

**Mary Lia Reiter**

*The Ohio State University*

*This research examines the determinants of crime completion and victim injury for three types of crime: rape, robbery, and assault. The interaction between the type of crime involved and the level of resistance used is considered along with the possibility of a curvilinear relationship between resistance and victim injury. Finally, a possible interaction between the type of crime involved and the victim - offender relationship is examined. Using National Crime Survey data, a sample of 101 rape incidents, 683 robberies, and 3347 assaults is analyzed. The findings indicate that there is an interaction between the type of crime involved and resistance in determining crime completion. Namely, resistance is positively related to crime completion for assault and rape and negatively related to crime completion for robbery. The relationship between victim resistance and victim injury is curvilinear, and the probability of any injury or minor injury is lower when the victim resists. However, the probability of serious injury is higher when the victim resists. Finally, offenders who are known to the victim are more likely to complete a crime and injure the victim than strangers, but this relationship does not significantly differ by type of crime.*

While the causes of violent crime have been studied extensively, the dynamics of the criminal incident the resulting outcomes have received little attention by researchers. In *Patterns of Criminal Homicide*, Wolfgang (1958) recognized that a criminal incident is not a one-directional act of a perpetrator; rather, it is a complex function of many factors including those related to the offender, the victim, and the circumstances. All of these play a role in determining whether the victim is injured and whether the crime is completed. The purpose of this research is to provide a more complete understanding of criminal incidents by examining what victim, offender and circumstantial factors play a role in these outcomes. The particular focus is on how the level of a victim's resistance influences victim injury and crime completion.

Since Wolfgang's work, many studies have argued for a closer examination the criminal incident to gain a clearer picture of the complex interactions involved in a criminal incident. For example, Block (1984) emphasized the importance of studying the "triad" of the crime event; an event involving a victim, an offender, and their interaction (1981:743). According to him, "The interaction of the victim and offender largely determines whether the crime is a rape or merely an attempt and also determines the level of injury" (Block, 1981:745).

Fattah (1984) also argues that because a criminal incident involves the attacker, the victim, and the circumstances surrounding the incident, all three sets of factors should be taken into account in trying to understand criminal outcomes (1984:76) Further, he argues for the development of a theory of victimization using elements related to these three factors. He places particular emphasis on the role of resistance as a

feature of victim-offender interaction in the determination of crime completion and victim injury. Fattah points out that not only can the victim's behavior play an important, perhaps a determining, role during the commission of a crime, but often the outcome of the incident is a function of the victim's response to the criminal act (1984:75). Thus, emphasis should be placed on the victim, offender, and circumstances, with special attention paid to resistance as an important aspect of the interaction between the victim and the offender.

In line with the works of these scholars, this research takes as a starting point that a more complete picture of violent crime can be painted by focusing on the roles of the victim, the offender, the circumstances surrounding the criminal incident, and especially victim resistance. Specifically, this research examines the determinants of crime completion and victim injury for three types of violent crime: rape, robbery, and assault. Special attention is given to how victim-offender interaction in the form of resistance affects outcomes for these three types of crime.

## **VICTIMIZATION AND VIOLENT CRIME**

Victimization research has looked at the victim's possible role in generating his/her own victimization (see Wolfgang [1958] and Wolfgang and Ferracuti [1967]). Generating one's own victimization occurs through contributing to the escalation of a conflict (Wolfgang, 1958:245). Not only is the escalation of a conflict important, but the interactions can be looked at as a transaction. In a violent transaction, the transaction begins with an insult or offense and escalates until one of the actors falls, sometimes to his

death (Luckenbill, 1977).

This concept of a transaction indicates the importance of the interaction between the victim and the offender during an incident. In addition, retaliation is an important factor in escalating an event and may be closely related to the demise of the victim (Felson, 1983). In fact, aggressive actions on the part of the victim are associated with the same types of aggressive actions on the part of the offender (Felson, 1983). Thus, victim-offender interactions can be characterized as a transaction of escalating violence that has the potential to result in the demise of the victim.

In addition to the victim-offender interaction, the lifestyle of the victim plays a role in the potential for harm. (Hindelang, Gottfredson and Garofalo, 1987). A violent crime occurs when an offender and an actor intersect in time and space, there is a perception by the offender that the victim is an appropriate target, and the offender is willing to use force in order to achieve a desired end (Hindelang, Gottfredson and Garofalo, 1987). Other important elements related to the risk of victimization include the level of exposure to risk, the proximity to risk, and target (victim) attractiveness (Meithe and Meier, 1990).

