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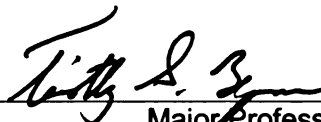
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**INJURY AS A RESULT OF ARMED ROBBERY:
A STUDY OF ROBBERY VICTIMIZATION IN DETROIT'S EIGHTH PRECINCT,
2001-2002**

By

Ryan Brevin Martz

A THESIS

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ABSTRACT

INJURY AS A RESULT OF ARMED ROBBERY: A STUDY OF ROBBERY VICTIMIZATION IN DETROIT'S EIGHTH PRECINCT, 2001-2002

By

Ryan Brevin Martz

Routine Activities Theory has been tested multiple ways, yet there is a significant gap in the literature in the theory's application to injury as a result of armed robbery. Importance lies in understanding what factors influence a victim's likelihood of becoming injured during the incidence of an armed robbery. Previous studies have evaluated the likelihood and factors associated with armed robbery victimization; however, few have extended their research to examine injury as a result of armed robbery. The present study reviews this question while examining several factors such as age, race, and sex of the victim, whether the victim resisted the robber, whether a gun is present, and time of day the incident occurred. A data set containing the 1213 armed robbery incidents occurring in the years 2001 and 2002 in Detroit, Michigan was analyzed to determine if any of the factors mentioned have a relationship to injury during armed robbery.

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CHAPTER I: INTRODUCTION

To many Americans, the fear of falling victim to an armed robber is among the most commonly expressed of all crime concerns. Conklin (1972) explains that, “Although the public certainly fears murder and rape, it is probably fear of robbery... which keeps people off the street, makes them avoid strangers, and leads them to lock their doors” (p. 4). As a result, many cities such as Detroit, which experienced 7,096 robberies in 2001 and 6,288 in 2002, have had to deal with the issue of how to prevent armed robberies from occurring (Detroit Police Department, 2002). However, equally important as *how* or *why* citizens are robbed by an armed attacker is *why certain individuals are injured* during the incidence, or as an outcome of an armed robbery.

Many previous studies have examined why individuals are criminally victimized. Research has shown that victims are often selected based on specific individual characteristics. For example, Conklin (1972) notes that offenders often choose their victims by evaluating such factors as: how they dress, whether they display cash, the sex and age of the victim, and their vulnerability. Nevertheless, there has been comparatively little research done on why victims are injured as a result of an armed robbery.

Matthews (2002) argues that individuals approached by an armed robber are generally more susceptible to injury if they display signs of non-cooperation. Any resistance by the victim, such as refusing to give up a purse or wallet, or refusing to exit a vehicle being car-jacked, may be likely to lead the victim to injury by the offender. Those individuals, then, that follow the directions of the assailant are less likely to be physically wounded. Armed robbers generally prefer not to harm victims, as is evident

by warning shots that are often given at the first sign of non-cooperation by the victim (Matthews, 2002).

Despite Matthews's notions on injury among robbery victims, there is limited empirical research to support them. Wright and Decker (1997) suggest that most offenders respond with severe but non-lethal violence in the hope of convincing the person to cooperate. Though incidents of violence are not as prevalent as might be expected, recalcitrant victims occasionally find themselves with nonfatal gunshot wounds. Even worse, it is not uncommon for victims to be killed. An admitted armed robber even acknowledged, "We try not to kill [our victims]. If we can avoid killing them, then we try not to. But if they force your hand, then you have to kill them. It's just that simple." (Wright & Decker, 1997:57). On the other hand, some victims have found that if they resist the robber's demands long enough, the aggressor will often recede (Wright & Decker, 1997:114-115).

Since most people have never been victimized by an armed robber, it is difficult to understand how the perceptions and proceedings of robberies affect the likelihood of victim injury. Furthermore, and as previously stated, victims can be injured just as quickly as they were robbed; all without resisting. Sometimes victims are injured, even fatally, despite their complete cooperation with the robber. Yet, while previous studies have shed light on why certain individuals might be victimized by armed robbers, it is evident that further investigation is crucial in order to reveal possible rationale for why armed robbers might employ violence to accomplish their objective.

Purpose of the Study

The purpose of this study is to identify various contributors to injury during an armed robbery through an examination of armed robberies occurring in Detroit, Michigan in the years 2001 and 2002. Explicitly, incidents of armed robbery in which physical injury occurred will be considered in order to determine whether injury is predictable based on selected characteristics of the robbery event. As mentioned, many studies have attempted to discuss if armed robbery characteristics similar to these can predict victimization; however, there is a significant gap in knowledge as to what factors can accurately predict victim injury. Furthermore, literature supporting the selection of these characteristics will be explained in Chapter Two, and definitional details will be addressed in Chapter Three.

Importance of the Study

As mentioned, researchers have had limited success in uncovering reasons why certain individuals are more prone to armed robbery victimization than others. It is difficult to study violent criminals on the street since armed robbers do not readily identify themselves. Therefore, research on this subject is somewhat limited. However in their qualitative study of armed robbers, Wright and Decker (1997) found that women, alcoholics, older people, drug dealers, those that look like they have money, and those that appear to be unlikely to resist are just a few examples of prime targets for robbery victimization. Females and the elderly are often either unlikely or unable to resist a robber whereas drug dealers may be able to resist, but unlikely to report the incident to the police. Additionally, alcoholics may tend to be intoxicated in public and therefore not

able to adequately resist a robber. Those that appear to have money or possessions worthy of robbery make themselves targets regardless of whether they can protect themselves. Since little empirical research has been conducted in order to explain why injuries occur during these violent crimes, this study will fill a void in the criminal justice literature regarding victim injury during armed robberies.

Armed robbery can occur anywhere; in urban America as well as in more rural settings. However, there is no question that armed robberies are significantly more common in large cities. Therefore, this study aims to provide clarification as to why injuries may occur during the incidence of armed robberies in such environments. Awareness of these reasons may aid in the reformation of public policy regarding gun possession and use while committing a crime, as one in three armed robbery victims sustain at least minor injuries (Reaves, 1993). Though not all armed robberies are committed with guns, many are, and these weapons continue to keep the public in fear. And since certain populations fear robbery victimization more than others (e.g., the elderly), this study can elucidate the rationality of fear of robbery among age groups.

Residents of poor inner city neighborhoods are often the victims of armed robbery, along with other violent crimes. There are certain characteristics of residents in these neighborhoods that may make them more susceptible to violent crimes. For example, inner city residents are not as likely as suburban residents to have bank accounts; hence, they may have larger amounts of cash on their person at any given time (Wright & Decker, 1997). Armed robbers are cognizant of this fact and capitalize on the reality that they are likely to obtain a relatively high sum of money as an outcome of each robbery.

Specifically, according to Heumann, Loftin, and McDowall (1982), Detroit, Michigan has had to deal with the reality of high violent crime rates over the years. The Detroit Police Department reports that in 2002 there were 6,288 robberies throughout the City of Detroit. This can be compared with the 1990 figures, which indicate an official report of 13,010 robberies in that year (Detroit Police Department, 2002). While statistics show that the number of robberies in Detroit has decreased by nearly half over the past decade, robbery continues to be a troubling reality (Detroit Police Department, 2002). Regardless of the statistics, residents do not feel as though crime is declining. Ronnie Hereford, a resident of Detroit's Tenth Precinct and owner of a go-cart track stated, "Drugs are still rampant, (burglaries) are still rampant. I don't know as a businessman in this community that I can say I see crime being down" (The Detroit News, 2003).

Even though statistically robberies have diminished from 13,010 in 1990 to 6,288 in 2002, Detroit continues the battle of dealing with these crimes. Over the past several decades, policies have been enacted to put a stop to the stubborn levels of crime. The "Stop the Robberies, Enjoy Safe Streets Unit" (STRESS) was created in October 1971 despite an unwelcoming reception from the public (The Detroit News, 2003). Though eventually abandoned by Mayor Coleman Young in 1974 for its offensive vigilante behavior and numerous civilian killings by police officers, the STRESS unit attempted to combat Detroit's robbery problem at full force (The Michigan Daily, 1997). Since STRESS was unsuccessful at reducing robberies over the long term, the City of Detroit abandoned the policy and concentrated efforts dealing with the "War on Drugs" in hopes that stricter drug enforcement policies might alleviate overwhelming robbery figures (The

Michigan Daily, 1997). For instance, according to Kleiman and Smith (1990), one example of Detroit's involvement in the drug war is that in the late 1980s, the city initiated a drug hotline allowing residents to call in and report information on drug usage in their neighborhoods, avoiding the 911 response system. This also supported focused crackdowns throughout the city – specifically in areas that needed it the most. Though the hotline did receive approximately 200 phone calls per day during the first few months of operation, the hope was that the concentrated enforcement would produce significant results (Kleiman & Smith, 1990).

It was not until 2002 that a national program aimed at reducing gun violence was initiated. Project Safe Neighborhoods (PSN) was established by President George W. Bush as a nationwide program attempting to reduce gun violence by unifying local, state, and federal agencies. Funds were allocated to participating federal judicial districts to hire new prosecutors, support investigators, provide training, distribute gun lock safety kits, deter juvenile gun crime, and develop and promote community outreach efforts as well as to support other gun violence reduction strategies (Project Safe Neighborhoods, 2004). Though PSN is still in its infancy, homicides dropped 34% from 2002-2003 in Detroit (Project Safe Neighborhoods, Eastern District of Michigan, 2004). Perhaps, with time PSN will have indirect effects in Detroit's robbery rates as well. Kwame Kilpatrick, the current mayor of Detroit stated, "Since Project Safe Neighborhoods began in Detroit in 2002, we have seen a marked decrease in the incidence of gun violence in 2003" (Project Safe Neighborhoods, Eastern District of Michigan, 2004).

Given that Detroit has a severe problem with the abundance of robberies in all thirteen of its precincts, attempts have been made to remedy the situation. While any

decrease in robbery is significant for the city, continuing to find a solution for robbery violence is imperative. This study contributes towards that end.

