

# THE DIFFERENTIAL RISK OF RETALIATION BY RELATIONAL DISTANCE: A MORE GENERAL MODEL OF VIOLENT VICTIMIZATION\*

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*This research attempts to elaborate a routine activity model of violent victimization by incorporating an explicit rational choice perspective on potential targets' decision making to avoid violent encounters. We propose that the costs associated with a violent attack and the probability of offender retaliation depend on whether the offender's targeting strategy is opportunistic or deliberate—a function of the relational distance between the offender and target. Specifically, we propose that victim efforts to limit exposure to an offender may motivate a violent retaliatory response when the victim and offender are intimates compared to when they are strangers. We develop hypotheses based on these ideas and test them using data from the National Crime Victimization Survey (1992–2000). The results suggest that female targets are more sensitive to an offender's targeting strategy than are males. We conclude with a discussion of how knowledge of the potential risk of violent retaliation on the part of intimate and spousal offenders can be used to create more efficacious policies to protect victims of violence.*

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Most policy research on violence is designed to examine how intervention strategies impact future crime. Criminological theory contributes to policy discussion by illuminating the underlying processes that lead to criminal victimization. By incorporating theoretical predictions, crime policy can more deliberately target risk factors as a way to ultimately reduce the incidence of violent victimization. Among criminological theories on victimization, perhaps none is more policy relevant than routine activity theory, a distinction that has made this the dominant theory of victimization. This study explores the limitations of relying exclusively on routine activity theory to inform crime prevention strategies for a broad range of violent crime. We elaborate on current routine activity formulations by incorporating a rational choice perspective to delineate targets' considerations when deciding whether to alter their routines to avoid violent encounters. We focus on violent crime (for example, rape, robbery, assault) because of the clear need for the offender and target to converge for successful perpetration. We construct hypotheses based on these ideas and test them using data from the National Crime Victimization Survey. The results suggest that policy can be better informed by understanding how potential retaliation might influence the choice behavior of targets.

### ROUTINE ACTIVITY MODEL OF PREDATORY VICTIMIZATION

Routine activities, as Cohen and Felson define them, are “any recurrent and prevalent activities which provide for basic population and individual needs” (1979: 593). By integrating a temporal with a spatial dimension, Cohen and Felson argued that structural changes in (aggregate) routine activity patterns influenced the convergence in space and time of (1) a motivated offender with (2) a suitable target (3) in the absence of a capable guardian, or the convergence of what they termed the “three minimal elements of direct-contact predatory violations.” A major implication of routine activity theory is that convergence of suitable targets in the absence of capable guardians is enough to lead to an increase in crime rates without a corresponding increase in either offender motivation or the supply of motivated offenders. In other words, the presence of motivated offenders can be assumed as a constant so that greater theoretical importance can be given to the other two minimal elements (targets and guardians) long underemphasized by criminologists (Cohen and Felson, 1979).<sup>1</sup>

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1. There are also data collection advantages that inhere in the assumption of constant offender motivation. Namely, victimization surveys allow for the possibility of collecting data and testing theories using only one side of the offender-victim dyad.

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With its de-emphasis on the motivated offender, routine activity theory became a natural candidate for a theory of criminal victimization. This was accomplished by integrating routine activity and lifestyle theories (Cohen and Felson, 1979; Hindelang, Gottredson and Garofalo, 1978) into an opportunity model of predatory victimization (Cohen, Kluegel and Land, 1981). The key theoretical concepts of this integrated perspective included exposure, proximity, guardianship and target attractiveness. Miethe and Meier (1990, 1994b) furthered this integration effort by incorporating an explicit offender-based rational choice formulation into their structural-choice model of victimization. The structural element of their model emphasized that routine activity and lifestyle patterns create a “criminal opportunity structure” that facilitates contact between potential offenders and victims (for example, exposure and proximity). The choice element of their model emphasized target selection on the basis of the subjective properties of specific crime targets (for example, guardianship and attractiveness).<sup>2</sup>