### ***Crime Completion***

Key factors related to crime completion include the type of crime involved, victim resistance, the relationship between the victim and the offender, and other victim, circumstantial, and offender factors.

***Resistance.*** Generally, both forceful and non-forceful resistance are related to a lower risk of crime completion for robbery (Block and Skogan, 1986), and a higher risk of crime completion for assault (Lizotte, 1986). For rape, the relationship is less clear. Non-forceful resistance is related to a lower risk of completion (Block and Skogan, 1986), but forceful resistance may either reduce the risk of crime completion (Lizotte, 1986) or may increase the risk of crime completion (Block & Skogan, 1986).

***Victim Factors.*** Victims who are less educated, who are attacked by an offender using a weapon, or who are attacked by an older are significantly related to rape completion (Lizotte, 1986). Those with more education are less likely to suffer from a completed rape (Lizotte, 1986). Female victims and black victims are more likely to suffer a completed robbery (Block & Skogan, 1986). Men with more education are less likely to suffer from a completed assault (Lizotte, 1986). Victims who are less educated and victims who use forceful resistance are significantly related to assault completion (Lizotte, 1986).

***Circumstantial Factors.*** Rapes are more

likely to be completed during evening hours than during the daytime (Lizotte, 1986). Victims of both completed and attempted rapes were more likely to be outside than at home (Block & Skogan, 1986).

***Offender Factors.*** Victims are less likely to suffer a completed rape when attacked by a stranger (Quinsey and Upfold, 1988). Weapon use is related to a greater likelihood of crime completion in rape incidents (Lizotte, 1986:212; Ruback and Ivie, 1988:106; Quinsey and Upfold, 1985:44; and Block and Skogan, 1986:250). Weapon use is related to a lower likelihood of crime completion in robbery incidents (Block and Skogan, 1986:250). Offender age is positively associated with rape completion, but negatively associated with assault completion against women (Lizotte, 1986).

### ***Victim Injury***

The same key factors that are related to crime completion are also related to victim injury, including the type of crime involved, the actions taken by the victim during the incident, the relationship between the victim and the offender, and victim, circumstantial, and offender factors.

***Resistance.*** The relationship between victim resistance and injury seems to be clear. Greater resistance is related to greater injury to the victim (Block & Skogan, 1986; Ruback & Ivie, 1988; Lizotte, 1986; Cook, 1986). Forceful resistance is related to greater victim injury while non-forceful resistance is related to less victim injury during a robbery (Block and Skogan, 1986; Cook, 1986). In addition, non-forceful resisters are better off than those who do not resist, but only slightly so in terms of being attacked or seriously injured (Cook, 1986). Thus there may be a curvilinear relationship between resistance and victim injury. Both forceful and non-forceful resistance is related to greater injury in rape incidents (Block and Skogan, 1986; Ruback and Ivie, 1988). This relationship is even stronger when the attacker is a stranger (Ruback and Ivie, 1988).

***Victim Factors.*** Younger and older victims are more likely to suffer greater injury than middle aged victims (Ruback & Ivie, 1988). Victim age is positively associated with injury in robbery incidents (Block & Skogan, 1986).

***Offender Factors.*** Victims are less likely to be injured when attacked by a stranger in rape incidents (Heller, Erlich, and Lester, 1983; Ruback and Ivie, 1988; Quinsey and Upfold, 1988). Weapon use is related to greater injury in rape incidents (Lizotte, 1986:212; Ruback and Ivie, 1988:106; Quinsey and Upfold, 1985:44; and Block and Skogan, 1986:250). Weapon use is related to greater injury in robbery

incidents (Block and Skogan, 1986:250).

## DATA AND MEASURES

### *National Crime Survey*

To assess the determinants of crime completion and victim injury, this study will use data from the National Crime Survey's National Sample of US Households 1986-1991 conducted by the Bureau of the Census for the Bureau of Justice Statistics. These data are available through the Inter-University Consortium for Political and Social Research (ICPSR) of the University of Michigan. The survey uses a stratified sample of housing units interviewing all residents over 12 years of age and asks about crime victimization during the last six months. The sample for this study includes a total of 4,131 incidents of violent crime, including 101 attempted or completed rape incidents, 683 attempted or completed robbery incidents, and 3,347 attempted or completed assault incidents.