Importance of Theory

Importance resides in the ability to explain the occurrence of robbery victimization. Though no theories align with injury resulting from victimization precisely, Routine Activities Theory (Cohen and Felson, 1979) reveals why some individuals fall victim to crime - in this case, why so many Detroit residents become the prey of armed robbers. Routine Activities Theory suggests that individuals become victims as a result of their customary daily behavior. In actuality, most robbery victims frequent the locations where they are getting robbed (Conklin, 1972). Cohen and Felson (1979) propose that when a suitable target is lacking a capable guardian and meets a motivated offender, a crime is likely to occur. First, suitable targets can be inclusive of many different people or objects. However, in the case of armed robbery, suitable targets are frequently persons that have in their possession something that is valuable to the offender. In many cases, this may be cash or other valuables such as automobiles or even eyeglasses; items that typify a desired status. Often, even if individuals look like they may have money or valuables, that is reason enough for an armed robber to approach. Perpetrators describe an ideal target as someone who is “high-catting;” a street term for a person showing off their wealth or temporary good fortune. Someone who “high-cats” might drive a Cadillac and wear flashy gold chains or rings. In such cases, some robbers feel as though “high-catting” is a crime itself deserving of punishment by means of

robbery (Wright & Decker, 1997). In reality, these very individuals may be armed robbers themselves, driving a stolen vehicle and wearing stolen jewelry.

Second, according to Routine Activities Theory, there must be an absent or incapable guardian (Cohen & Felson, 1979). In the instance of armed robbery, a guardian must actually be present as robbery itself is a personal crime. However, robbery victims are often incapable of fending off their attackers. People of all ages, both sexes, and all races fall victim to armed robbery in a myriad of locations; however, victims are often those who are less likely to have the capability to protect themselves. Perhaps these potential victims appear as though they might be armed, or might be willing to demonstrate resistance. Moreover, the ideal armed robbery victim may not be paying attention to their surroundings; thus, a sudden robbery would catch the victim off guard and render them helpless. Wright and Decker (1997) remark that upon interviewing armed robbers, they admitted their ideal targets were women, the elderly, and alcoholics, among others, because these individuals are often unable to provide adequate guardianship for themselves. While there are always exceptions, these groups of people are often less able or willing to resist a robber's assault. Additionally, if other capable guardians such as the police are not present, crimes are more likely to occur (Cohen & Felson, 1979). Consequently, it should come as no surprise that these populations are most often victimized.

Third, a motivated offender is required to commit an armed robbery. Though there are many reasons that armed robbers carry out their criminal acts, there is one thread of commonality: the appeal of fast, easy money or valuables. Wright and Decker (1997) provide evidence that some predators are unemployed and simply fall into the rut

of crime as an alternative to seeking employment. For instance, robbery brings in more money than a minimum wage job; and it produces cash much faster. Additionally, others may be motivated by living in an impoverished area and feeling that they simply deserve to have nice belongings and extra cash from time to time. Yet others say that they rob their victims when they need to pay bills or need money for food. Therefore, these robbers are actually striving to provide for themselves and other members of their households by committing robberies. Still, some offenders find their motivation from the sheer thrill of the crime and terrorizing their victims. In an interview with a St. Louis armed robber in 1997, the offender told Wright and Decker, “The money is the point [of robbery], that’s all. [But] pulling the gun, watching they face, how scared they get and all that... that’s fun too” (p. 56).

Routine Activities Theory is useful in explaining injuries sustained from armed robberies as it clarifies aspects of criminal victimization. Often, the reasons individuals become suitable targets are also what make them potential injured targets. Those chosen as suitable targets are those who possess something that the robber desires.

Consequently, victims have something to lose by giving up the items or money; if they resist, victims could be injured by the perpetrator.

In addition to actions or inactions that individuals take to increase their potential for victimization, the choice whether or not to inflict injury ultimately dwells with the perpetrator. Therefore, Routine Activities Theory is one possible explanation for why victimization might occur as robbers might cross paths with victims if the victims’ routine activities tend to place them in high crime areas. Since there are no theories that

explain injury as a result of armed robbery, this study intends to explain injury with the support of Routine Activities Theory.

The objective of this chapter was to present the research problem and offer an overview of the study. The following chapters will discuss the relevant literature in detail, methods used, data analysis, results, limitations, and policy implications that stem from this project.

CHAPTER II: A REVIEW OF THE LITERATURE

As previously stated, little research has been conducted regarding injury during or as a result of robbery. Though there is ample research in existence on robbery victimization, precise explanations for injury are rarely discussed. What is known, however, is that robbery is the crime that most often results in injury or death in the United States other than homicide (Zimring & Zuehl, 1986). Therefore, this study attempts to explain injury as a result of armed robbery through the theoretical framework of Routine Activities Theory, a paradigm utilized in many criminologically related research projects since its introduction to the field in 1979 by Lawrence Cohen and Marcus Felson.

Relevant Literature

Conklin was one of the first to complete an in-depth study of robbery on an academic level. He defined robbery as “the taking away and carrying away of personal property of another from the person and against his will, by force or violence, or by assault and putting in fear, with the intent to steal” (Conklin, 1972:4). This helped to support that robbery was both a personal and a property crime. Additionally, Conklin’s examination of robbers in Boston, Massachusetts gave one of the first accounts of the types of robbery offenders that exist as well as a description of how and when force is used by these offenders. Though written decades ago, the descriptive benefits of this work are invaluable as they relate to the problems that many large cities, including Detroit, endure.

One of the most salient studies of robbery is the research conducted by Franklin Zimring and James Zuehl. Introduced in 1986 as a report of their twelve-month collection of robbery experiences in Chicago, Illinois, Zimring and Zuehl (1986) considered the factors that contributed to the injury or death of a robbery victim. They concluded that victims actively resisted in 55 percent of robberies and reacted passively in 11 percent (Zimring & Zuehl, 1986). Therefore, the authors' thorough investigation into why injury is likely to occur during a robbery is most helpful in gaining a broader understanding of the phenomenon and how resistance may affect the outcome.

The examination of a large Midwestern city is valuable, as Chicago can be likened to Detroit. According to the United States Census Bureau in July of 2002, Detroit was smaller in population at 925,051 than was Chicago which had a population of 2,886,251. However, using official robbery statistics compiled by each city's police department, it was determined that both experience similar rates of robbery with Detroit's actually being slightly higher at 680 per 100,000 compared to Chicago's 641 per 100,000 (Detroit Police Department, Chicago Police Department, 2002).

Table 1. 2002 Robbery Statistics for Chicago, IL and Detroit, MI

City	2002 Population	2002 Robberies	2002 Robbery Rate
Chicago, Illinois	2,886,251	18,523	641*
Detroit, Michigan	925,051	6,288	680*

*(Per 100,000 Population)

More recently, Wright and Decker took an active role in seeking out armed robbers in their 1997 qualitative analysis of robbery in St. Louis, Missouri. The two researchers used a snowball sampling procedure to gain access to 86 of St. Louis's unapprehended robbers. Though at the outset most of the criminals were hesitant to speak

with Wright and Decker for fear that the researchers would disclose their findings to the police, the majority ended up cooperating. Thus, Wright and Decker obtained an unprecedented view into the world of robbery through the eyes of robbers.

One of the most recent studies of robbery was by Roger Matthews who examined robbery in the United Kingdom. Not only did this study contribute to the literature, but it also provided discussion concerning victims and the attitudes of robbers towards them. Additionally, the study included aspects of offenders' motivation and their inclination toward weapon use. Through his research, Matthews brought a different view of robbery into the mix with an examination of robbery in the United Kingdom.

In an attempt to maintain a focus on just a few studies, it is not feasible to discuss every research project on robbery in depth. Though a portion of this study involves deaths resulting from robbery, those incidents are not the central focus of this study and will be covered in only a cursory manner. In addition, non-fatal outcomes that are not injurious are also irrelevant. Injuries resulting from armed robbery are the principal concentration of this study.

Strangely enough, there is not an official classification for injuries incurred during a robbery; therefore, there exists difficulty in measuring this aspect of robbery (Zimring & Zuehl, 1986). In 1993, Reaves noted that nationally, nearly one in three robbery victims sustain at least minor injuries such as cuts, scratches, and bruises. However, it is known that during the period of study in Chicago, 10.2% of robbery victims were injured; though only 19% of those individuals were admitted to a hospital (Zimring & Zuehl, 1986). Though the sample being considered is relatively small compared to the number of robberies that occur, as Chicago often has approximately 18,000 robberies per year, a

classification of injury from robbery is something that is not generally recorded (Chicago Police Department, 2002).

Types of Robbers

Before taking an in depth examination of robberies, understanding a typology of such criminals is essential. Conklin (1972) makes note that there are several types of robbers. Professional robbers are frequently those that choose to victimize commercial establishments. However, since the 1970s these robbers have been replaced by many drug-using robbers (Conklin, 1972). Banks, convenient stores, and pharmacies are victimized most often by this group, although professional robbers may target other locations as well. Professional robbers are often white and are very skilled as they take time to carefully plan their crimes, calculating when and where the victim will be when the attack occurs. They are not likely to victimize randomly or haphazardly, and generally proceed in a “rational” manner. Their calculated crimes appear to be motivated by a grave contempt for society and conventional lifestyles and often become ingrained in their personalities (Matthews, 2002). Matthews also notes that these robbers invest in elaborate equipment to successfully conduct their crimes. Additionally, it is not uncommon for these robbers to have accomplices, as professional robbery can be particularly profitable (Conklin, 1972).

Another common type of robber can be described as an opportunist or, rather, an intermediate robber. Matthews (2002) notes that these criminals may have long and storied histories with crime and the criminal justice system, however they regularly devote a reasonable amount of time to planning their robberies. These robbers are

predominately black, young, low-income individuals that target victims with small amounts of money (Conklin, 1972). However, it would not be uncommon for this type of robber to take expensive automobiles at gunpoint, as car-jackings are a common form of robbery. Conklin (1972) explains that these opportunistic robbers are on the prowl for vulnerable targets and a rapid escape; as such, stealing an automobile provides them with the perfect opportunity.

Another type of robber that frequently engages in the crime is the amateur robber. These criminals engage in very little planning and organizational tactics and generally operate alone (Matthews, 2002). It is the amateur robber that would be most likely to approach a pedestrian on the street and commit a robbery. Matthews explains that these robbers are relatively inexperienced, and therefore aim to take relatively small amounts of money or less valuable property. Additionally, it is the amateur robber who may be addicted to illegal drugs and rob only to purchase more drugs (Conklin, 1972).