Implicit in the routine activity model of predatory victimization (and its variants) is the assumption that the offender’s targeting of specific crime victims is opportunistic. In other words, would-be targets are substitutable, in that potential offenders can simply choose a different target if the situation is not opportune (see discussion of predatory violence in Felson, 1993). The assumption of opportunistic target selection in combination with the victim-centeredness of the routine activity model has clear policy implications for the reduction of victimization risk. Put simply, the victim is responsible for taking preventive measures in a proactive way in order to reduce his or her risk of predatory victimization; to not be “in the wrong

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However, we acknowledge that a fuller empirical and theoretical account of decision making can only be derived from an analysis that explicitly considers offender, victim, and situational elements that are present in crime events. This “criminal event perspective” has been collectively pioneered by the likes of Kennedy, Forde, Meier, Miethe and Sacco (Kennedy and Forde, 1999; Meier, Kennedy and Sacco, 2001; Miethe and Meier, 1994a; Sacco and Kennedy, 2002).

2. Empirical findings from victimization surveys generally support the routine activity model of predatory victimization and its variants. For example, accumulated evidence suggests that the individuals at highest risk of victimization are those who are young, male, unemployed, and single. These factors serve as “lifestyle” indicators for those individuals most likely to engage in routine activities characterized by low guardianship capacity and close proximity to the pool of potential offenders. In addition, individuals at higher risk of victimization reside in urban, low-income, and high-crime neighborhoods; go out frequently at night for walks, drives, or entertainment; and themselves engage in criminal conduct and alcohol use (for example, Jensen and Brownfield, 1986; Kennedy and Forde, 1990; Massey, Krohn and Bonati, 1987; Messner and Tardiff, 1985; Miethe, Stafford and Long, 1987; Sampson, 1987; Sampson and Lauritsen, 1994; Sampson and Wooldredge, 1987).

place at the wrong time.” We refer to these as methods of target-initiated exposure reduction. The primary purpose of these exposure-reduction strategies is convergence avoidance in public spaces; that is, minimizing physical contact with the criminal opportunity structure and making oneself a less attractive target from the standpoint of potential offenders.<sup>3</sup>

These assumptions raise two important policy-related problems. First, not all violent crime is opportunistic. Routine activities or lifestyles that minimize exposure to predatory criminal opportunity structures decrease the risk that strangers employing an opportunistic target selection strategy will retaliate with violence in reaction to the target’s change in activity (for example, spending more time at home). Ironically, however, changes in these very same routine activities increase the potential for retaliatory violence committed by family members who employ a more deliberate target selection strategy. Effective crime policy must be sensitive to this variation in target selection strategies that produces quite different consequences for victim risk of retaliatory violence. Second, it is the target’s responsibility to reduce his or her own risk. Policy efficacy thus depends upon the potential victim’s help-seeking behavior, requiring a better understanding of the choices made by targets. In this study, we draw from a rational choice perspective to better understand the barriers that impede targets from altering their routine activities in order to reduce their risk.

#### INTEGRATING THE RISK OF RETALIATION INTO VICTIMIZATION THEORY

Offender retaliation is an important concept for further elaboration of the routine activity model. Retaliatory violence as a reaction to exposure reduction is discussed at length in research by Dugan, Nagin and Rosenfeld (2003) that examines the effects of domestic violence resources on intimate partner homicide. In it, they demonstrate that some policies and laws designed to protect women from abusive partners seem to have the opposite effect—they are associated with more homicides, not fewer. For example, Dugan and colleagues find that a more aggressive arrest policy and the availability of legal advocacy services are associated with a lower rate of intimate partner homicide for some groups. On the other

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3. In some sense, this is a “kinds of places, times and victims” model. Jensen and Brownfield (1986: 87) note that the opportunity model of criminal victimization “is essentially a passive theory because variations in victimization are explained by characteristics of victims which make them vulnerable. They are available, unprotected, and unguarded.” Accordingly, one major criticism of the routine activity model of victimization is its tendency to blame the victim for the victimization.