***Measuring Crime Completion and Victim Injury.*** Crime completion refers to whether the offender successfully carried out the crime or whether the offender was unsuccessful in carrying out the crime. A successful crime is a completed crime while an unsuccessful crime is an attempt. For example, a completed rape incident refers to an incident in which the offender succeeds in raping the victim while an attempted rape incident is one in which the offender tried but did not succeed in raping the victim. Crime completion is dummy variable coded for attempt (0) or completion (1). Sixty-three percent of all the crimes involved an attempted and 37 percent were completed.

The degree of injury refers to the level of physical injury received by the victim. No injury (0) means the victim did not receive any injury as a result of the incident. A minor injury (1) indicates that the victim received bruises, scratches, or other similar injuries. Serious injury (2) indicates that the victim suffered a stab wound, a gunshot wound, broken bones, or internal injuries. This variable is treated as an ordinal level variable. Sixty-eight percent of the crimes involved no injury to the victim, 19 percent involved minor injury, and 13 percent involved serious injury.

***Measuring Victim Resistance.*** Resistance is measured as no resistance (0), non-forceful resistance (1), and forceful resistance (2). No resistance consists of the victim not taking any action during the crime or cooperating with the offender. Non-forceful resistance consists of yelling, arguing, calling for help, or screaming. Forceful resistance consists of attacking or threatening the offender with a gun or weapon, chasing the offender, or threatening injury. Thirty-seven

percent of the victims did not resist, 53 percent of the victims resisted non-forcefully, and 10 percent of the victims resisted forcefully.

***Measuring the Type of Crime.*** This study analyzes the direct effects of the type of crime involved. Three violent crimes -- rape, robbery, and assault -- are examined. Each type of crime is dummy coded as 1 for yes and 0 for no. Researchers have not examined the type of crime as an explanatory variable in models of resistance or crime completion. However, including type of crime as a factor in models of crime completion and victim injury will allow an examination of the different role each type of crime plays in determining the outcome of the criminal incident and will allow for an analysis of the interactions between the type of crime and resistance.

***Measuring the Victim-Offender Relationship.*** The victim-offender relationship's effect on the outcome of the criminal incident is also examined. The victim-offender relationship is dummy coded. Whether the offender was a stranger to the victim is coded as stranger (1) and non-stranger (0). Sixty-four percent of the offenders were known by the victim.

***Measuring Victim Factors.*** Age of the victim is coded in number of years, with the mean age of the sample being 27 years. Victim sex is coded as 1 for male, 0 for female. Fifty-nine percent of the sample is male. Race is also included as a victim related factor and is coded as 1 for white, 0 for non-white with 84 percent of the sample being white. The National Crime Survey measures income on a 14 point, scale with \$2,500 intervals between 1 and 7 and \$5,000 intervals between 7 and 14. This breakdown is used here. The mean level of income is between \$17,500 and \$19,999 per year. Education is measured in years with the mean level of education being 11.8 years.

***Measuring Circumstantial Factors.*** The amount of light outside and whether the victim was home during the incident are included as variables in the analysis. The amount of light outside is dummy coded as 0 for dark/dusk/dawn/almost light and 1 for light. Fifty-three percent of the incidents occurred when it was dark and 47 percent of the incidents occurred when it was light outside. Whether the victim was home during the incident is dummy coded as 1 for home and 0 for away from home. Eighty-three percent of the incidents occurred away from the victim's home.

***Measuring Offender Factors.*** Offender factors included in the analysis are the age, race, and sex of the offender, and whether the offender had a weapon. With minor exceptions, the demographic variables are coded in the same way as those for the victim. Eighty-six percent of the offenders are male

(1) and 67 percent are white (1). The age of the offender is based on the victim's estimate. Because the data involves interviews with victims of violent crime, rather than police records or interviews with offenders, it is impossible to find out the exact age of the offender. Instead, victims are asked to estimate the age of the offender. The offender's age is dummy coded as either 0 for under 30 or 1 for 30 or over. Sixty-six percent of the offenders are younger than 30. The use of this estimated variable is not uncommon in victimization studies.

The last offender factor concerns whether the offender had a weapon during the incident. Weapon use is dummy coded in this study. Weapon use distinguishes between offenders who had a weapon (1) and those who did not (0). Thirty-seven percent of the offenders had a weapon.