Types of Robberies

Typically, there are three types of robberies: residential, commercial, and those that occur on the street. In Chicago, Zimring and Zuehl (1986) reported that half of all reported robberies occurred on the street, as do 2/3 of robberies with injury. Commercial robberies trail, only accounting for 11% of all reported robberies and 1/3 of all Chicago robberies with injury. Residential robberies account for a scant one in twelve reported robberies, with one of twenty resulting in injury (Zimring & Zuehl, 1986). In contrast, 85% of all robberies in St. Louis occurred on the street while 12% took place in

commercial establishments (Wright & Decker, 1997). The unaccounted three percent is likely to include residential robberies.

Residential robberies are fairly uncommon; however when they do occur, the outcome is arguably often far worse than injury. Behavioral dynamics and association with the victim repeatedly lead to residential robbery victim fatalities (Zimring & Zuehl, 1986). Since residential robbers often know their victims, it is likely that the relationship between the two affects the outcome of the robbery as the behavior of both the victim and the robber are different than would be in a stranger to stranger type of robbery. In addition, there is also a possibility of injuries occurring from burglaries or incidents of breaking and entering that have gone bad. However, one might expect more serious injuries and deaths to result from residential robberies than in other settings.

Commercial robberies, however, accounted for a significant portion of robbery injuries. The high numbers of commercial robberies are most likely due to a high likelihood of reporting these crimes to the police (Zimring & Zuehl, 1986). Businesses are most likely to report robberies as they have much to lose and generally little to hide. Conversely, street robberies often involve victims who are also engaged in criminal acts; therefore, some victims may be hesitant to report a robbery (Wright & Decker, 1997). After all, drug dealers cannot very well explain to the police that they were robbed of their drugs and drug money. Robbers recognize this reality, and barring violent resistance, take advantage of the fact that drug dealers can do little to impede them.

A Subculture of Violence

Because robbery often involves physical violence and because injury is the direct result of violence, it is essential to understand why it occurs. Violence is explained by Wolfgang and Ferracuti as stemming from a conflict between the values of the dominant culture and the often lower-class subculture of violence (Wolfgang & Ferracuti, 1981).

Wolfgang & Ferracuti (1981) make note that those that are part of the subculture of violence know that there are norms that are to be followed. These norms are backed up with social rewards and punishments. Of course these norms or “rules” are quite different than those in mainstream society. For instance, a glance in someone’s direction could mean something different in a subculture of violence than in other cultures. To one individual it could display disrespect, while to another it could simply be a greeting. This look may be enough to elicit a reaction ending in violence.

These rules also extend to how a person is to react to situations of conflict. These expectations of behavior may include the defending of one’s honor by following up an insult or assault with violence (Wolfgang & Ferracuti, 1981). Therefore, Wolfgang and Ferracuti argue that those engaged in the subculture of violence value human life less than the mainstream culture. For this reason, injury in areas where the subculture of violence is likely to exist might be better understood when coupled with the explanation of violence and the subculture that values it. Though injury resulting from the subculture of violence is not testable in this study, there is importance in recognizing the existence of the subculture of violence.

Types of Injury

Criminal victimization can often end in injury; and when it does, the level of injury can vary immensely. Injury is defined as hurt, damage, or a sustained loss (Merriam-Webster Dictionary, 2004). Not all injuries are serious, however, and they can range from psychological injury to serious life-threatening injury. According to Hindelang, Gottfredson, and Garofalo (1979), the most common injuries in robberies include knife or gunshot wounds, broken teeth or bones, internal injuries or being knocked unconscious, and bruises, black eyes, cuts, or scratches.

Contrary to what might be expected, Hindelang et al. (1978:41) report that 23.2% of robbery victims sustained only minor injuries. Therefore, this is a significant portion of the 29% that were injured during robberies in total. These minor injuries include bruises, black eyes, cuts, or scratches (Hindelang et al., 1978). It is often expected that robberies tend to result in severe injury such as gunshot or stab wounds; however, that is not the case. In fact, those injuries constituted only 2% of all injuries from robbery during 1972. Broken bones and teeth were about 2.5% of all injuries sustained from robbery, as were internal injuries and being knocked unconscious (Hindelang et al., 1978:41). These percentages make up only 29% of all robberies with 71% without injury. Therefore, one can surmise that from the 1972 Hindelang et al. study that less than 30% of robberies involved injury, and of those, the majority of injuries were minor.

Though victim injury can occur in many forms, psychological effects often haunt victims after any physical injuries may have healed. According to Gabor, Baril, Cusson, Elie, LeBlanc, and Normandeau (1987), over 90% of robbery victims in their study experienced an increase in fear, distrust, aggressiveness, mood swings, and depression

following a robbery. In more than 80% of these cases, the victims were still displaying symptoms of this psychological trauma even as late as six months following a robbery (Gabor et al., 1987). Some 20% of victims also experience changes in their social life and in their lifestyle as a result of robbery victimization (Gabor et al., 1987). Robbery can be a terrifying event for anyone, and it most certainly is expected to leave vivid imagery in the mind of the victim. One victim clearly recalled his victimization by stating, “You don’t release your eyes off the gun: it’s not like you think it would be, not like on television. I’ve never been so frightened. It’s panic...I can’t even talk about it now without shaking” (Grant, 1992).

Resistance, Victimization, and Injury

How a victim reacts to a robbery can have a significant impact on the outcome of the robbery. In most cases, Gabor et al. (1987) explain that whether the victim provides resistance has little to do with the success of the robbery, as the robber is likely to win the confrontation. Nonetheless, the amount of resistance that the victim demonstrates does have a considerable influence on whether the victim is injured by the offender. For instance, those that resist a robber are ten times as likely to incur some sort of injury compared to those victims who offer no resistance to the offender (Gabor et al., 1987). Of course, this is not conclusive as the victims could have resisted after the injuries took place, but victim resistance to robbery certainly merits investigation.

According to Gabor et al. (1987), there are several reactions that a victim could have toward a robber. Most commonly, victims are compliant with the demands of the

robber. Whether this is because of fear, inability to react, or surprise; the majority of victims choose to comply with the robber's demands.

Another frequent reaction to robbery is the hesitation of victims to do as the robber demands (Gabor et al., 1987). It might take the victim a few seconds to accept the reality of the robbery. Many victims are caught off guard, and since most robberies occur in less than one minute, victims may not be prepared to act quickly (Gabor et al., 1987). Hesitation is, therefore, a natural reaction to the immediate loss of autonomy (Jacobs, 2000). One robber is quoted by Jacobs (2000:93) to have stated,

Man, he was like, he was so shocked that we came up on him that he just, we took the money, he had the money and we took it. We had ran and we took it. He just like, "Damn." *K-Red*

However, it should be noted that those in poorer areas are more familiar with the codes of the street, therefore compliance as a reaction to robbery comes quickly and without panic to them (Baumer, Horney, Felson, & Lauritsen, 2003). Additionally, Baumer et al. (2003) note that screaming for help in these impoverished areas may be ineffective, as residents are unlikely to come to the aid of the victim.

Some victims, though few in number, refuse to obey the demands of the robber (Gabor et al., 1987). This recalcitrance can be verbal or physical, though usually the former. It is not uncommon for victims to tell the robber that s/he does not have any money, even though in reality s/he does possess some quantity of money. Some victims may choose just to walk away or remain silent, both of which clearly are not actions in compliance with what a robber would desire.

To note, some robbery victims respond with a spontaneous reaction (Gabor et al., 1987). Since robberies often occur in rough areas of cities, it would not be uncommon for robbers to encounter victims with weapons themselves. Schnebly (2002) notes that when an armed offender meets a defiant and armed victim, there is more of a threat of severe injury as one of the parties must either use the weapon to defeat his adversary or retreat. This encounter may trigger the “weapons effect” which states that the sight of a weapon may elicit aggression from angered persons (Berkowitz & LePage, 1967). Since the likelihood of retreat is not high, serious injury is often the result (Schnebly, 2002). Furthermore, victims may struggle from the beginning and defy the robber’s demands. This scenario, however, is not often the case during robberies as often victims are caught off guard and do not have time to pull out their own weapon or to respond in an effective way.

Hence, research indicates that perhaps the best way to avoid victim injury is to remain compliant during a robbery. Certainly, brandishing a weapon to the offender is likely to cause injury (Schnebly, 2002). Gabor et al. (1987) similarly mention that refusal to obey the robber’s commands and spontaneous reactions by the victim are more likely to incite violence leading to injury from the robber. These factors, coupled with common sense, might lead one to believe that it is best to stay calm and comply with a robber’s demands if the victim is interested in avoiding injury.

Race, Victimization, and Injury

While victim resistance is one factor in robbery injury, Zimring and Zuehl (1986) remark that race is a factor as well. They report that it is the black population of Chicago

that experiences the most victimization, at 60% of all incidents of robbery in addition to a high concentration of victim harm. This statistic could very well result from greater community resistance. As Wright and Decker (1997) note, blacks are more likely to resist an armed robbery because they often carry more on their person that could be lost. As one robber put it, "...whites accept that they are being robbed...but I noticed that blacks would rather die than give you they bucks and you damn near have to be killing [them] to get it" (Wright & Decker, 1997:84). Because many blacks are poor, giving up their money and belongings can be a significant sacrifice, whereas often for whites, this is perceived not to be the case.

In the case of commercial robberies, employees are frequently instructed to follow the orders of robbers to ensure that employees are not injured. Nevertheless, it is the case that in the United States, many Asians own small private businesses such as restaurants, beauty salons, and dry cleaning facilities. These individuals are also likely to work in their own shops and since it is their own money and goods at stake during a robbery, they are likely to resist victimization (Matthews, 2002). Since resistance can be a contributing factor in injury, Asian business owners are commonly injured as a result of robbery attempts. This injury occurs not necessarily because the shop owners are Asian, but due to the fact that Asians often resist robbers, therefore become injured (Matthews, 2002).

Naturally, all races are victimized. However, robbery tends to exacerbate racial tensions in the United States as it is often committed by a black offender against a white victim (Hacker, 1992). Hacker (1992:87) states, "For white victims caught in interracial robberies the loss of cash or valuables is seldom their chief concern. Rather, the racial character of the encounter defines the experience." Additionally, Wright and Decker

report that white drug users are often targets of robbers as they often visit black, crime ridden neighborhoods to purchase illegal drugs. Though there are many reasons why some races fall victim to robbers more often than others, resistance is often associated with injury; and it might be concluded that blacks are more likely to get injured because they are more likely to resist a robbery (Wright & Decker, 1997). However, one armed robber suggested a good point in saying that, "Armed robbery is not about black or white- it's about the green" (Wright & Decker, 1997:85).