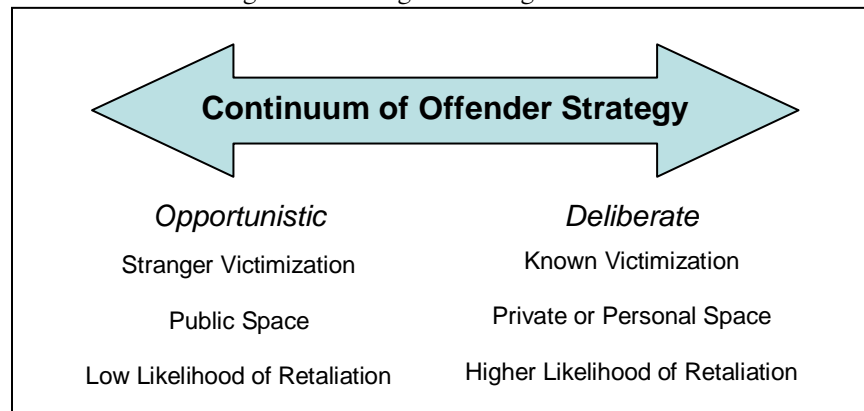
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hand, aggressive prosecution of protection order violations and use of specialized domestic violence units are associated with a higher rate of intimate partner homicide for other groups. The authors conclude that “a little exposure reduction... in severely violent relationships can be worse than the status quo” (Dugan et al., 2003:194, parenthetical material in original omitted).

Drawing from this idea, we propose that the offender’s relationship to the potential victim is a useful proxy for targeting strategy and that the targeting strategy influences the offender’s reaction to would-be victims’ efforts to reduce exposure. Specifically, retaliation as a reaction to exposure reduction is a function of whether the offender’s targeting strategy is opportunistic or deliberate. Opportunistic targeting is characteristic of violence by strangers and carries a low risk of retaliation, whereas deliberate targeting is characteristic of violence by domestic offenders and carries a comparatively higher risk of retaliation. This idea is illustrated in Figure 1. We elaborate below.<sup>4</sup>

Figure 1. Strategies of Target Selection



## OPPORTUNISTIC TARGETING STRATEGY

Routine activity models are most commonly associated with the explanation of predatory victimization by strangers in public spaces, as shown in the left side of the diagram presented in Figure 1. This implies

4. The concept of relational distance has factored more heavily in homicide studies than in nonlethal victimization studies (for example, Avakame, 1998; Parker, 1989; Smith and Parker, 1980; Williams and Flewelling, 1988). Taken together, these studies demonstrate that the correlates of stranger and intimate homicide generally differ in such a way that they warrant separate treatment empirically and theoretically.

that the offender's targeting strategy is largely opportunistic, in that potential targets are selected on the basis that they meet certain criteria of attractiveness, but that specific targets are exchangeable (Felson, 1993). The purely opportunistic offender is highly unlikely to have a prior relationship with the target. Given this absence of social ties, violent crime events are likely to occur in public places where the offender and target happen to converge. A specific person is the intended target insofar as he or she presents an appealing opportunity for personal gain to the potential offender. The implication of opportunistic targeting is that there is no risk of retaliation in response to exposure reduction, because there is no "absolute exposure" (see Gottfredson, 1981). If one target fails to converge in time and space with the offender, the offender is perfectly happy to substitute a different target. In other words, predatory victimization can simply be displaced to the next attractive target (however attractiveness may be defined).

#### DELIBERATE TARGETING STRATEGY

At the opposite extreme of the targeting continuum is a purely deliberate targeting strategy, in which the offender shows clear preference for a specific target (see the right side of Figure 1). This preference stems in part from a standing relationship between the offender and target, and is particularly true of victimization by someone who has direct access to the personal space of the potential target (for example, spouse, family member, cohabiting partner). Because victim exposure to the potential offender is the status quo, victim efforts to minimize or eliminate exposure can motivate a violent retaliatory response from the offender.

