR's also function as the starting point for all criminal investigations. In addition, witness statements, Coroner's reports, criminal history reports, newspaper articles, and informal case documentation notes (memos, hand-written notes pertaining to interviews, internal notes to detectives) were among the primary sources of information.

## Data Instrument

The data collection instrument was developed by the co-principal investigators of each site. The instrument included questions about the victim, offender, location,

circumstances surrounding the incident, investigative effort, and presence of physical evidence, among other attributes. Most questions were closed-ended and listed responses that were exhaustive and mutually exclusive. The majority of the closed-ended questions were either nominal or ordinal level responses. Where applicable, responses to these closed-ended questions were supplemented by additional information, for example, the caliber and exact use of a gun. Where closed-ended questions were not feasible (e.g., a detailed list of the physical evidence collected at the scene), open-ended responses were present (see Appendix B for specific questions that were used for the analyses).

## Variables

The bivariate and multivariate analyses assessed the effect of numerous independent variables on the dependent variable (e.g, whether the case was closed). Most of the variables were nominal level. They include: victim sex, victim race, victim's previous criminal record, season of crime, shift of crime, spatial characteristics, the presence of physical evidence, felony circumstance, drug circumstance, weapon, victim-offender relationship, and the presence of witnesses at the scene. Victim culpability was included as an ordinal level variable, and victim age has been coded as an interval level.

## Case Status

The dependent variable, case closed, was measured by determining if an arrest had been made for an incident. Case closed was operationalized as a binary variable (see Table 1).

## Victim Demographic Characteristics

Victim race consisted of two responses -- white and nonwhite. The nonwhite category included those victims who were Black, American Indian or Alaskan Native, and Asian or Pacific Islander. Due to the small sample size, it was necessary to create these categories in order to have the appropriate numbers in each category for statistical analyses.

For the bivariate analysis, an ordinal variable was created for victim age category (see Table 1 for categories). Victim age was determined by finding the difference in years between the victim's date of birth and the date the incident occurred. The age categories appeared to be conceptually sound. For the multivariate analysis, victim age was used in its interval level form.

Three dummy variables were created to assess the relationship between victim's previous criminal record and case clearance. This study measured the affect of previous criminal for drug crimes, violent crimes, and property crimes independently (see Table 1 for coding).

Weapon was categorized into gun and no gun. Previous research has generally categorized weapon into four specific categories: gun, knife/other cutting instrument, blunt object, and personal weapons (hands/feet) (Riedel and Rinehart, 1996; Rinehart, 1994). Although it was more desirable to be specific as possible with the type of weapon used, the sample size prohibited the use of these categories. It is also possible that in some instances multiple types of weapons were used to inflict injury to the victim. The this analysis focused on the weapon that was primarily responsible for the fatal injuries. This information was ascertained from a combination of the description of the wounds, witness statements, and the Coroner's report.

Felony circumstance was dummy coded from multiple questions on the data collection instrument (see "Felony Circumstances" in Appendix B). The instrument did not directly ask if the criminal incident was felony related, so an operational definition was created from the available data. The indicators of felony status are not exhaustive in nature, and it is possible that all felony circumstances might not have been captured. However, the indicators used cover the most common types of felony circumstances -- burglary, robbery, and sexual offenses. In addition, the question that determined if the victim was sexually assaulted does not attempt to determine if the sexual assault was the motive for the crime. The question merely records if a sexual assault took place, and this applies felony status even if the sexual assault was incidental to the crime.

Table 1. Variable coding and preliminary descriptive statistics[a] (N=200).

| Variable | Coding | Values | N | Mean | S.D. |
|---|---|---|---|---|---|
| Case Closed | Yes | 1 | 138 | .69 | .46 |
| | No | 0 | 62 | | |
| Victim age categories | 17 or younger | 1 | 15 | | 1.00 |
| | 18-25 | 2 | 50 | | |
| | 26-35 | 3 | 42 | | |
| | Over 35 | 4 | 57 | | |
| Gender of victim | Male | 1 | 177 | .89 | .32 |
| | Female | 0 | 23 | | |
| Race of victim | White | 1 | 27 | .14 | .34 |
| | Nonwhite | 0 | 173 | | |
| Victim has previous drug record | Yes | 1 | 66 | .33 | .47 |
| | No | 0 | 134 | | |
| Victim has previous violent record | Yes | 1 | 81 | .41 | .49 |
| | No | 0 | 119 | | |
| Victim has previous property record | Yes | 1 | 85 | .43 | .50 |
| | No | 0 | 115 | | |
| Weapon | Gun | 1 | 160 | .80 | .40 |
| | No Gun | 0 | 40 | | |
| Incident involved felony circumstances | Yes | 1 | 39 | .20 | .40 |
| | No | 0 | 161 | | |
| Incident involved drug circumstances | Yes | 1 | 57 | .29 | .46 |
| | No | 0 | 138 | | |
| Victim-offender relationship | Family | 1 | 26 | | .71 |
| | Acquaintance | 2 | 62 | | |
| | Stranger | 3 | 36 | | |
| Time incident report | Midnight | 1 | 51 | .29 | .45 |
| | Other | 0 | 126 | | |
| Spatial characteristics | Private | 1 | 100 | .51 | .50 |
| | Public | 0 | 98 | | |
| Physical evidence present at scene | Yes | 1 | 152 | .78 | .42 |
| | No | 0 | 43 | | |
| Witnesses present at scene | Yes | 1 | 85 | .84 | .37 |
| | No | 0 | 105 | | |
| Victim Culpability Group | Low | 1 | 73 | | .78 |
| | Medium | 2 | 76 | | |
| | High | 3 | 51 | | |

[a] Missing data are excluded.

This research also assessed the relationship between drug circumstance and case clearance. Previous research has indicated that the drug epidemic, especially the introduction of crack cocaine, in our nation's inner cities has changed the nature of crime (Decker, 1996). The data collection instrument included a question that asked if the homicide was drug-related. The incident was determined to be drug-related only if the sale, distribution, or use of narcotics was the precipitating factor in the incident.

Missing victim-offender relationship information posed a problem, as it did in previous research (see Riedel and Rinehart, 1996). For familial relationships, the data collection instrument collects a more specific level, such as sibling, parent, wife, or husband. However, for purposes of this paper they will all be combined into one group. There have been variations about how victim-offender relationship was coded in previous studies. Some researchers dichotomized victim-offender relationship into stranger or nonstranger groups (see Block, 1981 and Riedel, 1981), and others have argued that more precise levels of measurement allow the reader to better understand how these relationships affect other characteristics of homicide (Decker, 1995). More recent studies have argued for the addition of the third category of acquaintances (Decker, 1995; Riedel and Przybylski, 1993; Riedel and Rinehart, 1996; Rinehart, 1994). For this analysis, the victim-offender relationship was coded as family, acquaintance, and stranger (see Table 1).