Sex, Victimization, and Injury

There is a reason most people associate criminality with males. Generally, it is mostly males who are committing violent crimes and being victimized in the United States (Nettler, 1984). Zimring and Zuehl (1986) explain that males are two times more likely to be a victim of robbery than females. Moreover, that ratio doubles again when examining injury-related circumstances, as the injury rate of the Chicago study is four to one.

Males are not solely the targets of robbery, however. There are many males who would put up much resistance and others who would readily give in to the demands of an assailant. One robber explained to Wright and Decker that he prefers to target females for his robberies as he perceives them to be easier targets. Matthews (2002) concurred and stated that females are generally more compliant and therefore more desirable targets of robbery. In certain circumstances, this may be the case substantiated only by the common assumption that women are timid and unlikely to resist. The proverbial tables

might be turned, of course, if a female robbery victim is carrying a weapon. Therefore, it may be unwise of robbers to assume that all females are easy targets for robbery.

Though females tend to be thought of as easier and more compliant targets, they do get robbed and they do get injured, though just not as frequently as males. In fact, Zimring and Zuehl (1986) note that in Chicago, male victims comprise 80% and female victims comprise 20% of the 342 injuries experienced during the one year study. Additionally, males represented 93% and females represented 7% of the serious injuries inflicted during robberies in that city (Zimring & Zuehl, 1986). Again, resistance is the key factor that can be used to explain why this is the case. Robbers may use more initial force against males in an attempt to prevent any resistance from them. Therefore, if force is used during a robbery, one can assume a high likelihood of injury.

Age, Victimization, and Injury

The perception that offender age has an effect on injury may keep some in fear of youthful offenders. Nonetheless, Hindelang et al. (1978) state that age actually has little to do with the likelihood of injury during victimization. In fact, in their 1972 study, Hindelang et al. found similar percentages of offenders under and over 21 that injured their victims (26% and 27%). While only classifying age into two categories is not necessarily an appropriate measure of age, these figures do indicate that disproportionate fear of a young offender is not warranted, as victims are just as likely to be injured by a robber regardless of age.

Though Hindelang et al. (1978) found there are equal numbers of older and younger offenders; it is often the former group that is victimized. In Felson, Baumer, and

Messner's 2000 study of victimization, they found that younger individuals were less likely to be injured than older people. Essentially, robberies involving younger victims have a propensity to be less serious. Perhaps it is assumed that older people have more money and are more likely to resist a robber, therefore initial injury is necessary in gaining the victim's compliance.

Weapon Use, Victimization, and Injury

Though guns were the weapon of choice in the majority of murders in Chicago, they are not quite as prevalent in causing robbery injuries. Guns represent nearly the same percentage of weapons inflicting injuries compared with other types of weapons – including knives (Zimring & Zuehl, 1986). Guns did, however, cause 34% of serious injuries in Zimring and Zuehl's 1986 study. What may come as a surprise is that personal force actually causes the majority of all injuries at 54%. Personal force also causes 32% of serious injuries during robberies – a similar percentage of serious injuries that guns cause (Zimring & Zuehl, 1986). Though there are many means of causing injury such as guns, knives, fists, bottles, and rocks, many injuries are serious, yet non-lethal. For instance, some of the more callous robbers suggest that they hit their victims, often with a gun, prior to exiting the crime scene in order to afford time to escape before the victim can get a look at them and call the police (Wright & Decker, 1997).

There are, however, different situations that seem to prompt weapon use over other situations. For instance, Zimring and Zuehl (1986) found in their Chicago study that less than a third of robberies without victim injuries involved more than one offender. Similarly, more than three quarters of the robberies that involved serious injury

or death was group related (Zimring & Zuehl, 1986). Zimring and Zuehl (1986) explain that commercial establishments are often better prepared to protect themselves.

Businesses frequently have security technologies, security guards, alarms, and other devices to prevent robbers from being successful in their attempts. Therefore, robbers are more likely to work in groups and with weapons in commercial establishments. Robbers anticipate that with the help of weapons and the strategy of teams, they can overcome the barriers put forth by businesses and be successful in their criminal endeavors. Though it does seem evident that the more offenders that are involved in a robbery, the higher the probability there is of injury, Zimring and Zuehl (1986) do note that the small Chicago study cannot be used to predict injury or death. A much larger sample must be analyzed in order to substantiate such a claim.

Above all, weapon use is seemingly related to the power the offender holds. In the society and culture of the United States, where half of all households possess a gun, it is evident that Americans value the ability to control situations with weapons (Kleck & McElrath, 1991). However, with this power, Americans also realize that weapons are violence enhancing and therefore increase the likelihood of injury or death to an individual (Newton & Zimring, 1969). According to Kleck and McElrath (1991), weapon use resulting in injury may be the result of a failed attempt at a preferred mode of exercising power. Essentially, weapon use may be a robber's last resort after verbal coercion has failed. As noted in Wright and Decker's 1997 study, robbers generally do not desire to injure or kill their victims, but victim injury or death can and does occur.

Routine Activities Theory

After World War II, the United States experienced a marked increase in crime. From 1960-1975, the Uniform Crime Report indicated that reported rates of robbery increased by 263%, aggravated assault by 164%, forcible rape by 174%, and homicide by 188% (FBI, 1975). Similarly, the FBI (1975) revealed that property crime rates rose with burglary rates, increasing by as much as 200% during the same time period. This considerable rise in crime was due to various factors.

To begin, the professionalization of the police led to better reporting and recording of crime even though departments were still considered largely ineffective (Conklin, 1972). Additionally, the United States experienced a “coming of age” of sorts fueled by the post World War II baby boom. Conklin also explains this upsurge of crime with the dynamic distribution of income. While it is difficult to verify that poverty increases crime, the mounting number of unemployed and those on a quest for “easy money” seemed to swell during the 1960s. Finally, the transformations in race relations during the 1960s also contributed to an increased crime rate (Conklin, 1972). Conklin (1972) clarifies that young black males in many cities became involved in urban riots, some of which spawned an insurgence of robberies. Thus, with the advent of increasing crime coming into the scope of criminologists and sociologists, Cohen and Felson investigated the trend and offered Routine Activities Theory as clarification.

Essentially, Routine Activities Theory proposes that three elements must be present in space and time for a crime to occur. Cohen and Felson (1979) suggest that a motivated offender must come into contact with a suitable target in the absence of a capable guardian. If any one of the three of these factors is missing at any time, a crime

cannot occur. For instance, one can have a desirable target, such as an expensive automobile, and be capable of protecting it. Without a motivated offender, though, the driver is not likely to get car-jacked. Similarly, individuals may be fully capable of protecting their property and selves, and a motivated offender may be present, but without a suitable target the intended crime cannot occur. As a final example, motivated offenders can find a suitable target but if capable guardians are present, then the intended crime cannot occur in full.

Though any of the aforementioned three factors can be absent to prevent a crime, it is often the case that the structural changes in routine activities influence the likelihood of victimization (Cohen & Felson, 1979). Effectively, if the proportion of suitable targets, or even the number of suitable targets, were to remain stable in a community, changes in routine activities would lead to increased occurrences of crime. These changes in routine activity structure can stem from a wide range of possibilities. Use of the automobile, small power tools, weapons, highways, and telephones are all items that have changed and continue to change the way Americans go about their daily lives (Cohen & Felson, 1979). These items not only allow people to go through their daily routines easier, but these items also can work against individuals. Criminals have similar access to items of convenience such as automobiles and telephones; these items often aid criminals in the planning and operationalization of their deviant and criminal acts.

Cohen and Felson (1979:593) note that routine activities are defined as any recurrent and common activity which provide for the basic community and individual need, including those of biological and cultural origins. Therefore, routine activities can occur at home, in jobs away from the home, or in any other activities that take place

outside the home. In essence, it is the shifting of these routine activities that invites crime. In Cohen and Felson's 1979 study, shifting from home activities to routine activities outside the home was found to explain a solid amount of crime. Since an increasing number of people travel great distances to get to work and leave their homes unattended, criminals see the window of opportunity during the daytime hours and take advantage. Often, offenders choose targets near their own homes, and so unattended houses and property such as automobiles could be prime targets. Hence, household and family activities offer the lowest risk of victimization as the nearer one is to his or her home, s/he can provide more adequate guardianship (Cohen & Felson, 1979).

Social changes in the United States during the 1960s can assist in explaining why there were many shifts in routine activities. As discussed, when houses are left empty during the day, or at night, they are primary targets of crime. During the 1960s, the married female labor force increased by 31% (Cohen & Felson, 1979). Consequently, many more homes were unattended during the day than existed during previous decades. Cohen and Felson (1979) stated that the proportion of households left unattended at 8:00 AM increased by almost half between 1960 and 1971. Since American tradition often found women as stay-at-home mothers, they were previously able to provide constant guardianship for their homes and belongings. When a percentage of those women moved into the work force, Routine Activities Theory supports that crime would increase in those locations.

There were more factors at work in the changing social structure of America. For instance, families were enjoying more vacations. In fact, families were taking 81% more vacations between 1967 and 1972 (United States Census Bureau, 1973). Largely,

Americans were spending more time away from home. Whether as a result of work, or because of leisure, Americans found reason to leave their homes unattended and found themselves falling victim to the increasing crime rate during the 1960s.

All ages of people have different lifestyles; and young people often tend to be the most active. Consequently, it can be expected that they leave themselves in the position to be victimized. Younger persons are often not in their residences regularly and frequently keep dissimilar hours than those of the rest of the community. Younger people are often less likely to be married, therefore are more likely to live alone (Cohen & Felson, 1979). This as well as their engagement in peer activities rather than family activities opens them up for victimization at higher levels than others due to a lessened ability to provide adequate guardianship.

Cohen and Felson (1979) also consider the unemployed and handicapped to be at greater risk for victimization. The unemployed are often far less dynamic and engaged in standard social activities that others enjoy. Moreover, the handicapped are frequently unable to protect themselves, which renders them nearly helpless in many critical situations such as victimization.

While social changes contributed greatly to increased crime during the 1960s and early 1970s, the ever-changing consumer goods definitely had some effect as well. As the economy strengthened, individuals were purchasing more goods. More people were purchasing a family vehicle, or even two. Concomitantly, the size and weight of goods was decreasing for increased portability. Televisions and radios were smaller as were many kitchen appliances. According to Cohen and Felson (1979), the decreased size and

weight of many goods enabled thieves to execute burglaries easier and steal more at any one given time.