The fact that women are considerably more likely than men to be victimized at home and by someone they know suggests that crime-prevention policies derived from the routine activity model fail to adequately protect a large percentage of female victims. To provide some perspective, Rennison and Rand (2003) report that 27 percent of female victims are victimized by an intimate or other family member, compared to 7 percent of male victims. Belknap (1987) reports that 38 percent of reported rapes in her sample of women occurred just outside the victim's home. In almost 40 percent of these cases, the perpetrator had a right to be there as a resident or guest. Thus, the irony of the routine activity model is that "those persons who lead lives that are centered around the home are precisely those who are most likely to be victimized at home" (Messner and Tardiff, 1985:262; see also Kruttschnitt, 1996; Rodgers and Roberts, 1995). This suggests that the routine activity model would benefit from further elaboration in order to make it more generalizable to certain types of victimizations, certain groups of victims, or both.

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## RATIONAL CHOICE THEORY FROM A VICTIM'S PERSPECTIVE

Until now, rational choice theory has been used almost exclusively by criminologists to explain the decision making of potential offenders (Cornish and Clarke, 1985, 1986; Grasmick and Bursik, 1990; Nagin and Paternoster, 1993; Paternoster and Simpson, 1996; Piliavin, Gartner, Thornton and Matsueda, 1986).<sup>5</sup> Even research that applies a rational choice perspective to routine activities—a victimization theory—only explicitly considers the offenders' choices while recognizing the import of its application to would-be victims: "rational crime theory must explain not only the offender's successes but also... the successes and failures of the potential victim" (Felson, 1986: 121). By applying rational choice theory to the decisions of would-be victims, we hope to provide insight into the conditions that would make policy choices more or less attractive to those at risk and to ultimately reduce violent crime.

Offender decisions modeled in prior research include whether to begin a criminal career (Cornish and Clark, 1985), whether to commit a specific crime or deviant act (Bachman, Paternoster and Ward, 1992) or whom to select as a victim (Felson, 1986). Regardless of the research question, rational choice always predicts that potential offenders' decisions are dependent upon the perceived utility of the act weighed against its perceived costs. With some exceptions (Nagin and Paternoster, 1993; Piliavin et al., 1986; Scott and Grasmick, 1981), most work in this area focuses exclusively on the perceived costs of offending. For example, Felson's (1986) application of rational choice to routine activity theory borrows the fundamentals from Hirschi's (1969) control theory to describe how informal social controls—commitments, attachments, involvements and beliefs—increase the perceived cost of committing a crime. Others use data to more specifically show that costs of crime also include adverse outcomes if discovered (Nagin and Paternoster, 1993; Paternoster and Simpson, 1996; Piliavin et al., 1986).

Regardless of their origin, perceived costs have one characteristic in common: they are probabilistic. Offenders must make judgments about the likelihood of an adverse outcome. Benefits, on the other hand, are usually more certain to the potential offender. The criminal act usually leads to some positive level of perceived pleasure (Nagin and Paternoster, 1993) or anticipated returns (Piliavin et al., 1986). We postulate that the target's costs and benefits of exposure reduction are not as cleanly defined. In fact, depending on the target's perceived risk of violence, there

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5. A singular exception is a recent study by Kingsnorth and MacIntosh (2004) that examines under what circumstances battered women report their victimization to the police and support prosecution of the offender. Although admittedly not an explicit test of a theory, they cast their findings within a rational choice perspective.

may not be any benefits to altering routine activities. For targets who have never been victimized, their baseline experience is safely maintaining routine activities. Any change in routine activities would jeopardize the status quo and, therefore, contribute to the cost.