Season and shift during which the incident was reported are the two temporal characteristics included. This analysis distinguished the relationship between crimes that were reported between September and February, versus those that occurred between March and August (see Table 1). These groups were created because mean clearance rates for the months were very similar. Shift was operationalized to measure the relationship between crimes that were reported during the midnight shift (12 a.m. - 8 a.m.), and those reported on any other shift (see Table 1). Shift was originally broken into three different groups. The final analysis included midnight shift versus non-midnight shift groups because the mean clearance rates for the other two shifts were clearly similar, and significantly different from the first.

Spatial characteristic of the criminal incident was operationalized into private versus public setting. Due to the limited support for the supposition that crimes occurring in public are more likely to be solved, a positive relationship with the dependent variable was hypothesized. Previous studies that used SHR or Victim Level Murder data (VLM) were unable to make this determination because the information was not readily available.

Previous research found victims often precipitated the violence that lead to their final demise (Levi, 1980; Wolfgang, 1958; Wolfgang, 1967), yet none of these researchers have appropriately quantified victim culpability. While it was difficult to

quantify the interaction that takes place between the victim and the offender, indicators contained in the instrument made it possible to measure general victim culpability characteristics. It has been argued detectives often consider factors such as the victim's lifestyle and social characteristics as important in their interpretation of the level of necessary investigative effort (Waegel, 1982).

The data collection instrument provided information concerning the victim's lifestyle that were used to determine their level of culpability, and a dummy variable called "victim culpability score" was created from these indicators (see "Victim Culpability in Appendix B). Like all other indicators, information from detective notes, witness statements, crime scene photographs, evidence technician reports, and Coroner reports were used to obtain the details. For the bivariate analysis, the variable was grouped into three categories at the 33rd and 66th percentiles (see Table 1). The ratio measure of culpability was used for the multivariate analyses. Since a review of the literature did not yield an operational definition for this concept, comparisons are not possible. It is hypothesized that as the victim culpability score goes up, case clearance will decrease.

Evidence technician reports were the primary source for information about the presence of physical evidence (see "Physical Evidence in Appendix B, Table 1 for coding). The reader should exercise caution when interpreting the findings associated

with this variable since the analysis did not attempt to determine the usefulness of the physical evidence collected, merely its presence. A positive relationship is hypothesized between this variable and case closure.

Finally, the analysis will determine if a relationship exists between presence of witnesses and clearance (see Table 1). Similar to the caution about interpreting the results of information pertaining to the presence of physical evidence, this information does not indicate if the witnesses provided any valuable information. It is hypothesized that a positive correlation will exist between the two variables and the dependent variable.

## STATISTICAL TECHNIQUES

### Descriptive Summary

The first section of Chapter 5 will presents a descriptive summary of the population selected for the sample, including information on victims and offenders by sex, race, and age. In addition, information on gun crimes, felony circumstances, victim-offender relationships, temporal characteristics, spatial characteristics, physical evidence present at the scene, and presence of witnesses will be furnished. This will allow for a descriptive analysis of the nature of homicide in the city of Detroit for the years 1994-1995, and will make comparison to previous findings possible.

The first level of analysis will be a bivariate analysis between each of the independent variables and the dependent variable "case closed." A table will be

presented that identifies each categories mean clearance rates for each independent variable. The bivariate analysis will include only categorical and interval level variables. Analysis of variance will be used to determine if a significant relationship exists between each independent variable and clearance. The analysis of variance will be used to determine the mean clearance rate for each independent variable category, and determine if the mean clearance rates for the subcategories are significantly different from each other.

After the findings from the bivariate analysis have been presented, multivariate analysis will be conducted. Logistic regression will be used to measure the relationship between each independent variable and the dependent variable, while controlling for all other variables in the model. Logistic regression is preferred over ordinary least squares regression when the dependent variable is dichotomous. A true linear relationship cannot exist with a dichotomous dependent variable, and the subsequent s-shaped regression line violations one of the major assumptions of linear regression (Bachman and Paternoster, 1997, pp. 567-572).

Two models will be constructed, one with all of the independent variables, and the other excluding victim-offender relationship information. Victim-offender relationship will be excluded from one model because of missing data. The missing data results in

substantially more cases being excluded from the analysis due to missing data. Due to the small sample size, it is useful to include as many cases as possible.

# Chapter 5

## RESULTS

The city of Detroit achieved an overall clearance rate of 69 percent during the period of 1994-1995; this figure exceeds the national average of 64 percent (United States Department of Justice, 1995). The two to three year difference from when the crimes occurred to when the data were collected could be at least partly responsible for the increased clearance rate by providing more time to identify and apprehend a suspect. Most crime data submitted to the Federal Bureau of Investigation is done so on an annual basis, and this information is used to calculate clearance rates. If a case was cleared during another calendar year, the clearance statistic was applied to the year it was cleared. Thus, clearance rates do not necessarily reflect how many crimes that occurred during a given year were cleared by arrest, but merely how many crimes were cleared by arrest during the period. Collecting the data 2 to 3 years after the initial criminal incident allowed the researchers to determine a more accurate clearance rate for criminal homicides that occurred during the calendar years 1994-1995.

Table 2 suggests that both victim and offender demographic characteristics found in the Detroit sample are generally consistent with the findings of previous research. The typical homicide victim can be characterized as a younger black male who was killed with a gun. This representation of young black males among homicide victims is slightly higher than previous research. The age patterns found in the present sample was

Table 2. Additional descriptive statistics for sample (N=200)

| | |
|---|---|
| **Age** | |
| Median Victim Age | 28 years |
| Missing Victim Age | 15.5% |
| Median Offender Age | 24 years |
| Missing Offender Age | 36.5% |
| **Sex** | |
| Male Victim | 88.5% |
| Male Offender | 88.5% |
| Missing Offender Sex | 18.5% |
| **Race** | |
| Nonwhite Victims | 86.5% |
| Nonwhite Offenders | 75.0% |
| Missing Offender Race | 18.5% |
| **Crime Information** | |
| Victims w/Drug Record | 33.0% |
| Victims w/Violent Record | 40.5% |
| Victim w/Property Record | 42.5% |
| Gun Incidents | 80.0% |
| Felony Circumstances | 19.5% |
| Drug Circumstances | 28.5% |
| Missing Drug Circum. | 2.5% |
| **Victim-Offender Relationship** | |
| Stranger | 18.0% |
| Acquaintance | 31.0% |
| Family | 13.0% |
| Missing Relationship | 38.0% |
| **Environmental Characteristics** | |
| Midnight Shift (0001-0800) | 28.8% |
| Missing Time | 11.5% |
| Season of Incident | |
| September-February | 42.5% |
| Missing Season | 5.0% |
| Weekday of Incident | |
| Weekend (Fri-Sun) | 45.0% |
| Missing Weekday | 2.5% |
| Spatial Characteristics | |
| Private | 50.0% |
| Missing Spatial | 1.0% |
| **Evidence** | |
| Physical Evidence Present | 78.0% |
| Missing Evidence | 2.5% |
| **Witnesses** | |
| Witnesses Present At Scene | 84.0% |
| **Victim Culpability Scores** | |
| Low (0-1) | 36.5% |
| Medium (2-5) | 38.0% |
| High (6-13) | 25.5% |

consistent with previous research. The distribution for age was positively skewed, and the median victim age was 28 years.