Though many factors influence crime rates, the change of routine activities was introduced by Cohen and Felson in 1979 as an accurate explanation of the dramatic increase in crime during the 1960s. Essentially, the changes to the routine activity structure in American society and to a corresponding target suitability and reduction in proper guardianship led to the increase in criminal victimization (Cohen & Felson, 1979).

Routine Activities Theory and Injury in Detroit, Michigan

To review, Routine Activities Theory requires the convergence of a motivated offender, a suitable target, and the absence of a capable guardian in time and space (Cohen & Felson, 1979). However, this theory offers a general explanation of victimization, and requires a certain level of dissection to understand injury as a result of robbery victimization in Detroit, Michigan. The routine activities of the residents of the Eighth Precinct of Detroit often place them in the position to be victimized and often injured as is evidenced by Detroit's crime rates discussed previously. Overall, the community itself is rather poor with 14.4% of its families living below poverty (United States Census Bureau, 2002). This unfortunate reality awards many people a large amount of free time due to unemployment and provides the opportunities for victimization from violent crimes such as robbery.

Though the community does have its unproductive and deviant citizens, many residents are hard-working and attempt to live honest lives in Detroit. Even these individuals find that their activities must be carefully selected in an attempt to avoid

robbery, in particular. For instance, those that must work two or more jobs, or work late hours, may return home from work late at night, placing them in danger as they walk home in the dark without adequate guardians. Therefore, Detroit citizens can find Routine Activities Theory helpful in understanding why they get injured in their communities during robberies.

As discussed, a motivated offender is necessary to commit a robbery (Cohen & Felson, 1979). Additionally, this offender must be motivated to cause injury to the victim as well. Many factors can motivate robbers to injure their victims; perhaps the most common is the need to gain compliance from them. It is not uncommon for victims to resist a robbery; as such, shooting them in the foot or slashing them across the face with a knife quickly gives the offender control of the situation again.

Furthermore, assailants may injure a victim in order to give the robber time to escape (Wright & Decker, 1997). If the victim falls to the ground with a gunshot or stab wound, it is unlikely that s/he can get a good look at the offender or engage in pursuit following the occurrence of the crime. From a robber's perspective, these reasons are valid in order to gain victim compliance during a robbery. However, Wright and Decker (1997) expose one robber's view stating that sometimes he likes to injure his victims for fun, as he gets a malevolent pleasure from causing injury.

For robberies to occur, though, suitable targets must exist. Despite the fact that Detroit's Eighth Precinct is a relatively poor area with 8.3% of households receiving public assistance and 10.5% of its citizens unemployed (United States Census Bureau, 2002); residents do still possess enough valuable items and money to attract robbers' attention. Cash, regardless of its quantity, is always of value to robbers. Primarily,

robbers observe people who look like they might have money and target them (Wright & Decker, 1997). These might be people who have nice clothing, they might be talking on a cellular telephone, or they may have just exited a bank or store. Robbers also target known drug dealers as they frequently have cash on hand (Jacobs, 2000). Additionally, if robbers can get cash from drug dealers, they can also take drugs, which can either be re-sold or used. For example, a robber calling himself “Baby Doll” informed Jacobs that, “...[With drug dealers] you get money, you get the dope, you get jewelry... take off with the car, sell the car, sell everything” (p. 25). As a bonus, the drug dealers are unlikely to report victimization to the police; therefore, it never occurred according to police data. The police will not be looking for the robber who therefore can continue terrorizing the neighborhoods. It is this type of robbery, though, that is likely to cause injury as well. Drug dealers are less likely to cave to the demands of an armed robber and are likely to resist. Drug dealers’ reputations and financial success depends on their recalcitrance (Jacobs, 2000). It is likely that the dealers themselves are armed, introducing yet another aspect of robbery. This presents a situation where either party; the offender or the victim could become injured as a result of the robbery.

Suitable targets may also be evident in the Eighth Precinct because of the prevalence of status symbols. Often, inner city residents choose to acquire material items such as flashy jewelry, expensive vehicle, and designer clothing (Anderson, 1999). In his ethnographic study of street culture, Elijah Anderson (1999:73) explains that these status symbols reflect more than just taste, but also represent the willingness of possessions that may need defending. This flaunting of wealth in an impoverished area often can create extreme jealousy leading to robbery and injury. In the case of car-jackings, some robbers

Wright and Decker (1997) interviewed feel as though since they cannot ever afford a new, expensive vehicle, they deserve it anyway and take it from another who perceivably does not deserve it. Therefore, in their minds, they have done nothing wrong. However, this sort of acquisition of material goods often ends in personal violence. For instance, one robber explained to Wright and Decker, “I don’t have no remorse. They got money. I got to get mine, so I’ll take yours” (p.25).

The absence of a capable guardian also encourages victimization. Robbers generally know where the best locations are to commit robberies. They are likely to strike in areas where the police are either not present or not looking for a robbery to occur. Robbers generally tend to take into account the proximity of police stations and routine patrols in the selection of their targets (Gabor et al., 1987). In fact, some robbers choose to rob businesses near police stations, under the assumption that the stores may have a false sense of security due to the close proximity to the police (Conklin, 1972). Therefore, the lack of guardianship allows for the robbery to be sudden and allow the robber to escape without identification or apprehension.

Additionally, robbers look for victims who are not likely to be able to defend themselves (Wright & Decker, 1997). A robber’s worst nightmare is a victim that has on his or her person a weapon and is willing to use it. Therefore, to avoid confronting armed victims, older people and those who are white are likely to be targeted. Both demographic groups are fairly likely to accommodate the robber and his demands (Federal Bureau of Investigation, 1995). However, it is these types of people who may fall victim to injury as well. If they try to resist at all, the robber will likely feel threatened and may resort to violent means of inducing compliance.

Since offenders and targets generally remain fairly stable, it is evident that the routine actions of individuals provoke injury as a result of armed robbery. When victims place themselves in vulnerable situations, a robbery may actually occur. If it does, their level of resistance and specific behavior influence their likelihood of being injured by the robber.

Another Approach to Explaining Victimization

Though Routine Activities Theory works well to describe injury as a result of robbery, there are always alternative explanations. Another such explanation was given a year before Cohen and Felson's 1979 Routine Activities Theory. Hindelang et al. (1978) proposed the lifestyle/exposure model to describe rates of victimization across different groups.

Essentially, the lifestyle/exposure model describes the variations in personal rates of victimization by variations in individuals' lifestyles (Hindelang et al., 1978). Hindelang et al. (1978) note that the way people allocate their time between different leisure and vocational activities contributes to their likelihood of victimization. Therefore, if a person tends to recreate in a location known for high crime rates, his or her likelihood of victimization would be higher than those who do so in other locales. Specifically, the way people choose to spend their time determines what types of people they might come into contact with, and at what times they encounter them. Some of these people may be criminals. For instance, because few capable guardians would be present, if someone decides to do their jogging at 1:00 AM on the streets of the inner city, s/he might be more likely to be victimized compared to the individual who chooses to

exercise during the day in a gym in the suburbs. Therefore, Hindelang et al. (1978) explain that criminal victimization is not evenly distributed across time and space because offenders are not representative of the general population and certain behaviors become high risk depending on time, location, and the people involved.

Summary

In essence, the literature on robbery victimization and injury suggests that there are several factors that may increase the likelihood of injury significantly. Primarily, victim resistance has been a recurring theme throughout the literature. According to many researchers, it seems that the level of resistance that the victim provides can be influential in the robber's decision on using violence that could result in injury. In addition, the race of the victim may have some effect on the likelihood of victimization and on that individual's proclivity to resist. Yet while women are often targeted for robbery victimization, generally they are not injured nearly as often as males. Hindelang et al. (1978) demonstrated that younger and older victims are injured at a similar rate – invalidating any supposed distinctions between age groups. Lastly, though many injuries are performed with weapons, the overwhelming majority of injuries is minor and is a result of personal force, not weapon use (Zimring & Zuehl, 1986). However, the presence of a weapon does make it more likely that an injury would occur, as a serious injury is less likely without a weapon.

Though the above factors influencing injury during robbery do provide insight, Routine Activities Theory affords an appropriate theoretical explanation. The convergence in time and space of a motivated offender, suitable target, and an incapable

guardian do most certainly explain criminal victimization (Cohen & Felson, 1979). As routine activities aid in creating different lifestyles, they also have the potential to place victims in the position to be injured. Individuals can find themselves victimized and injured differently due to dynamic lifestyles. Actions such as maintaining irregular hours and leaving residences unoccupied until late at night place individuals in the position to be victimized (Cohen & Felson, 1979). Therefore, a single explanation for why injury occurs during a robbery cannot be applied, as there are multiple factors present that may supply a cooperative explanation of injury as a result of robbery.

CHAPTER III: DATA AND METHODS

Strategic Approaches to Community Safety Initiative (SACSI)

Data used in this study were initially collected for the Strategic Approaches to Community Safety Initiative (SACSI) project in an effort to ascertain information on weapon possession and use in the Eighth Precinct of Detroit, Michigan. The primary objective during data collection for SACSI was to capture instances of criminal acts involving guns. Therefore, the two crimes selected to be measured were carrying concealed weapons (CCW) and armed robberies (RA). CCW incidents that were collected were either lone offenses or often coupled with other offenses. On the other hand, collected RA offenses were solely those of “armed robbery-business or commercial,” “armed robbery-personal,” and “RA-UDAA” (unauthorized driving away of an automobile or car-jacking). Attempted armed robberies were also included given that the success of the robber in taking possessions from the victim is irrelevant.

Data were collected at Detroit’s Eighth Precinct Police Station, located on the northwest side of the city. The Detroit Police Department (DPD) uses a standardized form called a “Preliminary Complaint Record” (PCR) for incident reporting. This one-page form is completed by an officer when reporting a criminal incident. The form captures information such as the type of offense, its location, complainant and perpetrator information, as well as the details concerning the processing and the outcome of the crime. PCRs are not used exclusively for armed robberies, but for all crimes ranging from identity theft to homicide. PCRs are often filled out by the officer in the field; however, some PCRs are filled out at the police station as a result of walk-in crime reports. For the SACSI project, PCRs of the following offenses were photocopied and

entered into a database: armed robbery and attempted armed robbery (RA), carrying concealed weapon (CCW), and armed unauthorized driving away of an automobile (UDAA-armed), or more commonly known as a car-jacking. Attempted car-jackings were collected as well.