Potential costs of change considered by the target include the probability of retaliation (denoted  $P(R)$ ), attack costs ( $AC$ ) and resource costs ( $RC$ ). We can summarize these potential costs by the equation:

$$P(R) \times AC + RC \quad (1)$$

The potential benefit of change is a reduction in attack costs (for example, injury) associated with exposure reduction ( $ER$ ), summarized by

$$AC \times (1 - ER) \quad (2)$$

where  $ER \in [0,1]$ , such that 0 represents no exposure reduction and 1 represents complete exposure reduction. Thus, the decision rule is as follows. If

$$P(R) \times AC + RC < AC \times (1 - ER) \quad (3)$$

then the target should alter his or her routine activities in order to avoid violent victimization. In other words, if the cost of altering ones activities is less than the likely benefit, then targets should make the necessary changes to reduce their exposure to violence. Notice that attack costs ( $AC$ ) are on both sides of the equation. In Equation 1 these costs denote the direct impact of victimization. In Equation 2 the costs are associated with the impact of having been retaliated against for initiating a change in the status quo.

In this research, we are especially interested in the characteristics of the target-offender-guardian triad that influence whether offenders will retaliate against their targets' actions to reduce the likelihood of contact. Once we identify the components that predict retaliation, we can more accurately assess the costs and benefits for the target to reduce his or her exposure, and thus more strategically design policy. For instance, if the possibility of retaliation is zero, then the costs simply entail the tangible drain on the target's resources. These could be as simple as the additional time needed to alter a route to work, or they may be as costly as moving the household to another location. In this scenario, benefits are also more certain—reduced risk. If the possibility of retaliation is high, on the other hand, then the attack costs on the benefits side of the equation are not reduced and the costs now include the heightened risk of attack or retaliation.



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## HYPOTHESES

In the context of our discussion of routine activity and rational choice theories, we present three general hypotheses; each offering two specific tests. The first concentrates on the probability of retaliation found in the costs portion of the rational choice equation (equation 1), whereas the second and third hypotheses both focus on the attack costs.

Hypothesis 1: The probability of violent retaliation in response to exposure reduction increases as relational distance decreases.

If this were true, we would expect two sets of results. First, typical protective factors for stranger violence will not protect targets as effectively from intimate or family violence (H1a). Second, typical risk factors for stranger violence will pose a higher risk of intimate or family violence (H1b). Without adequate safety within the home, those living in close relational proximity to their offender will have fewer safe spaces when they have an already high risk of stranger violence. If results are consistent with expectation, they will support adding a concept of the differential risk of retaliation into the routine activity model of victimization.

The second and third hypotheses more directly test the ideas of a victim-based rational choice perspective. Here, we examine the role of attack costs within the most intimate relationship—marriage. For the second hypothesis, we consider the role of attack costs in the *cost portion* of the rational choice model (equation 1).

Hypothesis 2: Given high attack costs within a marriage, the victim is more likely pursue a change in the status quo.

This has two specific components. First, if one spouse violently attacks the other, the marriage is more likely to end (H2a). Second, because this deliberate offender (the spouse) has direct access to the target's living space, sufficiently high attack costs will increase the likelihood that the target will choose to disrupt the home environment by calling the police, receiving agency assistance help, or ending the marriage in order to avoid further attacks (H2b).

The third hypothesis initially appears to contradict the second.

Hypothesis 3: Given high attack costs within a marriage, the victim is less likely to pursue a change in the status quo.

Here, however, we examine the role of attack costs in the benefits portion of the rational choice equation (equation 2). These attack costs might be interpreted as retaliation costs against victims in response to a change in the status quo. In these instances, sufficiently high attack costs (or retaliation costs) could preserve the marriage and reduce the

likelihood that the target seeks help (H3a). Because we propose a differential risk of retaliation depending on the relational distance between the offender and target, we further hypothesize that the impact of the threat of retaliatory violence on help-seeking behavior will be stronger for spousal victimization than for stranger victimization (H3b).