Studies that attempt to systematically analyze the relationship between victim/offender characteristics and case solvability suffer from one primary shortcoming; offender information is often missing. Of all the offender demographic variables included in this analysis, offender age was most often missing. The reasons seems to be because offender race and sex were more easily obtained from sources such as witness testimony, but if the offender was neither positively identified nor apprehended, exact age was difficult to establish. In the instances where offender information was known, parallel findings were evident between victim and offender characteristics. Similar to victims, homicide offenders also tended to be younger black males. As expected from previous findings, homicide offenders tended to be slightly younger than homicide victims (24 years versus 28 years).

The reader should exercise caution when interpreting these results because the racial composition of Detroit is not representative of either the United States or Michigan (see Figures 2 and 3 in Appendix A). The Detroit homicide data revealed victimization and offending levels closely mirror the actual proportion of blacks in the total population (Table 2). This is a significant factor because blacks represented only 12 percent of the total U.S. population, and 14 percent of Michigan's total population in 1990 (United States Census Bureau, 1990). Thus, blacks are significantly overrepresented in homicide victimization

and offending rates in both the United States and Michigan, while only slightly overrepresented in Detroit.

Drug circumstances were more common in homicide incidents than were felony circumstances. Incidents were defined as involving drug circumstances if the primary motivation for the incident was the sale, distribution, or use of illegal narcotics. In some cases drugs might have been present at the scene, but were not a contributing factor to the incident. Similarly, there were incidents where drugs were not present at the scene, yet circumstances surrounding the fatal altercation revolved around the drug trade. Of those homicides with a known motive, slightly less than 20 percent involved felony circumstances. It is hypothesized that this figure would be higher if information concerning uncleared homicides was more readily available. Research suggests incidents with missing victim-offender relationship information involve strangers (Williams and Flewelling, 1987), and homicides involving strangers tend to involve a higher concentration of felony circumstances (Cardarelli and Cavanagh, 1992; Decker, 1995; Decker, 1996; Riedel and Rinehart, 1996; Rinehart, 1994; Wolfgang, 1958).

A problem with missing data was also evident with victim-offender relationship. Victim-offender relationship was unknown in 38 percent of all incidents, even though only 31 percent of all cases were not cleared by arrest.[23] The percentage of cases missing

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[23] Reason would suggest that the victim-offender relationship should be known for all cleared cases. It is not altogether apparent why the percentage of missing victim-offender relationship is higher than the

information on the victim-offender relationship is higher than was found in previous research (Williams and Flewelling, 1987), especially when considering the one to two year window in gathering the information. It is unlikely that missing victim-offender relationship information is evenly distributed across each category because these incidents are more likely to involve strangers (Williams and Flewelling, 1987). However, when the relationship was known, the most frequent relationship involved acquaintances, followed by strangers, and family.

There was limited consistency between patterns in temporal characteristics and previous findings. Nearly half of all homicide incidents occurred between the hours of 4:00 p.m. and midnight. While there was a correlation between time of day and homicides, no significant pattern existed for season or weekday of incident. The lack of a clear relationship for season is surprising, especially when one considers the extreme weather patterns that exist in Michigan. Although it was hypothesized homicides would be significantly higher in the spring and summer because personal contact is more frequent, this does not appear to be the case in the Detroit sample.

Both physical evidence and witnesses were present at the vast majority of homicide scenes. It is difficult to determine how useful physical evidence and witnesses were because their sheer presence reveals nothing about their ability to identify a suspect, or to

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percentage of uncleared cases. Possible reasons might include error on the part of the data collection personnel, or the information was simply missing from the case folder.

add other pertinent information to the investigation. Spatial characteristics can affect the presence of witnesses, but this relationship did not appear to be the case. Findings suggest an almost equal number of witnesses in both public (85 percent) and private (82 percent) settings.

Finally, nearly 65 percent of all victims scored either a medium (38 percent) or high (26 percent) on the victim culpability scale. Researchers have suggested that victims sometime play an active role in their own demise (Curtis, 1974; Levi, 1980; Lerner, 1971; McDonald, 1976; Shultz, 1967; Silverman, 1974; Von Hentig, 1948; Wolfgang, 1958; Wolfgang, 1967), and the label "victim" or "offender" are mere roles assigned after the discovery of a crime. Since it is sometimes difficult to distinguish the victim's actions from the offender's, the victim/offender labels do not always adequately capture the true sense of who was the aggressor. It has been suggested that the victim's lifestyle (e.g., drug abuser, drug dealer) can have an affect on the perceived level of necessary investigative effort, especially when no suspect has been initially identified (Bynum et. al, 1982; Waegel, 1982). The variable attempted to measure the level of victim culpability that could be perceived by investigators.

## Findings

Age was the only victim demographic variable that was significantly related to clearance (Table 3). The relationship between victim age and clearance was nonlinear.

Clearance rates for victims in the 26-35 age group was lowest, while clearance rates were highest for victims 17 years and younger. Of the three variables measuring the victim's previous criminal record, the victim's previous violent criminal history was the only significant variable. Incidents involving victims with previous violent criminal histories were less likely to be cleared.

Four situational variables were significantly related to the dependent variable. Crimes involving drug circumstance were significantly less likely to be cleared by arrest, and those involving drug circumstances were also less likely to be cleared. Shift was also significant, and those that were reported during the midnight shift were less likely to be cleared by arrest. Crimes that occurred in private settings, such as a house or other building were more likely to be cleared, and those where eyewitnesses were present at the scene, were more likely to be cleared by arrest.