## ANALYSIS

Using regression analysis, the effects of the type of crime involved, resistance, victim factors, circumstantial factors, and offender factors on victim injury and crime completion are examined. Nominal logistic regression is used in the analysis of crime completion. Ordinal logistic regression is used to examine victim injury. This analysis proceeds in stages. First, the role of resistance in determining victim injury and crime completion is analyzed. Because resistance may have different effects on crime completion and victim injury for rape, robbery, and assault, the interaction of resistance by type of crime is also examined. This will allow a test of whether the effect of resistance on victim injury and crime completion are different for different types of crime. Second, I assess the possibility of a curvilinear relationship between resistance and victim injury to test whether there is a point at which greater resistance begins to hurt the victim more than it helps the victim during the criminal incident. This is done by including the square of the resistance variable in the analysis for victim injury. Finally, models of victim injury and crime completion are examined where interaction variables between the relationship of the victim to the offender and the type of crime involved are examined to assess if this relationship has a different impact on different outcomes depending on the type of crime.

## RESULTS

**Correlations.** Table 1 presents the correlation matrix with means and standard deviations of all the variables. These correlations show that most of the victim, circumstantial, and offender factors have the

**Table 2. Percentage of Crimes Completed for each Level of Resistance for Assault, Robbery, and Rape.**

	Assault	Robbery	Rape
No Resistance	24%	84%	43%
Non-Forceful Resistance	36%	55%	37%
Forceful Resistance	35%	47%	67%

expected relationship to both victim injury and crime completion. Resistance is positively associated with crime completion. Younger victims, women, individuals with lower incomes and those less educated experience a greater likelihood of crime completion. The amount of darkness is positively related to crime completion. The use of a weapon by the offender is more likely to result in crime completion, and an offender who is known to the victim is less likely to complete the crime against the victim.

For victim injury, a similar pattern for victim factors is found. Resistance is positively associated with victim injury. Younger victims, women, individuals with lower incomes and those with less education experience greater injury. Victimization occurring during darker hours are associated with greater victim injury. Persons who are victimized by offenders who use a weapon receive greater injury. Finally, those who are victimized by strangers are less likely to be injured. The question is whether these patterns hold when the independent variables are considered simultaneously. Before doing so; however, it is useful to assess the interrelationships among resistance, type of crime, and each of the dependent measures.

**Crime Completion and Resistance.** Table 2 presents the percentage of crimes completed for each type of crime given the level of resistance used by the victim. Crime completion in assault incidents does not vary much by level of resistance. However, those who do not resist are the least likely to experience a completed crime, with resisting forcefully and non-forcefully yielding a similar proportion of crimes completed. Resistance seems to result in a lower likelihood of robbery completion. For robbery, 84 percent of the victims who do not resist experience a completed crime. That number falls to 47 percent for those who resist forcefully. In rape cases, victims who resist forcefully experience a substantially greater likelihood of crimes being completed against them than either victims who do not resist or victims who resist

**Table 3. Mean Levels of Injury for each type of Resistance for Assault, Robbery, and Rape.**

	Assault	Robbery	Rape
No Resistance	.3443	.4243	.7143
Non-Forceful Resistance	.4854	.6199	.7273
Forceful Resistance	.4785	.5172	1.0000

non-forcefully. There is only a slight difference in the proportion of crimes completed between no resistance and non-forceful resistance in rape incidents.

**Victim Injury and Resistance.** Table 3 presents the mean levels of injury for each type of crime given the level of resistance used by the victim. In general, victims of assault are least likely to suffer an injury regardless of the level of resistance, while victims of rape are most likely to receive an injury. In addition, the influence of resistance for the three types of crime appear to vary. In the case of assault, the level of injury is higher when there is victim resistance but there is essentially no difference between the level of injury given non-forceful or forceful resistance. For robbery, non-forceful resistance yields the highest level of injury followed by forceful resistance and no resistance. For rape, victim injury is likely to be high regardless of resistance, but no resistance and non-forceful resistance produces about the same levels of injury while the level of injury increases sharply when forceful resistance is used by the victim.

In brief, Tables 2 and 3 suggest that resistance likely does not have a similar effect on either crime completion or victim injury across the three types of crime. Nor does the pattern of effects of resistance appear to be similar across the dependent variables. Still, these patterns may be misleading since other relevant variables are not being controlled.