## DATA AND METHODS

To test these hypotheses, we use data from the National Crime Victimization Survey (NCVS), sponsored by the Bureau of Justice Statistics (U.S. Department of Justice, 2001). It is the largest victimization data source that documents characteristics of victims and nonvictims, ages 12 and older, living within sampled housing units. In addition to detailed information on each interviewed household and individual, respondents report their recent experiences as crime victims, including their severity and consequences. Data collection has been ongoing since 1972, using a rotating panel designed to interview about 100,000 residents in select housing units seven times during a three-year period.<sup>6</sup> Our sample includes all respondents ages 12 or older who were interviewed with the redesigned NCVS between January 1992 and June 2000, inclusive (709,235 females and 605,648 males).<sup>7</sup>

### TEST OF THE DIFFERENTIAL RISK OF RETALIATION IN THE ROUTINE ACTIVITY MODEL

To test H1—the differential impact of routine activities and lifestyles on different types of victimization—we use all observations in the NCVS,<sup>8</sup> and distinguish between two measures of violent crime:<sup>9</sup> stranger

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6. BJS uses the first interview for bounding purposes only. We do not include it in our data.
  7. In 1992, a redesigned version of the NCVS was implemented following an elaborate technical review, which relied on consultation with criminal justice experts and victim advocacy groups to better design the survey's contents and procedures (Bachman and Taylor, 1994). The redesign effort is especially important for the investigation of violence against women. Improvements in screening questions and interview context led to enhanced estimations of domestic and sexual violence (for a thorough description of the redesign effort and its improvements, see Bachman and Taylor, 1994).
  8. We specifically hypothesize that routine activities or lifestyles that increase the likelihood of stranger victimization will increase even more the likelihood of victimization by intimates or family members. The theoretical link is retaliation in response to exposure reduction. However, since our data are cross-sectional, we can only speculate as to whether an attack is truly retaliatory.
  9. Violent crime is defined as completed or attempted incidents of rape, robbery, and aggravated assault, simple assault, sexual attack with serious assault or minor

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victimization, which is perpetrated by an offender previously unknown to the victim, and domestic victimization, which is perpetrated by a spouse, ex-spouse, unmarried partner or other family member. Here the important distinction is that a stranger would not routinely be welcomed into the respondent's home, whereas a family member typically would be. The outcome is a multinomial response variable for whether the respondent reported being the victim of a violent crime within the previous six months. The following coding strategy is used:

$$Y_i = \begin{cases} 0 & \text{if not victimized} \\ 1 & \text{if victimized by a domestic} \\ 2 & \text{if victimized by a stranger but not a domestic} \\ 3 & \text{if victimized by someone other than a domestic or stranger} \end{cases}$$

For these analyses, we model the likelihood that a person is the victim of a violent crime using the logistic function:<sup>10</sup>

$$\Pr(Y = k) = \frac{\exp(\mathbf{X}\beta_k)}{1 + \sum_{k=1}^K \exp(\mathbf{X}\beta_k)}, \quad k = 1, 2, 3 \quad (4)$$

where

$$\mathbf{X}\beta_k = \beta_{0k} + \beta_{1k}\text{Home Environment} + \beta_{2k}\text{Attainment} + \beta_{3k}\text{Demographic} + \beta_{4k}\text{Survey Controls.}$$

Home Environment includes variables describing the immediate environment or lifestyle of the victim. Some factors suggest instability and are hypothesized to increase violence according to routine activities; these are urban, high mobility, public housing, multiple-unit housing, dormitory living, separation or divorce, one-adult household with at least one child,

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assault, threatened assault with weapon, sexual assault without injury, unwanted sexual contact without force, assault without weapon or injury, and verbal threats of rape, sexual assault, or assault.

10. For this set of analyses, the person rather than the incident is the unit of analysis. Someone coded "1" is victimized at least once by a domestic offender, but may also be victimized in other instances at the hands of a stranger or acquaintance. We thus give priority to the domestic victimization. Someone coded "2" is victimized at least once by a stranger but never by a family member, with the possibility that this person is also victimized by an acquaintance. Someone coded "3" is victimized only by acquaintances.

and going out every night. Other factors describe more stable environments and are hypothesized to decrease violence according to routine activities; these are months at residence, home ownership, the number of children under 12, and marriage. Attainment characterizes factors such as education, income and employment; these include a measure of low income, which is defined as having a family income of less than \$15,000 per year, having a job, and level of education (less than high school, enrolled in high school, some college and college diploma). Demographics include measures of race, ethnicity and age. Race is composed of four dummy variables: non-Hispanic black, Hispanic, Native American and Asian-Pacific Islander (non-Hispanic white is the reference group). Age is broken into three categories: teen, 20 to 29 years old and age 60 or above (adults aged 30 to 59 years are the reference group).