Current Study

Relevant to this study are the data collected on armed robberies during the years of 2001 and 2002. The State of Michigan defines robbery as “the taking or attempting to take anything of value from the care, custody, or control of a person or persons by force or threat of force or violence and/or putting the victim in fear” (Michigan State Police, 2002). Armed robbery is simply classified as a robbery that is carried out with a weapon. Weapons can range from broken bottles to guns. Armed robbery is, however, distinct from robbery, which is committed without any type of weapon. Therefore, in this study, armed robberies and armed car-jackings are the crimes which will be analyzed, as unarmed robbery data were not collected for SACSI and also is not pertinent to the current study. Additionally, car-jackings and attempted armed robberies will be included as armed robberies unless specified otherwise.

During 2001, the City of Detroit had 7,096 reported robberies across all precincts (Detroit Police Department, 2002). Though that number fell to 6,288 in 2002, it is evident that gun crimes - specifically in the form of armed robbery - are a considerable problem in Detroit (Detroit Police Department, 2002). Since armed robbery is both a property and a personal crime, there is great potential for injury during the occurrence of these crimes, hence supporting the purpose for this study.

Study Context

Before examining the data, it is important to have a basic understanding of the location where these armed robberies took place. Detroit is a large working class city of 925,051 (United States Census Bureau, 2002) located in southeastern Michigan on the banks of the Detroit River, which links the Great Lakes Huron and Erie. Though many factors might contribute to finding an explanation as to why Detroit has serious crime problems, there is no debate as to the fact that weapons and crime are prevalent on the streets of the city. Citywide, there were 6,288 robberies, 402 homicides, and 12,542 assaults reported in 2002 (Detroit Police Department, 2002). While these statistics are lower than 10 years earlier when there were 12,194 robberies, 595 homicides, and 12,433 assaults, it is evident that crime is a major concern in Detroit (Detroit Police Department, 2002). Thus, this study aims to provide more clarification of armed robberies in Detroit that may be valuable in resolving the problem.

The Eighth Precinct of Detroit, Michigan is an area designated by the Detroit Police Department that encompasses an area of 15.4 square miles in the northwestern portion of the city (Detroit Police Department, 2004). In 2000, 106,330 of Detroit's citizens lived in the Eighth Precinct (United States Census Bureau, 2000). Of those citizens, 89.4% were black, while 8.1% were white. A minority of citizens were Asian (.4%), Native American (.3%), and "other" (.3%). The Eighth Precinct also had a bi-racial population of 1.6%. Residents 17 years of age or younger comprised 17% of the population, while 13.8% of those aged 25 years or older held at least a bachelor's degree (United States Census Bureau, 2000). In 2000, 8.3% of the households in Detroit's Eighth Precinct received public assistance and 10.1% of its citizens were unemployed.

Additionally, 14.4% of families in the Eighth Precinct lived below the poverty line (United States Census Bureau, 2000).

Variables

The objective of this study was to determine if certain characteristics of robbery victims and their actions can be utilized in estimating the likelihood of injury during a robbery. Consequently, the dependent variable for this study is *injury during a robbery or attempt*. There are six characteristics of robbery victims under analyses related to their actions (or inactions) and the circumstances of the situation which may affect the likelihood of injury. These six characteristics are: 1) *the age of the victim*, 2) *the sex of the victim*, 3) *the race of victim*, 4) *the type of weapon used in the robbery*, 5) *victim resistance*, and 6) *the time of day that the robbery occurred*. These variables were selected based on the combination of existing evidence from the literature discussed in Chapter II, and the influence of variables that are theoretically, practically, and intuitively relevant.

Dependent Variable

As mentioned, the purpose of this study was to determine if injury can be predicted by characteristics of the robbery incident and/or the victim. Therefore, the dependent variable is specific physical injuries incurred as a result of armed robbery. In the data set, whether injury occurred during an armed robbery can be determined by many different factors. The data set was already designed in a manner which broke the incident of robbery down into three stages. These stages allow better understanding of

what events occur during the different phases of an armed robbery. Additionally, injury can occur at any of the different stages of robbery. If an injury occurs during the robber's approach or during the initiation of a robbery, then for this project it is considered to have occurred during the "entry" stage. As the robbery takes place, the actions that the robber and the victim take that determine the outcome of the robbery compose the processing stage. Lastly, as the robber attempts to end the robbery and leave the situation, this is referred to as the exit stage. Thus, to reflect these stages of robbery, several variables were recoded to represent one single dependent variable representing victim injury. The variables that were present in the data set and merged are:

Table 2. Armed Robbery Stages and Merged Variables.

Entry	Gun fired and hit target?
	Other weapon used?
	Hit victim with gun?
	Bump victim physically?
	Injury took place?
Processing	Gun fired and hit target?
	Other weapon used?
	Hit victim with gun?
	Bump victim physically?
	Injury took place?
Exit	Gun fired and hit target?
	Other weapon used?
	Hit victim with gun?
	Bump victim physically?
	Injury took place?

If any of the armed robberies indicate that at least one of the above variables equals "yes," then injury will be considered to have occurred. The recoded dichotomous variable ("injury") will indicate "yes" with a "1" and "no" with a "0." Additionally, robbery injury will be examined separately in each of the robbery circumstances of entry, processing, and exit.

Independent Variables

Table 3. Independent Variables.

<i>Independent Variables</i>	<i>Coded</i>
Complainant age	Continuous
Complainant sex	Male = 1, Female = 0
Complainant race	Black =1, All others = 0
Weapon type	Gun = 1, All others = 0
Victim resistance?	Yes = 1, No = 0
Time of day incident occurred (4 variables)	a. 12:00 PM-6:00 PM =1 All other times = 0 b. 6:00 AM-12:00 PM=1 All other times = 0 c. 6:00 PM-12:00 AM = 1 All other times = 0 d. 12:00 AM-6:00 AM = 1 All other times = 0

Table 2 provides information on the recodes for the independent variables. The first independent variable that will be used to predict victim injury during robbery is the complainant's age. This is a continuous variable representing the victim's age in years. The sex of the complainant is another independent variable that will be examined. This variable, however, is coded as "male" or "female" in the data set. For this study, the variable indicating the victim's sex was recoded as a dummy variable indicating males as "1" and females as "0."

Similarly, the race of the victim was specified as: American Indian/Alaskan Native; Arab American/Chaldean; Asian; Black/African American; Hispanic/Latino; Multi-racial; Native Hawaiian/Other Pacific Islander; White; or Other. Because the Eighth Precinct's racial composition includes 89.4% Blacks/African-Americans, these variables were recoded into dummy variables with the value of Black/African-American equal to a "1," and all other values (races) equal to a "0." Races other than

Black/African-American were few enough in numbers that their individual inclusion was not merited.

Due to the nature of the study, it is assumed that a weapon was used in each incident. Armed robbery, by definition, is a robbery that is committed with a weapon. The weapon variable was recoded into a dummy variable with guns represented with a "1" and all other weapons expressed with a "0." The final independent variable is the time of day that the robbery occurred. Recoding time of day as AM and PM may be misleading as AM and PM both occur during the day and the night. Therefore, to reduce confusion, four variables were utilized to better determine the time of day that robberies took place. The four time periods that will be examined are: 12:00 PM-6:00 PM, 6:00 AM-12:00 PM, 6:00 PM-12:00 AM, and 12:00 AM-6:00 AM. A "1" will indicate that a robbery did occur during each time period and a "0" will represent that the robbery did not take place during that time. This dichotomous coding will be consistent for all four variables.

Methods

For all variables, univariate statistics were computed in order to determine descriptive information. Where appropriate, the mean, the percent, and number were derived and compared. This descriptive information provides vital statistics about the armed robbery data.

After recoding several variables, both the dependent variable and all the independent variables became continuous items suitable for independent samples t-tests to facilitate bivariate analyses by testing the relationship between the armed robbery

characteristics and injury as a result of the crime. Logistic regression will be utilized as the multivariate method. Finally, logistic regression will be used to test for a relationship between the characteristics of the robbery victim/robbery and injury as a result of armed robbery while controlling for the other characteristics of the robbery.

Hypotheses

Based on an examination of the literature on armed robbery, the following hypotheses are tested:

H₁: Injury is more likely when victims resist.

According to Gabor et al. (1987), those that resist a robber are ten times as likely to incur some sort of injury compared to those victims who offer no resistance to the offender. Though not resisting an armed felon aligns with common sense, it is hypothesized that similar results will be discovered from the armed robbery data representing the Eighth Precinct of Detroit, Michigan.

H₂: Male victims are more likely to be injured than are female victims.

According to Zimring and Zuehl, in their 1986 study of Chicago robbery victimization, males are two times as likely to be robbed and four times more likely to be injured during a robbery than are females. Similar results are expected in this study of Detroit, Michigan robbery victimization injuries.

H₃: Armed robberies that occur between the hours of 6:00 PM to Midnight are more likely to result in victim injury.

Routine Activities Theory suggests that victimization is likely to occur while potential victims are engaging in routine activities where there are fewer capable guardians present and available. Therefore, during the hours of 6:00 PM to 12:00 AM it

is hypothesized that motivated offenders may be likely to rob and injure other residents of Detroit's Eighth Precinct.

H₄: Armed robberies where a gun is present are more likely to result in victim injury.

Zimring and Zuehl's 1986 Chicago study revealed that 34% of robbery injuries were caused by guns. Regardless of whether the victim or the offender is the individual in possession of the gun, it is hypothesized that the mere presence of the gun during an armed robbery increases the likelihood of victim injury. After all, without a gun present, victims cannot receive a gunshot wound.

Based on the literature, the four hypotheses are examined to determine whether resistance, sex, time of day, and the presence of a gun have any bearing on whether or not victims are injured during armed robberies. Data analyses are used to test these hypotheses and are explained in the following chapter.

CHAPTER IV: RESULTS

This study focuses on testing for factors likely to lead to or encourage victim injury during armed robbery. Univariate, bivariate, and multivariate results are presented and discussed.

Univariate Statistics

This section discusses descriptive information about the data used in the study. Relevant variables will be described as well. Table 1 summarizes descriptive data for the sample as a whole.