**Interactions between Type Of Crime and Victim resistance**

**Crime Completion.** Table 4 shows the logistic regression of crime completion on the type of crime, resistance, victim-offender relationship, and on victim, circumstantial, and offender factors. Rape and assault are included in the model. The values for robbery can be calculated by substituting a zero as the value for both rape and assault. Model 1 represents the direct effects of the type of crime and victim resistance while Model 2 includes the interaction terms. The values in Table 4 are the unstandardized logistic coefficients and

their standard errors. Logistic coefficients represent the change in the log odds of the dependent variable for every one unit change in the independent variable. For example, according to Table 4 Model 2, for every year of education the victim receives, there is a .0522 increase in the log odds of crime completion. An easier way to discuss the results of logistic regression is in terms of the effects on the *probability* of an outcome. The results are examined using this method below.

The results indicate that the degree of resistance is negatively related to crime completion so that victims who resist more strongly are less likely to experience a completed crime. This direct relationship is significant in Model 1. In Model 2, the interactions between the type of crime and resistance are significant. Thus, resistance does play a different role in crime completion according to the type of crime involved. In addition, offenders who are known to the victim are more likely to complete the crime than offenders who are strangers. Among the other factors examined, women are significantly more likely to experience a completed crime, and both income and education are positively related to crime completion. Thus, the higher the education and income of the victim, the more likely he/she is to experience a completed crime. Both of the circumstantial factors are significantly related to crime completion. Victims who are away from home are more likely to experience a completed crime as are victims who are attacked after dark. None of the offender factors are significant in the Models.

Another way to look at logistic regression coefficients is to examine the key variable's effect on the probability of an outcome. Thus, the probability of crime completion for each type of crime is calculated for Model 2. First, the effect of resistance on crime completion for each type of crime at the mean level of all other independent variables is calculated. The equations are solved by substituting zeros and ones into the equations for rape, robbery, or assault, and zeros, ones, or twos for no resistance (0), non-forceful resistance (1), and forceful resistance (2). More specifically, the equations at the mean levels of all other independent variables follow:

$$\begin{aligned}
 &\text{Rape} && \text{Log Odds of Crime Completion} = - \\
 &&& .0342 + .2681(\text{Resistance}) \\
 &\text{Assault} && \text{Log Odds of Crime Completion} = \\
 &&& .0148 + .2851(\text{Resistance}) \\
 &\text{Robbery} && \text{Log Odds of Crime Completion} = \\
 &&& 1.2268 - .3916(\text{Resistance})
 \end{aligned}$$

**Table 5. Probability of Crime Completion by Level of Victim Resistance for Rape, Robbery, and Assault**

	Rape	Robbery	Assault
No Resistance	49%	77%	50%
Non-Forceful Resistance	56%	70%	57%
Forceful Resistance	62%	61%	64%

Next, the probability of crime completion for each type of crime is calculated. To find the predicted probability of crime completion for each type of crime by different levels of resistance, the independent variables corresponding to the type of crime and the level of resistance are multiplied by the appropriate coefficient, summing the products and the constant, exponentiating the sum to obtain the numerator, and then dividing by 1 plus the numerator (Roncek, 1991:513-514). Table 5 below shows the probabilities of crime completion for rape, robbery, and assault, and Figure 1 is a graphical representation of the Table.

For assault and rape, there is a positive relationship between resistance and crime completion while for robbery, that relationship is negative. Resistance in assault and rape incidents is related to a greater probability of crime completion while resistance in robbery incidences is related to a lower probability of crime completion. More specifically, there is a 50 percent probability of crime completion for assault given no resistance. For non-forceful resistance, that probability is 57 percent. Finally, for forceful resistance, the probability of crime completion is 64 percent. The probability of crime completion is 77 percent when the victim of a robbery does not resist. For non-forceful resistance, that probability is 70 percent and for forceful resistance, the probability is 61 percent. For rape, the probability of crime completion is positively related to the level of resistance. For no resistance, the probability of crime completion is 49 percent, for non-forceful resistance the probability is 56 percent, and for forceful resistance the probability is 62 percent.