No other victim level variables were significantly related to clearance. The number of homicides was almost evenly distributed among males and females, and whites and nonwhites. Although information about victims' previous drug or property crime records did not affect clearance in the bivariate findings, results suggest that the general trend was for clearance rates to be lower for victims with prior records. Table 3 suggests that although victim culpability was not significantly related to case clearance, there was a trend in the clearance rates. Clearance rates consistently decreased as the victim culpability score

Table 3. Percentage of cases cleared by arrest, by categories of independent variables[a].

| | |
|---|---|
| Age of Victim* | |
| 17 or younger | 87.0 |
| 18-25 | 78.0 |
| 26-35 | 52.0 |
| Over 35 | 70.0 |
| Gender of Victim | |
| Male | 69.0 |
| Female | 70.0 |
| Race (Victim) | |
| White | 70.0 |
| Nonwhite | 69.0 |
| Victims w/Drug Record | |
| Yes | 64.0 |
| No | 72.0 |
| Victims w/Violent Record* | |
| Yes | 60.0 |
| No | 75.0 |
| Victim w/Property Record | |
| Yes | 66.0 |
| No | 71.0 |
| Weapon | |
| Gun | 69.0 |
| Other | 70.0 |
| Incidents Involving Felony Circumstances | |
| Yes | 69.0 |
| No | 69.0 |
| Incidents Involving Drug Circumstances** | |
| Yes | 54.0 |
| No | 75.0 |
| Victim-Offender Relationship | |
| Family | 96.0 |
| Acquaintance | 90.0 |
| Stranger | 86.0 |
| Time Crime Reported** | |
| Midnight Shift | 59.0 |
| Other Shift | 78.0 |
| Season | |
| Sept-Feb | 65.0 |
| Mar-Aug | 72.0 |
| Day of Week | |
| Fri-Sun | 71.0 |
| Mon-Thurs | 67.0 |
| Spatial Characteristic** | |
| Private | 80.0 |
| Public | 59.0 |
| Physical Evidence Present | |
| Yes | 70.0 |
| No | 63.0 |
| Witnesses Present At Scene* | |
| Yes | 72.0 |
| No | 53.0 |
| Victim Culpability Scores | |
| Low | 77.0 |
| Medium | 67.0 |
| High | 61.0 |

[a]Analysis of Variance was used to determine significant differences in this table.

* $p < .05$

** $p < .01$

increased, indicating a negative relationship between the two variables. It was originally hypothesized that crimes involving victims with higher culpability scores would be less likely to be cleared. Based on the just world theory (McDonald, 1976), it was hypothesized that detectives would perceive more culpable victims as less worthy of intensive investigative effort because of the perceived relationship between their lifestyle and death. The findings suggest that the victim's lifestyle did not diminish the investigative effort of Detroit's detectives.

There was no significant difference between the clearance rates for crimes that involved the use of a gun and those that involved another type of weapon. Unlike the significant relationship between drug circumstances and cases clearance, no such relationship developed between felony circumstances and clearance. The time the incident was reported, and season crime occurred were not significantly related to case clearance. However, the data reveal that crimes that occurred during the midnight shift, and during the fall or winter months were less likely to be cleared.

Several of the above relationships are inconsistent with the general findings of previous research. Previous findings have generally not found victim demographic variables to be significantly related to case clearance. The significance relationship between victim age and clearance is contrary to previous findings (Bynum et al., 1982, Riedel and Rinehart, 1996; Rinehart, 1994). In addition, although victim sex and race have

previously been shown to be marginally significant for isolated years (Rinehart, 1994), no such relationship existed in the bivariate analysis.

Felony circumstances has generally been regarded as a strong predictor of case clearance (Riedel and Rinehart, 1996).[26] However, the clearance rate for felony versus nonfelony crimes were the same (Table 3). It is possible the operational definition for felony circumstances used here differed from that used by previous researchers. In the present analysis, cases were identified as involving felony circumstances only if there was a clear indication that a concurrent felony was being committed at the time of the homicide (e.g., rape, robbery, burglary). Therefore, there might be a relationship between missing circumstance information and the felony circumstance variable, suggesting that the proportion of felony crimes might be higher or lower if all circumstances were known. It is also possible that different criteria was used by other studies.

There is contradictory evidence surrounding the significance of the type of weapon used in the crime. Prior research on the relationship between type of weapon and clearance is mixed, with some finding presence and type of weapon significantly related to case clearance (Cardarelli, 1993; Cardarelli and Cavanagh, 1992), and others finding otherwise (Riedel and Rinehart, 1996). This analysis did not reveal a significant relationship. It could be argued the relationship was influenced by the fact that the vast majority of

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[24]Riedel and Rinehart (1996) found that 42.4% of felony homicides were cleared while 89.6% of nonfelony homicides were cleared.

incidents in Detroit involved guns (Table 2). The limited variability in the type of weapon could make it difficult to discern this relationship.

Another finding that was inconsistent with previous findings was the relationship between victim-offender relationship and case clearance. Previously, victim-offender relationship was found to be strongly correlated with case clearance (Bottomley and Pease, 1986; Rinehart, 1994). Missing information is a commonly cited problem when analyzing the impact of this variable, and this also proved to be a problem in the current analysis. It was hypothesized that the amount of missing victim-offender relationship data was related to felony and/or drug circumstances, yet zero order correlations indicated otherwise. Victim-offender relationship was not significantly correlated with drug circumstances, or to felony circumstances.

There was limited consistency between the findings from the bivariate analysis and the logistic regression results shown in Table 4. Logistic regression was chosen for the multivariate analysis for two reasons. First, logistic regression is preferred over ordinary least squares regression when the dependent variable is dichotomous. Second, logistic regression is used when a nonlinear relationship is hypothesized, meaning that the independent variables are not normally distributed in the population. This implies the linear regression requirement of homoscedasticity is not met, and the error terms do not have constant variance (Bachman and Paternoster, 1997).

Of the variables that measured victim's previous criminal record (property, violent, drug), only victim with violent criminal record was included because of multicollinearity.[27] A correlation matrix indicated that the three variables were highly correlated, so violent record was included because it has the most significant impact on the dependent variable. Finally, victim age and victim culpability were used in their original ratio level form versus the recoded groups that were used for the bivariate analysis. This was done in order to measure the optimal amount of possible significance.

The first regression model (Table 4) suggests that, net of all other variables, there were no significant relationships between any of the independent variables and case clearance. Incidents involving drug circumstances and incidents that occurred in private settings were close to reaching the .05 significance level, suggesting that they might be related to case clearance. The direction of the relationship between victim culpability score and case clearance changes direction in the regression model. This indicates that one or more independent variables were intervening in the original bivariate relationship. Zero order correlations indicate that victim culpability is significantly correlated with drug circumstances (.523), violent criminal history (.412), and felony circumstances (.252). This suggests that incidents involving victims with higher culpability scores were more likely to

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[25] An assumption of multiple regression is that the independent variables should be independent of each other, and therefore uncorrelated (Bachman and Paternoster, 1997, p.491). Multicollinearity is a problem in multivariate analysis when two independent variables are highly correlated with each other. While relatively small correlation is acceptable, a correlation above approximately .7 is problematic (Ott, Larson, Rexroat, and Mendenhall, 1992, p.530).