Table 4. Descriptive Information for Armed Robbery Sample (N = 1213).

Offense types

Armed robbery	75.02%
Car-jacking	16.90%
Attempted armed robbery	6.36%
Attempted car-jacking	1.73%

*Armed robbery and attempted armed robbery categories include: RA Business, RA Citizen, RA Assault, RA Bank, RA Shooting, RA Kidnapping, RA Cutting, and RA Home Invasion.

The above table includes basic descriptive information for the armed robbery data that is useful in understanding the data that will be analyzed. The following tables provide univariate statistics for the dependent and independent variables used in the study.

Table 5. Univariate Statistics for Dependent Variables (N=1213).

	<i>Number</i>	<i>Percent</i>
<i>Entry injury</i>		
<i>Injury took place</i>	26	2.1
<i>Bumped victim physically</i>	27	2.2
<i>Hit victim with gun</i>	14	1.2
<i>Fired gun and hit target</i>	0	0.0
<i>Other weapon used</i>	7	0.6
<i>Total</i>	57	4.7
<i>Processing injury</i>		
<i>Injury took place</i>	101	8.3
<i>Bumped victim physically</i>	49	4.0
<i>Hit victim with gun</i>	44	3.6
<i>Fired gun and hit target</i>	27	2.2
<i>Other weapon used</i>	43	3.5
<i>Total</i>	181	14.9
<i>Exit injury</i>		
<i>Injury took place</i>	7	0.6
<i>Bumped victim physically</i>	0	0.0
<i>Hit victim with gun</i>	2	0.2
<i>Fired gun and hit target</i>	7	0.6
<i>Other weapon used</i>	1	0.1
<i>Total</i>	11	0.9
<i>Any injury</i>	239	19.7

*Entry injury, processing injury, and exit injury do not equal the total since injuries that occur during one or more stage of an armed robbery may be duplicated. Similarly, the types of injury do not equal the total since more than one type of injury could have occurred in each phase of the robbery or incident.

Table 5 illustrates that 239 of the 1,213 armed robbery victims were injured at some point during the robbery incident. It is evident that the majority of injuries occur during the robbery processing, specifically with “bumped victim physically” maintaining the highest frequency, with 49 incidents occurring. However, victims that were bumped physically during the processing stage only accounted for 4% of all injury.

Table 6. Univariate Statistics for Independent Variables.

	<i>Number</i>	<i>Percent</i>
<i>Mean Age = 33.88 (Range: 10-93)</i>	1156	95.30
<i>Sex</i>		
Male (1)	789	65.0
Female (0)	377	31.1
Unknown	47	3.9
<i>Race</i>		
Black (1)	975	80.4
All others (0)	144	11.9
Unknown	94	7.7
<i>Weapon type</i>		
Gun (1)	867	71.5
No gun (0)	101	8.3
Unknown	245	20.2
<i>Resistance</i>		
Yes (1)	73	6.0
No (0)	1140	94.0
Unknown	0	0.0
<i>Time</i>		
Midnight to 6:00 AM	335	27.6
6:00 PM to Midnight	444	36.6
Noon to 6:00 PM	234	19.3
6:00 AM to Noon	162	13.4
Unknown	38	3.1

As is evident in Table 5, the sample has a mean victim age of 33.88. Additionally, the vast majority (65%) of the victims are male. Overwhelmingly, blacks are most commonly victims in the Eighth Precinct at 80.4% leaving whites and other races to account for only 11.9% of the victims in the data set. Guns, however, represent the vast majority of weapons used during armed robberies in the Eighth Precinct in 2001 and 2002. Though 245 incidents had no specification on weapon type, 71.5% of the incidents in the data set had guns present during the offense. Moreover, victims did not

frequently resist an armed robber. Only 6% of the 1213 incidents involved some sort of victim resistance. Though victims were not likely to resist, their robbers were often likely to strike under the cover of darkness. In the case of this data set, 27.6% of the armed robberies occurred between the hours of midnight and 6:00 AM and 36.6% of the incidents occurred from 6:00 PM to midnight.

Bivariate Statistics

In order to test each independent variable for a relationship with the dependent variables, independent samples t-tests were conducted as the bivariate method to compare the means. The results are as follows:

Table 7. Independent Samples t-test.

	Any injury		Entry injury		Processing injury		Exit injury	
	Mean	t	Mean	t	Mean	t	Mean	t
Mean Age								
Injured	34.32	-0.53	35.50	-0.88	34.31	-0.44	35.80	-0.43
Not injured	33.77		33.79		33.80		33.86	
Percent Injured								
Male	0.23	-3.85***	0.05	-1.52	0.17	-3.30**	0.01	-1.15
Female	0.14		0.03		0.11		0.01	
Percent Injured								
Black	0.18	3.50**	0.05	1.30	0.13	3.37**	0.01	0.56
All others	0.33		0.08		0.26		0.01	
Percent Injured								
Gun involved	0.14	8.93***	0.02	3.46**	0.11	7.16***	0.01	-0.16
No gun involved	0.59		0.15		0.48		0.01	
Percent Injured								
Victim resisted	0.41	-3.85***	0.04	0.26	0.37	-4.06***	0.04	-1.45
Victim did not resist	0.18		0.05		0.14		0.01	

* $p < .05$; ** $p < .01$; *** $p < .001$

Table 7. Independent Samples t-test Continued.

	Any injury		Entry injury		Processing injury		Exit injury	
	Mean	t	Mean	t	Mean	t	Mean	t
Percent Injured								
Occurred Midnight to 6:00 AM	0.02	-1.29	0.05	-0.10	0.17	-1.03	0.01	-0.10
All other times	0.19		0.05		0.14		0.01	
Percent Injured								
Occurred 6:00 AM to Noon	0.25	-1.62	0.05	-0.16	0.20	-1.86	0.01	-0.49
All other times	0.19		0.05		0.14		0.01	
Percent Injured								
Occurred Noon to 6:00 PM	0.17	1.15	0.04	0.72	0.12	1.55	0.01	-0.68
All other times	0.20		0.05		0.16		0.01	
Percent Injured								
Occurred 6:00 PM to Midnight	0.17	1.59	0.05	-0.34	0.13	1.29	0.00	1.29
All other times	0.21		0.05		0.16		0.01	

* $p < .05$; ** $p < .01$; *** $p < .001$

In the armed robberies where any injury occurred, sex, race, having a gun, and victim resistance had a statistically significant relationship to victim injury. Not surprisingly, males are more likely than females to be injured in the Eighth Precinct of Detroit by armed robbers. Of the male victims, 23% were injured compared to 14% of females that were injured. Additionally, non-blacks are significantly more likely than blacks to be injured during an armed robbery. In the case of this study, 18% of black victims were injured and 33% of non-blacks were injured. The presence of a gun does not increase the likelihood of injury in the Eighth Precinct. In fact, of those armed robberies where a gun was present, only 14% resulted in injury. However, 59% of armed robberies where other types of weapons were present resulted in injury. Lastly, victim resistance is significantly related to victim injury during armed robberies. In the case of this study, 41% of those who resisted were injured. Of those victims who did not resist the armed robber, only 18% were injured. However, age of the victim and the time period that the robbery occurred are not statistically significantly related to victim injury. The preceding findings describe injury during an armed robbery incident overall, not separating the robbery incident into different stages. The following analyses classify robbery incidents into entry, processing, and exit and examine injury.

Only the presence of non-gun weapons during the entry stage of an armed robbery is statistically significant in its relationship with injury. Only 2% of victims were injured when a gun was present. This is compared to 15% of victims who were injured when other types of weapons were present during the entry stage of an armed robbery. Age, sex, race, victim resistance, and time of day have no statistically significant relationship to victim injury during the entry stage of an armed robbery in the Eighth Precinct of

Detroit, Michigan.

In the incidents where any injury occurred during the processing stage of an armed robbery, sex, race, possession of a gun, and victim resistance had a significant relationship to victim injury. Males are more likely to be injured in the Eighth Precinct of Detroit by armed robbers as 17% of males were injured and 11% of females were injured. In addition, blacks are less likely than are other races to be injured during the processing of an armed robbery. Of those victims there were injured during the processing stage of the armed robbery, 13% of blacks were injured and 26% of non-blacks were injured. The presence of a gun does not increase the likelihood of injury in the Eighth Precinct. In fact, only 11% of victims were injured if a gun was present, however 48% were injured if another type of weapon was present at the time of the armed robbery. Lastly, victim resistance is significantly related to victim injury during the processing stage of armed robberies. From the data, it is evident that 37% of those victims who resisted the armed robber were injured. When the victims did not resist, only 14% were injured. However, the age of the victim and the time period that the robbery occurred are not statistically significant in relation to victim injury during the processing of an armed robbery.

During the exit stage of an armed robbery, there were no variables that had a statistically significant relationship with victim injury. Age, sex, race, resistance, the presence of a gun, and time of day the incident occurred were not significant in relation to injury during the exit phase of an armed robbery in the Eighth Precinct of Detroit, Michigan.

Multivariate Statistics

To compare each of the independent variables to the dependent variables while controlling for all the other independent variables, logistic regression was used to determine the probability of each independent variable having a relationship on the dependent variable. In the case of this study, only one time block was included as an independent variable so as to avoid multicollinearity. Hence, the remaining three were excluded. Additionally, the time variable analyzed is consistent with the previously hypothesized time period in this study.

Table 8. Logistic Regression.

	<i>Any injury</i>		<i>Entry injury</i>		<i>Processing injury</i>		<i>Exit injury</i>	
	Coeff.	Exp(B)	Coeff.	Exp(B)	Coeff.	Exp(B)	Coeff.	Exp(B)
<i>Individual Characteristics of Armed Robbery</i>								
Age	-0.002 (0.007)	0.998	0.007 (0.012)	1.007	-0.006 (0.007)	0.994	0.006 (0.025)	1.006
Sex (Male)	0.683** (0.231)	1.979	0.607 0.445	1.834	0.501* (0.247)	1.651	1.197 (1.088)	3.311
Race (Black)	-0.715** (0.263)	0.489	-0.574 (0.450)	0.563	-0.782** (0.278)	0.458	0.250 (1.132)	1.285
Weapon type (Gun)	-2.165*** (0.255)	0.115	-2.077*** (0.392)	0.125	-1.898*** (0.258)	0.150	0.469 (1.134)	1.599
Resistance	1.032 (0.322)	2.807	-0.872 (0.781)	0.418	1.166*** (0.326)	3.209	2.370** (0.783)	10.701
6:00 PM to Midnight	-0.454* (0.204)	0.635	0.485 (0.366)	1.625	-0.575* (0.228)	0.563	-1.691 (1.082)	0.184

* $p < .05$; ** $p < .01$; *** $p < .001$

As is evident in Table 8, males are nearly two times as likely (1.979) to get injured during an armed robbery. Consistent with the literature, those victims who resist are more likely to get injured. From the analysis conducted, it is apparent that those who resist are 2.807 times more likely to get injured than are those who provide no resistance to an armed robber. Additionally, blacks are less likely to be injured during an armed robbery. They are 0.489 times less likely to be injured than are those who are non-black. Armed robberies where a gun is present are also 0.115 times less likely to result in victim injury than are those cases of armed robbery where other weapon types are involved.