**Victim Injury.** The next step is to examine the effects of the interaction of the type of crime and victim resistance on victim injury. The results in Table 6 Model 1 indicate that resistance is significantly related to victim injury. Greater resistance is related to less victim injury. However, while the interaction between the type of crime and resistance are significant in determining the likelihood of crime completion, they

do not yield significant results for victim injury. In sum, the interaction between the type of crime involved and victim resistance is important in determining the outcome for crime completion but not for victim injury.

***Curvilinear Relationship Between Victim Resistance and Injury***

Table 6 presents the ordinal logistic regression of degree of injury on the type of crime, resistance, victim-offender relationship, and victim, circumstantial, and offender factors.<sup>1</sup> Robbery and assault are included in the Models and the values for rape can be calculated by substituting a zero as the value for both robbery and assault. The results in Model 1 indicate that resistance has a negative direct effect on victim injury. Thus, more forceful resistance is associated with lower levels of victim injury. Model 2 indicates that there is a significant curvilinear relationship between victim injury and resistance. The direct relationship between resistance and injury is negative, but the relationship between the square of resistance and injury is positive. This shows that there is a greater probability of injury when no resistance is used, but the probability of any injury for all three types of crime is lower for both non-forceful resistance and forceful resistance. The results also indicate that people who are attacked by a stranger are less likely to be injured than those attacked by someone they know. Further, women are more likely to be injured than men and those with more education and higher incomes are more likely to be injured. Victims who are attacked away from home and victims who are attacked after dark also receive greater injury levels. Finally, offenders brandishing a weapon are more likely to injure their victims.

<sup>1</sup> Because ordinal logistic regression is used, the number of intercepts will be N-1 where N is the number of response categories in the dependent variable. Since injury is measured as serious (2), minor (1), and none (0), there will be 3-1 or 2 intercepts.

**Table 7. Cumulative Probabilities of Victim Injury by Level of Victim Resistance**

	Minor Injury	Serious Injury	Any Injury
No Resistance	48%	30%	78%
Non-Forceful Resistance	35%	33%	68%
Forceful Resistance	32%	33%	65%

For ease of interpretation of victim injury, the predicted cumulative probability of victim injury for each type of crime is calculated for Model 2 at the mean levels of all other independent variables. Table 7 shows the cumulative probabilities of victim injury for each level of resistance for all crimes together. Figure 2 is a graphical representation of this relationship.

For all types of crime together, there is a 48 percent probability of minor injury if the victim does not resist. The probability of minor injury is 35 percent with non-forceful resistance and 32 percent with forceful resistance. The probability of any injury is 78 percent for no resistance, 68 percent with non-forceful resistance, and 65 percent with forceful resistance. Since these are cumulative probabilities, the probability of serious injury can be determined by subtracting the probability of minor injury from the probability of any injury. Thus, the probability of serious injury is 30 percent with no resistance, 33 percent with non-forceful resistance, and 33 percent with forceful resistance. This is of particular note since the probability of any injury and minor injury are both lowest when the level of resistance is greatest, but the probability of serious injury varies only slightly by level of resistance. Thus, while the overall risk of injury is lower when a victim resists, the risk of serious injury is actually slightly higher when a victim resists the crime.

The predicted cumulative probability of victim injury for each type of crime is calculated at the mean levels of all other independent variables. Table 8 separates the cumulative probabilities of victim injury by type of crime. Figure 3 is a graphical representation of this relationship.

Examining each crime separately, one can see that the cumulative probability of any injury is highest in rape incidents and lower for robbery and assault. One important note, though, is the fact that for rape, robbery, and assault, the probability of serious harm is highest when the victim forcefully resists. For example, for rape, the probability of serious harm is

about 22 percent when the victim forcefully resists, but only 15% when the victim does not resist at all. Thus, the same pattern holds up for each type of crime as for all crimes together. No matter what the crime, while the overall risk of injury may be lower when the victim resists more forcefully, the risk of serious injury is higher.

### *Interaction of Victim-Offender Relationship and Outcome*

As noted earlier, the relationship between the victim and offender plays a significant role in the outcome of the criminal event. Offenders known to the victim are more likely to complete a crime against the victim and injure the victim than strangers. In order to determine whether this relationship is different depending on the type of crime involved, analyses are conducted which include an interaction between the victim-offender relationship and the type of crime. In both the crime completion and victim injury Models, these interaction terms fail to achieve statistical significance. While a victim who is attacked by someone he or she knows is more likely to experience a completed crime and is more likely to experience a greater degree of injury than a victim who is attacked by a stranger, the lack of significance of the interaction terms indicates that the connection between victim and offender relationship and the outcome of the incident is not significantly different for different types of crime.