Table 4. Logistic Regression coefficients, significance levels, and odds ratio. All variables included in model.

| Variable | b | S.E. | Odds Ratio. |
|---|---|---|---|
| Victim Age | 0.14 | 1.00 | 1.15 |
| Victim Male | -11.84 | 56.58 | .00 |
| Victim White | 8.39 | 57.77 | 4424.39 |
| Victim had Violent Record | -1.79 | 1.40 | .17 |
| Gun Crime | -7.03 | 52.98 | .00 |
| Felony Circumstances | -0.64 | 1.64 | .53 |
| Private Location | 3.13 | 1.64 | 22.93 |
| Evidence Present | 1.09 | 1.0 | 2.96 |
| Witness Present | 0.44 | 1.45 | 1.55 |
| Midnight Shift | -2.00 | 1.25 | .13 |
| September-February Incident | -1.77 | 1.14 | .17 |
| Weekend Incident | -0.56 | .89 | .57 |
| Drug Circumstance | -2.39 | 1.30 | .09 |
| Victim Culpability | 0.32 | .25 | 1.37 |
| Victim-Offender Strangers | -0.13 | 1.10 | .88 |
| *N* | 120 | | |
| Modified $R^2$ | .38 | | |

*Significance level <.05

involve drug and felony circumstances. Also, the victim was more likely to have a previous criminal history for violent crimes. The direction also changed between victim age and case clearance, once again suggesting that one or more variables were intervening in the original relationship. Victim age was significantly correlated with victim race (.231), and

weapon (-.233). This suggests that black victims tended to be younger, and the crimes tended to involve guns.

The results in Table 4 are weak due to missing data. The large standard errors for victim sex, victim race and weapon are disproportionately high. The inflated odds ratio for victim sex makes the problem more evident, indicating a serious problem with the model. Although the percentages of excluded cases for nonwhites (38 percent) and whites (41 percent) are similar, only 16 cases involving white victims are left in the analysis when victim-offender relationship is included. The small number of cases included in the analysis is primarily responsible for the questionable results.

A second logistic regression model was run using the same information included in Table 4, except the victim-offender relationship was excluded from the analysis (Table 5). It is hypothesized that one reason for the lack of any significant relationships in Table 4 was because a large proportion cases were excluded from the analysis due to missing data. When victim-offender relationship was included, 80 cases were excluded due to missing data. However, when the victim-offender information was left out, only 39 cases are excluded. It can be argued that including more cases in the analysis will make the analysis more accurate.

When victim-offender relationship was excluded from the analysis, five variables were significantly related to clearance (Table 5). The data indicated that victims with previous violent criminal records were significantly less likely to have their cases cleared.

Table 5. Logistic Regression coefficients, significance levels, and odds ratio. Victim-offender relationship information excluded from model.

| Variable | b | S.E. | Odds Ratio. |
|---|---|---|---|
| Victim Age | -.01 | .02 | .99 |
| Victim Male | -.48 | .95 | .62 |
| Victim White | -.08 | .73 | .92 |
| Victim had Violent Record | -1.45** | .48 | .23 |
| Gun Crime | -.22 | .70 | 1.24 |
| Felony Circumstances | -.10 | .62 | .90 |
| Private Location | 1.21* | .47 | 3.37 |
| Evidence Present | .72 | .46 | 2.06 |
| Witness Present | -.65 | .64 | .52 |
| Midnight Shift | -.94* | .46 | .39 |
| September-February Incident | -.80 | .41 | .45 |
| Weekend Incident | -.04 | .43 | 0.04 |
| Drug Circumstance | -1.86** | .54 | .16 |
| Victim Culpability | 0.25* | .10 | 1.28 |
| *N* | 161 | | |
| Modified $R^2$ | .20 | | |

*Significance level <.05

A surprising finding was that victims with higher culpability scores were more likely to have their cases solved. This finding contradicts the speculation of previous researchers who suggested that victim's lifestyle and social characteristics would negatively impact investigative effort (Waegel, 1982).

Cases that involved victims with violent criminal records were significantly less likely to be cleared by arrest. Crimes that occurred during the midnight shift, in public settings, and involved drug circumstances were less also significantly less likely to be cleared. Zero-order analysis indicates a significant correlation between drug circumstances and three other independent variables (victim with previous violent record, felony circumstances, and victim culpability). All three correlations are positive, and indicate that drug circumstances are more likely to involve victims with violent criminal histories, involve felony circumstances, and involve more culpable victims. The strongest correlations are for victim culpability (.523) and felony circumstances (.310), yet are still significant for victim's violent criminal history (.159). Although incidents that were reported during the fall or winter did not have a significant relationship to case clearance, the significance level of .05 suggest that it was closely related to clearance.

Of all of the variables included in the analysis, location, evidence present, weekend incident, and victim culpability were the only variables that were positively associated with case closure. The direction of the relationship between victim race and felony circumstance were opposite in the logistic regression versus the bivariate analysis. This could suggest that one or more of the other variables somehow intervened in the original relationship.

The odds ratio in Table 5 indicates that certain variables have a greater impact on the dependent variable. For example, the location of the homicide incident was one of the

better predictors of case clearance. Homicide incidents that occurred in private were over three times has likely to be cleared compared to those that occurred in private.[28] There are several possible reasons for this relationship. The negative, and significant relationship between spatial characteristics and weapon suggest crimes that public homicides were significantly more likely to involve guns. In addition, they were significantly more likely to involve felony circumstances, and occur during the midnight shift. Thus, it appears as if weapon, felony circumstances, and time the incident was reported were intervening variables.

Similar to linear regression, logistic regression provides a means to measure the overall goodness of fit for the regression model. Like the R-square used in linear regression, the modified R-square essentially indicates the reduction in error of prediction. The measure is calculated by dividing the model chi-square by the log likelihood, and multiplying the 100 (Menard, 1995, pp. 19-22). This statistic helps to determine the amount of variance explained by the model (see Menard, 1995).

The modified R-square for model one (victim-offender strangers included) suggests 38 percent of the variance is explained by the model. For model two, 20 percent of the variance is explained by the model. However, a larger number of cases were excluded from the first regression analysis because of missing data. The effect of these

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[26]The above model was tested for multicollinearity using a standard test such as the VIF collinearity statistic. The test indicated multicollinearity was not a problem with any of the models in this analysis.

missing data is evident in the inflated standard errors for victim sex, victim race, and weapon. In addition, the weakness of the model was also evident in the inflated odds ratio for victim sex. Thus, although the modified R-square for the second model was smaller than the first, yet the lower standard errors suggest the model is better. In addition, none of the variables in the first regression model were statistically significant, whereas several of the variables in Table 5 were statistically significant.

# Chapter 6

## CONCLUSIONS

This research was undertaken in response to steadily decreasing homicide clearance rates since the 1960s. Federal, state, and local governments have funneled tens of billions of dollars into the criminal justice system, yet is still has to be established if those resources were effective in assisting agencies in achieving their missions. Although there is some disagreement about the usefulness of using clearance rates as a measure of police effectiveness, it is still one of the most commonly used methods. If one were to use clearance rate as a measure of effectiveness, then it would be reasonable to assume that the resources allocated to police agencies have been less than effective. Official police statistics indicate that homicide clearance rates have decreased 33 percent since the 1960s (Cardarelli and Cavanagh, 1992, p. 2), and homicide clearance rates tend to be substantially higher than any other crime (see Figure 1 in Appendix A).