Entry injury displayed in Table 8 shows that armed robberies where a gun is present are 0.125 times less likely to result in injury than when weapons of other types are present. Additionally, males are almost two times as likely as females to be injured during the entry stage of an armed robbery; however, this is not a significant relationship. Injury during the entry stage of an armed robbery from 6:00 PM to Midnight appears to be 1.625 times greater than at other times, though also a insignificant figure. It appears that there are no significant findings that can be drawn about injury as a result of armed robbery during the entry process. The results are most likely less meaningful due to a low number of injuries that occurred during the entry process of the armed robberies.

The logistic regression analysis demonstrates that while several variables have significance in their relationship to victim injury, males are 1.651 times more likely to get injured than are females during the processing stage of an armed robbery. Blacks are .458 times less likely to be injured during an armed robbery than are non-blacks. Additionally, those that resist an armed robbery during the processing phase are 3.209 times more likely to become injured. Lastly, armed robberies that occur during the hours

of 6:00 PM to Midnight are .563 times less likely to result in injury than armed robberies occurring at other times of the day.

Injury during the exit stage of an armed robbery appears to draw some conclusions for many of the variables. However, only the results for victim resistance are significant. Most likely, similar to the entry stage, the results in the exit stage of the armed robberies are less meaningful due to the low number of injuries that occurred during this particular stage. Nevertheless, during the exit stage of an armed robbery, it is concluded that armed robbery victims in the Eighth Precinct of Detroit, Michigan are 10.701 times more likely to become injured if they resist the robber.

CHAPTER V: DISCUSSION

Findings

From this research, four major findings emerged. First, throughout the study, males are more likely than females to be injured during an armed robbery. Moreover, males are more likely to be injured during the processing phase of an armed robbery. Few individuals were injured during the exit stage of armed robbery; therefore a significant finding does not exist in regards to males and injury at this stage. Therefore, overall, males have almost double the chance of injury than females do during an armed robbery encounter. This finding is most likely the case because it is mostly males who are committing violent crimes and being victimized in the United States (Nettler, 1984). Therefore it is conceivable that males would be injured at a higher frequency than females.

Second, overall, blacks are less likely to get injured than non-blacks during an armed robbery. Additionally, during the processing stage, again it is non-blacks that were more likely to be injured over blacks. This finding is not necessarily supported by the literature; however, there is a reason why non-blacks could be more likely to be injured than blacks. Perhaps since the racial composition of the Eighth Precinct of Detroit is primarily black, non-blacks that spend time in the Eighth Precinct could be viewed as minorities, therefore standing out and becoming more likely to be victimized.

Third, when a gun is present in an armed robbery, the victim is less likely to become injured than if some other type of weapon is present. This is also the case in the entry stage and the processing stage, however not in the exit stage of an armed robbery. Perhaps the last finding is the result of a low number of individuals who were injured in

the exit stage. These findings suggest that many armed robbery victims are unlikely to argue with a gun. The presence of a gun is quite intimidating and therefore may be likely to convince victims to comply with a robber's demands. Clearly, the less serious weapons are less menacing than a gun leading some victims to view this as encouragement that noncompliance would be beneficial.

Fourth, another finding that emerged is that resistance has a significant relationship to the likelihood of victim injury during the processing and exit stages. During these stages, those victims who provided some sort of resistance were more likely to become injured. That resistance leads to a higher likelihood of injury is intuitive. However, perhaps this is the case during the processing and exit stages because at these stages the robber has more time invested in the robbery and is willing to use force to injure the victim if anything does not go as planned. Conversely, at the onset of an armed robbery, if the victim resists it is possible that the offender may be more likely to retreat.

Overall, time of day that the armed robbery occurred had no effect on the likelihood of injury during an armed robbery. In addition to time of day the robbery occurred, the victim's age had no bearing on the likelihood of injury during armed robberies in the Eighth Precinct of Detroit, Michigan in 2001 and 2002. Therefore, from this research, it is concluded that injury from armed robbery in the Eighth Precinct of Detroit, Michigan is most likely when: the victim is a male, the victim is non-black, a weapon other than gun is present, and the victim resists the armed robber.

Study Limitations

The major limitation of this study pertains to the initial input on the PCR's by Detroit Police Department officers and personnel. Though information was generally complete on most complaint records, a significant number of PCR's had missing and/or incomplete information about criminal incidents. This may be attributed to the nature of policing. For example, police officers are out on the streets when they write PCR's, and do not always have the resources and time to attain all pertinent information on the case. Thus, missing information and mistakes made by officers and personnel limit the study in that it cannot be assumed that all information was accurately reported.

Furthermore, the study assumed that all reported robbery incidents were authentic and constituted an actual robbery event. There is the possibility that some cases of robbery included in the data represent false reports. This possibility limits the study because there is no way to determine which robbery events are accurately defined and reported as such. As officers have mentioned, there is the possibility of false robbery reports by alleged victims, perhaps motivated by lucrative insurance settlements. This is especially likely with car-jackings, as these can be staged.

Additionally, exclusions of robbery incidents may have occurred during data collection. Because the Detroit Police Department has yet to convert all PCR's to electronic format, all PCR's are still prepared in paper form. Therefore, the researchers who collected the data may have omitted relevant robbery cases because of the lack of proper organization of the PCR's. This precludes any possible guarantee that all robbery cases were collected for relevant years. Any PCR's that were missed are likely to be random; therefore, their exclusion does not pose a problem.

The dependent variable - victim injury - also limits the study since it is a subjective measure. The study includes many individual types of injury as a single measure of whether an injury occurred. Because several variables indicating injury types were combined to create a new item measuring prevalence of injury, there is the possibility that incidents involving injury could be included more than once or omitted. Lastly, this study cannot be generalized to any other precinct of Detroit, let alone any other city. This study is based upon a single police agency and city, and the characteristics of the Eighth Precinct and of Detroit are unique.

Conclusions and Policy Recommendations

Results from this research provide support for other victimology studies. Exposed were four important results: armed robberies are more likely to result in victim injury when the victim is male, armed robberies are more likely to result in injury when the victim resists the armed robber, armed robberies are less likely to result in injury when the victim is black, and armed robberies are less likely to result in injury when a gun is present.

Perhaps another stage of this study would include an examination of why these three factors result in a higher likelihood of injury. The Chicago study by Zimring and Zuehl (1986) sheds light on the fact that males are much more likely to be victimized than are females, and significantly more likely to be injured. Not surprisingly, males are injured more often as they often tend to engage in criminal behavior at a higher rate (Nettler, 1984). Additionally, it should be noted that there is no evidence that males are necessarily *targeted* for robbery victimization more than females. Perhaps their activities

place them danger requiring, as they perceive, more self defense, or resistance.

Though avoiding injuries that result from armed robberies is important, the prevention of armed robberies in general would reconcile both issues. Therefore, an implication that can be taken from this study is that by increasing guardianship, as suggested by Routine Activities, crime will be less likely to occur. Gabor et al. (1987) state that through increased surveillance, police patrols can possibly have an impact on crimes in an area. Specifically, if police officers in the Eighth Precinct of Detroit can identify and target armed robbery hotspots, then it is suggested that the intensified presence of police patrol could deter armed robberies. If armed robberies are then deterred, potential injuries are prevented as well.

Additionally, as Nugent, Wilson, and Chappell (1989) suggest, by increasing awareness of the penalties an armed robber will face if caught, this may increase the risk of committing an armed robbery for prospective criminals. Since many offenders are not aware of the lengthy sentences for robbery, informing the public on that issue is also imperative (Nugent et al., 1989). Addressing issues such as the higher sanctions for weapon possession or use, the fact that armed robbers will certainly receive a prison sentence if sentenced could help to minimize armed robberies (Nugent et al., 1989).

Though there is no theory that exclusively aligns with armed robbery injury, the Routine Activities Theory adequately explains how a motivated offender, a suitable target, and a lack of proper guardianship must all converge in time and space for a crime to occur (Cohen & Felson, 1979). From this study, however, it is evident that the Routine Activities Theory does not adequately explain why a victim is more or less likely to be injured during an armed robbery. In order for injury from an armed robbery to occur, the

basic assumptions about the Routine Activities Theory must be present only to the extent that the armed robbery actually occurs. Once the armed robbery takes place, the theory does not specify any further conditions that might encourage injury. Additionally, the Routine Activities Theory does not account for the other factors that might influence the likelihood of injury. For instance, if the victim resists, he or she may be injured. Secondly, the theory makes no specification as to which sex is more likely to be victimized. It assumes that males and females have an equal chance of victimization. Again, it appears that the Routine Activities Theory could explain armed robbery victimization, however in the case of this study it did not succeed in explaining why some individuals became injured.

In conclusion, what can be drawn from this study is that males, non-blacks, those who resist armed robbers, in addition to the presence of a weapon other than a gun, are more likely to get injured in the Eighth Precinct of Detroit, Michigan. These findings support two of the four proposed hypotheses. The presence of a gun during an armed robbery has little effect on likelihood of injury in the Eighth Precinct. However, having a gun present during an armed robbery gives the offender yet another option for violence and should be taken seriously. Furthermore, though time of day is not significant in this factor in this study, avoiding the streets late at night may be something for potential armed robbery victims to consider. Applicability is imperative as armed robbery is a significant problem in Detroit and in the Eighth Precinct. It seems as though a wise choice would be to remain compliant if one finds him or herself a victim of an armed robber, especially if the victim is male. After all, when one in three victims sustains at least minor injury, it seems evident that compliance is the best policy during an armed

robbery (Reaves, 1993).

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