### **CONCLUSION**

The preceding analysis assessed the determinants of two outcomes of a criminal incident: crime completion and victim injury. These outcomes are hypothesized to be functions of victim resistance, the type of crime, the victim-offender relationship, and victim, circumstantial, and offender factors. Based on the findings of this research, three specific conclusions can be drawn. First, resistance plays an important role in both outcomes. However, the type of crime involved is important in determining the role of resistance in crime completion but not victim injury. Second, the role of resistance in determining victim injury is curvilinear. Finally, there is no significant difference in the role of the victim-offender relationship on outcome for the different types of crime.

Whether or not a crime is actually completed by an offender is a function of a number of factors including the sex, income, and education of the victim, the location and time of the incident, and the victim-offender relationship. But, when resistance is used by

the victim, the picture varies depending upon the type of crime involved. This research confirms Block and Skogan's (1986) earlier work in showing that a higher level of resistance is associated with a higher probability of crime completion for rape cases and a lower probability for robbery. The findings regarding rape and resistance contrast with Lizotte (1986) who found that as resistance increased, the probability of crime completion decreased. In contrast, this analysis is in line with Lizotte's (1986) findings for assault which showed that higher levels of resistance are associated with higher probabilities of crime completion.

Interestingly, although the findings establish that the effect of resistance on crime completion varies by type of crime, there is a lack of a significant interaction between resistance and the type of crime involved for victim injury. Thus, victim resistance has a similar effect on injury regardless of whether the incident involved a rape, robbery, or an assault.

This study also provides a novel look at the effect of resistance on victim injury. Block and Skogan (1986), Ruback and Ivie (1988), and Cook (1986) all found a positive relationship between resistance and victim injury for all three types of crime. This study actually finds a curvilinear relationship. While the relationship between resistance and injury is negative, more forceful resistance is related to a higher probability of serious injury.

In addition to the level of resistance, the relationship between the victim and the offender is an important factor in determining the outcome of a criminal incident. My research supports the findings of Heller, Ehrlich, and Lester (1983) in showing that a victim attacked by someone he or she knows is more likely to suffer greater injury and a completed crime than one attacked by a stranger. However, the present results contrast with Ruback and Ivie's (1988) finding regarding an interaction between the victim-offender relationship and the type of crime. That is, these data provide no evidence of such an interaction.

The degree of victim injury is also a function of the sex, income, and education of the victim. Victims who are attacked away from home or after dark are more seriously injured. Additionally, offenders who carry a weapon are more likely to injure

their victim than those who do not carry a weapon. Thus, victim, circumstantial, and offender factors are important in determining the level of victim injury.

Fattah (1984) and Block (1981) argued that the outcome of a criminal event is a function of the interaction between the victim and offender, factors specific to the victim, the circumstances involved, and factors specific to the offender. This study supports this argument. Victim resistance does affect outcome, and factors related to the victim, the offender, and the circumstances surrounding the incident are all important. But, the victim's reaction to an attack in the form of resistance can have different results in terms of victim injury and crime completion. Wolfgang (1958) argued that a victim may generate his or her own demise during a crime. Indeed, I find that victims who resist a crime run a greater risk of serious injury for all three of the examined types of crime, and that victims who resist a rape or assault increase the likelihood of crime completion. Luckenbill's (1977) notion of a violent transaction and Felson's (1983) notion of escalating violence both seem supported in this study, particularly in terms of a higher probability of crime completion in rape and assault incidents when a victim resists non-forcefully or forcefully. Finally, the significance of circumstantial factors lends some support to the lifestyle theories of Hindelang, Gottfredson, and Garafolo (1987). Victims who are away from home or out during hours of darkness are more likely to experience a completed crime and greater injury.

Despite significant relationships between victim injury or crime completion and the level of resistance in this study, caution must be taken in advising victims of the appropriate action to take during a criminal event. Victim resistance explains a relatively small proportion of the outcomes in this study and there are other variables that simply cannot be measured in victimization surveys that may have a role in determining the outcome. Variables such as the intent of the offender, the relative strength of the victim and offender, and the sequences of events can tell us much about the nature of criminal victimization. Further studies should explore these aspects of potential criminal situations.



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