It is also reasonable to hypothesize that the nature of the crime itself may have changed, and that this change is somehow related to decreasing clearance rates. However, there is only limited support for this conclusion. These above findings suggest that the patterns and comprise the typical homicide incident are relatively consistent with previous findings. For example, the descriptive statistics presented in Chapter 5 suggest that the victim, offender, and situational characteristics found in the previous literature are still consistent with the nature of crime today. The typical homicide victim in Detroit was a

young black male who was killed with a gun. Just over half of all victims had at a previous criminal record, and most were killed by someone that they knew. These findings should be tempered with the fact that Detroit's population is not representative of either the United States or Michigan. Data presented in Figures 2 to 5 in Appendix A suggest that Detroit's population consists of a larger proportion of minorities and women. Also, economic indicators (as measured by mean education and income level) suggest that there is a higher concentration of poverty in the City of Detroit.

These demographic composition of Detroit is significant for two reasons. As will be discussed below, since Detroit's population is not representative, it is difficult to generalize findings from this research to other times and places. Second, although nonwhites are still proportionately overrepresented among homicide victims, they are substantially closer to their actual representation in the general population than in previous findings.[29]

Although many characteristics of homicide have remained stable over time, it also seems apparent that homicide has changed. One major influencing factor that has affected the nature of criminal homicides seems to be the large scale manufacturing, trafficking, selling, and use of illegal narcotics in our nation's inner cities. Data revealed that nearly 30

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[27]Victimization rates for blacks found in Wolfgang's (1958) research were similar to those in the Detroit sample. However, at the time of Wolfgang's study, blacks comprised only 12 percent of the total population, thus they were significantly more overrepresented among homicide victims.

percent of all homicide incidents were motivated by drug circumstances (see Table 2 in Chapter 5). It has been suggested that drugs, especially the crack epidemic, have diminished many of the protective elements in our inner cities (Decker, 1996). This figure seems even higher if one considers that a strict definition was used in this study for drug-related homicides. A case was determined to be drug-related only if drugs were a precipitating factor in the homicide incident. A possible explanation for the drug-violence nexus is that drug-related violence often involves young, heavily-armed males. It is argued many of these heavily-armed youth tend to lack the ability to mediate conflict without violence. The illegal drug industry has actively recruited young males, and this trend does not seem to be decreasing (Blumstein and Heinz III, 1995). It seems that this is an important area to further explore.

The bivariate analysis revealed that victim age was significantly related to case clearance, and that younger victims were more likely to have their cases cleared. Incidents involving victims with a previous criminal record were less likely to have their cases solved. Previous research generally found that victim level variables did not significantly affect clearance. These two variables are important because previous research found victim level variables not to be significant predictors of case clearance (Bynum et al., 1982; Riedel and Rinehart, 1996).

Two variables that were previously shown to be important predictors of case clearance, felony circumstances and weapon, demonstrated no relationship to the dependent variable. With felony circumstances, it is reasonable to assume that missing data or different coding criteria affected the relationship. An incident was recorded as involving felony circumstances only if there was a clear indication that another felony was the motivation for the incident. Those instances, for example, where an offender might have taken property after or during the commission of the crime, but the theft was not the motivation for the crime, but only an afterthought, were not considered felony circumstances because the theft was not the motivation for the crime. Thus, the different criteria might have excluded cases that other researchers would have included. Also, more cases might possibly have been coded as felony circumstances if more information was available for open cases. Although felony circumstances was not significant, drug circumstances were significantly related to case clearance. Zero order findings also indicate a moderate (.310) correlation between felony circumstances and drug circumstances. This indicates that incidents involving drug circumstances were also more likely to involve felony circumstances.

It was hypothesized previously that spatial characteristics would be correlated with clearance rates, suggesting that crimes in public would be more readily solved because more witnesses would be present (Skogan and Antunes, 1979). The variable was

significant, though crimes occurring in private settings were significantly more likely to be cleared. One possible explanation might be that these crimes were more likely to involve family and friends. The data support this hypothesis. Nearly 40 percent of homicides that occurred in private settings involved family members, compared to only 4 percent that occurred in public settings. Similarly, nearly 40 percent of crimes that occurred in public involved strangers, compared to slightly more than 20 percent of those that occurred in private settings. The Cramer's V value of .39 indicates the two variables are moderately correlated.

Victim-offender relationship did not prove to be a significant predictor of clearance. It is possible that the variable was insignificant because of missing data. It was difficult to discern the victim-offender relationship for those incidents where an offender was not identified. In a limited number of cases the information was available for open cases from other sources such as information provided by witnesses. Finally, the presence of physical evidence was not significantly related to case clearance. It is hypothesized that the presence of physical evidence is potentially more valuable than the data indicate. The usefulness of evidence is mediated by how the evidence is analyzed and integrated into the investigation process. Technological advancements, such as Automated Fingerprint Identification Systems (AFIS), have the potential for providing more assistance in the clearance of cases. Unless these advancements are integrated into the investigation process,

physical evidence will continue to be useful only in preparing a case against an offender that has already been identified.

When victim-offender relationship was included in the logistic regression model, none of the independent variables were significantly related to clearance. Part of the explanation for this might be that including the variable resulted in substantially more cases being excluded because of missing data. When the variable was excluded, five variables were significantly related with clearance. Consistent with the bivariate analysis, incidents involving victims with previous violent records, and those that occurred during the midnight shift were less likely to be cleared by arrest. However, a new development was that crimes occurring during the midnight shift were significantly less likely to be cleared.

In addition to the above findings, two of the most significant findings are those that are original to this piece of research. When controlling for all other variables, drug circumstances remained a very significant predictor of case cleared. The consistency in this relationship gives support to Decker's (1996) conclusion that the drug trade is at least partly responsible for decreasing clearance rates. The argument is that primary relationships (e.g., family, or in some cases good friends) traditionally protected victims from being murdered by family members for instrumental reasons (involving some sense of gain such as financial reward). However, the drug trade has broken the protective nature of these relationships (Decker, 1996). Furthermore, the correlation between drug

circumstances and felony circumstances adds an element to the discussion that has been previously neglected.

## Limitations of Findings

The major limitation in interpreting the above information concerns generalizability. It is highly likely that the findings are not generalizable to all times and places. The primary reason for this concern steams from the information provided in Figures 2-5 in Appendix A that suggests Detroit is not representative of the population of Michigan or the United States. However, one advantage to interpreting these results is that the data, although technically secondary, were collected by the author and several of his colleagues. It is argued that there is a high level of reliability and validity to the responses. This author was present almost every day of the data collection process, and meetings were held regularly to ensure that there was consistency in the data collection.

## Implications

The findings presented above have implications to both the field of criminology, and to the overall crime fighting/prevention strategies developed by components of the criminal justice system. First, the descriptive data presented indicate that there are both consistencies and inconsistencies between data presented here and findings from previous research. Racial minorities and males are still substantially overrepresented as both homicide victims and offenders, yet the disparity is not as pronounced in Detroit. Also,

most offenders tend to know their victims prior to the criminal incident, yet there was a substantially large percentage of missing victim-offender information. There have been two major findings in this research, both of which have been largely untested in previous research. First, nearly 30 percent of all homicide incidents that occurred in Detroit in 1994 and 1995 involved drug circumstances. Second, almost 64 percent of all victims scored medium to high on the victim culpability, suggesting that they might have somehow played a role in their own demise. These findings suggest that there have been some sociological changes that have resulted in this change in the nature of homicide. As hypothesized by Decker (1996), this change seems to at least in part be due to the influx of drugs into our inner cities. The growing drugs-youth-violence nexus suggests although overall crime rates might continue to drop, certain subpopulations might continue to experience high rates of victimization (Blumstein and Heinz III, 1995)

These findings also suggest that the criminal justice system has become less effective in solving crime, assuming that clearance rates are used as a measure of police effectiveness. Homicide investigations tend to get the highest allocations of resources per case for any crime, but it does not appear to be working effectively. There are two apparently contrary operational implications for police departments. First, the implementation of a case screening model that provides more resources to cases that are more likely to be solved suggests less resources should be allocated to drug related

homicides because they result in significantly lower clearance rates. Second, it could also be argued that extra attention should be given to drug or gang related homicides because it is likely that the violence could possibly result in "homicide epidemics" (Decker, 1996, p. 446) that eventually consume even more departmental resources. If these rash of drug related homicides are stopped at the onset by arresting the offenders quickly, it could positively affect homicide rates and clearance rates by taking these criminals off of the street. It seems possible that a differential response might be necessary for different types of homicides, such as drug-motivated homicides. The moderate correlation between drug circumstances and felony circumstances indicates that departments may need to implement a more coordinated approach to the investigation of drug and/or felony homicides. These two types of homicide circumstances might in fact present situations where the sharing of intelligence and information is even more essential.

These findings also suggest that more research attention needs to be given to the drugs-guns-youth nexus. Researchers have found that younger offenders who are involved in the drug trade are more violent than others, and they demonstrated a greater willingness to solve disputes with violence (Inciardi and Pottieger, 1991). Although overall national violent crime rates are lower, there appears to be a greater propensity to use violence as a reasonable alternative to interpersonal conflict among some juveniles.

The data that were used for this analysis were limited in their suitability for extensive testing of criminological theory. However, some inquiry was possible. Routine activities theory has been found to be a useful framework for interpreting the social ecology of urban homicide (Messner and Tardiff, 1985). A routine activities approach to urban homicide suggests sociodemographic characteristics of the victim, along with temporal factors, are systematically related to the location of the homicide. For example, incidents between family members are more likely to occur at night and on the weekends when contact with family members is greatest (Messner and Tardiff, 1985).

There was limited support for a relationship between a victim's routine activities and the temporal and spatial characteristics of crime. Based on the routine activities theory, a significant relationship would be predicted between the victim-offender relationship and spatial characteristics, suggesting that incidents involving family members would be more likely to occur in private settings. The theory would also posit that family crimes would be less likely to involve firearms, and more likely to involve other types of weapons such as knives and personals weapons (e.g., hands/feet). Finally, another hypothesis is that crimes involving family members would be more likely to occur on weekends since contact between family members would be most frequent.

Of all of the hypotheses just presented, only two were significant. The relationship between victim-offender relationship and spatial characteristics was significant. Incidents

involving family members were more likely to occur in private settings, and incidents involving strangers were most likely to occur in public settings. Stranger homicides were most likely to involve guns (86 percent), and incidents involving family members were less likely to involve guns (58 percent). However, there was no relationship between the day of the week the crime was reported, and the victim-offender relationship. Crimes involving strangers were not significantly more likely to occur on the weekends (57 percent) when compared to incidents involving family members (50 percent). These findings suggest limited support for the theory.

# APPENDICES

# APPENDIX A

## APPENDIX A

**Figure 1**

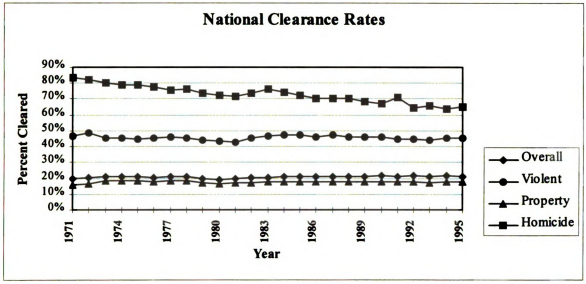



**Figure 2**

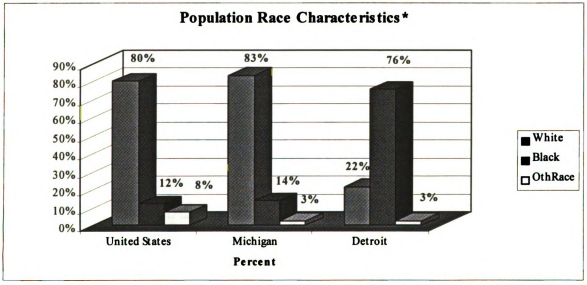


**Figure 3**

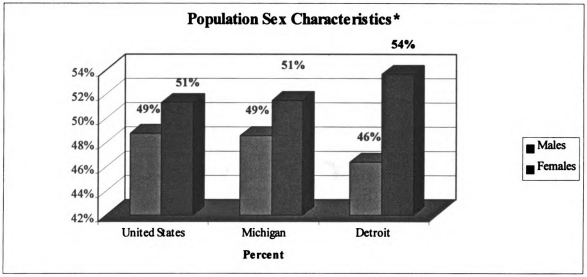



**Figure 4**

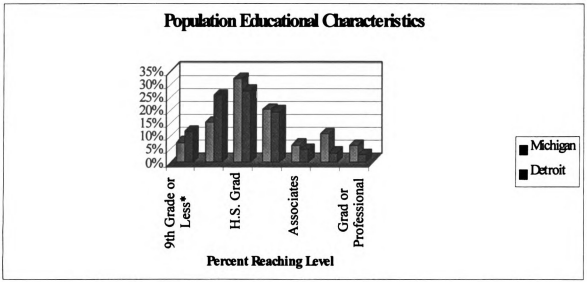
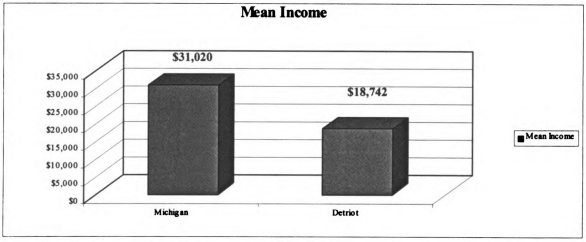


**Figure 5**




*Source: United States Department of Justice, 1995

# APPENDIX B

## APPENDIX B

## INSTRUMENT QUESTIONS USED FOR ANALYSIS

### VICTIM CHARACTERISTICS

Sex of decedent:

1 = Male

2 = Female

3 = Missing

Race of decedent:

1 = White (Includes Mexican Americans)

2 = Black

3 = American Indian or Alaskan Native

4 = Asian or Pacific Islander

5 = Missing

Date of decedent's birth; (DOB) Month, Day, Year

99-99-99 = Missing

### WEAPON USED

What was the primary cause of death?

Note: Primary cause of death refers to the injuries that were responsible for the death. Incidental, non-lethal injuries prior to death, and post-mortem mutilations are not a cause of death.

1 = Shot, Handgun

2 = Shot, Rifle

3 = Shot, Shotgun

4 = Shot, other gun, Specify: _____

5 = Shot, Unknown Gun

6 = Stabbed, Knife

7 = Stabbed, Other Instrument or Unknown
8 = Blunt Object (Would Include Gun, If Used As Gun)
9 = Personal Weapon (E.g., Hands, Feet)
10 = Asphyxiation, Suffocation, Drowning, Strangulation
11 = Fire
12 = Other, Specify: _____
99 = Missing

## PREVIOUS CRIMINAL RECORD

Did the decedent have one or more prior arrests for drug offenses?

1 = Yes, Specify: _____
2 = No
3 = No Mention
4 = Suspected But Uncertain

Did the decedent have one or more prior arrests for violent offenses?

1 = Yes, Specify: _____
2 = No
3 = No Mention
4 = Suspected But Uncertain

Did the decedent have one or more prior arrests for property offenses?

1 = Yes, Specify: _____
2 = No
3 = No Mention
4 = Suspected But Uncertain

## FELONY CIRCUMSTANCES

Did any offender take or attempt to take property?

1 = Yes -- Specify: _____

2 = No

3 = No Mention

4 = Suspected by Uncertain Specify: _____

If Yes,

Was the taking of property incidental to the homicide? That is, did the offender kill the victim for reasons unrelated to taking of property and then take the property?

1 = Yes

2 = No

3 = No Mention

4 = Suspected by Uncertain

Did any offender sexually assault the victim?

1 = Yes

2 = No

3 = No Mention

4 = Suspected by Uncertain

Did the homicide involve the robbery of a drug dealer that occurred during the selling of drugs?

1 = Yes

2 = No

3 = No Mention

4 = Suspected But Uncertain

Did the homicide incident involve the robbery of a drug buyer that occurred during the purchase of drugs?

1 = Yes

2 = No

3 = No Mention

4 = Suspected But Uncertain

Did any offender unlawfully enter a structure to commit a crime?

A structure would include a dwelling, garage, barn, public building, commercial establishment, or vehicle used as a dwelling.

1 = Yes

2 = No

3 = No Mention

4 = Suspected But Uncertain

## DRUG CIRCUMSTANCE

Were drugs a circumstance in the homicide incident?

1 = Yes

2 = No

3 = No Mention

4 = Suspected But Uncertain

## VICTIM-OFFENDER RELATIONSHIP

Prior to the incident in which the homicide occurred, were the decedent and offender strangers?

1 = Yes (If yes, skip all other relationship questions)

2 = No

3 = No Mention

4 = Suspected but Uncertain

5 = Missing

Where the decedent and the offender members of the same family?

1 = Yes

2 = No

3 = No Mention

4 = Suspected but Uncertain

5 = Missing

Was the decedent related to the offender by blood (consanguineously)?

1 = Yes, decedent was offender's parent

2 = Yes, decedent was offender's child

3 = Yes, decedent was offender's sibling

4 = Yes, but not nuclear family members (Specify relationship: _____)

5 = No

6 = No Mention

7 = Missing

All other relationships will be considered as acquaintanceships.

## TEMPORAL CHARACTERISTICS

Date incident occurred: month-day-year

Note: This date may be different from the date the incident was reported to the police.

99-99-99 = Missing

Time incident occurred.

9999 = Missing

Day of week incident occurred:

1 = Sunday

2 = Monday

3 = Tuesday

4 = Wednesday

5 = Thursday

6 = Friday

7 = Sunday

## SPATIAL CHARACTERISTICS

Location where injury occurred that led to homicide.

A private location is, by community standards, not open to the general public. All others are considered to be public.

1 = Public, Specify: _____

2 = Private, Specify: _____

9 = Missing

## PHYSICAL EVIDENCE

Were fingerprints or other physical evidence found?

1 = Yes, Specify:

2 = No

3 = No Mention

4 = Suspected but Uncertain

## PRESENCE OF WITNESSES

Were witnesses found at the crime scene interviewed?

1 = Yes

2 = No

3 = No Mention

4 = Suspected But Uncertain

5 = No witnesses at the crime scene

9 = Missing

## VICTIM CULPABILITY

Was the decedent a known gang member or part of a drug organization?

1 = Yes
2 = Yes, But Not At Time of Death
3 = Never
4 = No
5 = No Mention

Was the decedent drinking alcohol at the time of the incident?

1 = Yes
2 = No
3 = No Mention
4 = Suspected but Uncertain

Was the decedent consuming illegal drugs at the time of the incident?

1 = Yes
2 = No
3 = No Mention
4 = Suspected but Uncertain

Was the decedent in possession of illegal drugs at the time of the incident?

1 = Yes
2 = No
3 = No Mention
4 = Suspected but Uncertain

Was the decedent in possession of alcohol at the time of the incident?

1 = Yes
2 = No
3 = No Mention
4 = Suspected but Uncertain

Did the decedent have a history of association with drug dealers/users?

1 = Yes
2 = No
3 = No Mention
4 = Suspected but Uncertain

Did the decedent have a history of drug abuse?

1 = Yes
2 = No
3 = No Mention
4 = Suspected but Uncertain

Did the decedent have a history of alcohol abuse?

1 = Yes
2 = No
3 = No Mention
4 = Suspected but Uncertain

Was the decedent identified by police as a drug dealer?

1 = Yes
2 = No
3 = No Mention
4 = Suspected but Uncertain

Was the decedent identified by police as a drug buyer?

1 = Yes
2 = No
3 = No Mention
4 = Suspected but Uncertain

Did the decedent have one or more prior arrests for drug offenses?

1 = Yes
2 = No
3 = No Mention
4 = Suspected but Uncertain
9 = Missing

Did the decedent have one or more prior arrests for violent offenses?

1 = Yes
2 = No
3 = No Mention
4 = Suspected but Uncertain
9 = Missing

Did the decedent have one or more prior arrests for property offenses?

1 = Yes
2 = No
3 = No Mention
4 = Suspected but Uncertain
9 = Missing

Was the decedent buying drugs at the time of the incident?

1 = Yes
2 = No
3 = No Mention
4 = Suspected but Uncertain

Was the decedent selling drugs at the time of the incident?

1 = Yes
2 = No
3 = No Mention
4 = Suspected but Uncertain

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