The final group of variables, Survey Controls, adjusts for over- or under-reporting violent episodes due to the survey design and missing data. Among these are indicators for proxy and unbounded interviews, as well as the interview period (for discussion of biases associated with each, see Biderman and Cantor, 1984). Also, because some respondents fail to answer questions pertaining to income, education and length of residence, we include dummy variables for those cases. Finally, year dummies are included to control for temporal trends in violence. All variable definitions are listed in Appendix A.<sup>11</sup>

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11. Analyses using the NCVS inherently suffer from the problem of spatial autocorrelation. Uncorrected positive autocorrelation in linear models biases variance estimates downward, thereby exaggerating model fit (Johnston, 1984). The practical consequence is to increase the probability of type I errors, leading us to conclude that a predictor is significantly related to violence when in fact it may not be. However, the coefficient estimates remain unbiased. There are at least three sources of violation of the assumption of independence across observations. First, because the sampling strategy of the NCVS is to interview all persons in the selected housing units, respondents living together could be victimized by the same offender. For example, the husband of a victim of spousal violence may also abuse his son. We address this problem partly by conducting the analysis separately for males and females. Second, NCVS data are gathered using a cluster sampling technique which interviews residents in adjacent housing units (U.S. Department of Justice, BJS 2001). Persons living in the same neighborhood may have a similar propensity to be victimized. We address this source of autocorrelation by directly adjusting standard errors using estimated design effects. Finally, because the NCVS uses a panel design, residents of housing units are potentially interviewed six times (not including the bounding interview). Therefore, a sample of respondents compiled by pooling NCVS interviews across multiple years will contain repeat interviews of the same respondents. In the present analysis, we are unable to directly address possible type I errors due to multiple interviews of the same respondent.

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## TEST OF A VICTIM-BASED RATIONAL CHOICE PERSPECTIVE

To address the remaining hypotheses, we restrict our attention to violent victimization by a spouse (with violence defined as before: rape, robbery or assault). This is the only type of violence recorded in the NCVS where we are more confident in knowing whether victims altered their direct exposure to the offender through marital dissolution or other help-seeking actions. To test H2a, we use the subset of respondents who report being married during the previous interview (6 months earlier) and who are currently married, separated or divorced (328,235 females and 307,211 males). We hypothesize that married persons who are violently victimized by their spouse during the 6 months prior to the interview are more likely to be divorced or separated at the current interview. We estimate binary logistic regressions separately for males and females, using most of the same regressors denoted by  $X\beta$  in equation (4).<sup>12</sup> Regressors were chosen to control for factors that relate to both violence and separation.<sup>13</sup>

An important nuance of this data is that the subsample that reports being divorced or separated does not represent all respondents whose marriage ended. It only includes those who remained at the current address while their former spouse moved. Respondents who move exit the sampling frame since the address, not the person, is the sampling unit. Consequently, results from this model can only be generalized to all persons who were married 6 months ago and still live at the same address. This distinction is important because the resource costs (equation 1) for those who stay while their offenders leave are clearly lower than for those who move away.

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12. It is especially important that we model males and females separately to assure independence across observations. Those individuals who remained married since the last interview period are likely to be married to another respondent in the sample.

13. We omit factors from the model that could “result from” instead of “cause” the ending of the marriage, such as a single-adult household, living with children under 12 (or not living with them), going out every night, low income and having a job. Also omitted are indicators for attending high school, teenager, attending college, and living in a dormitory. Very few of these individuals were married 6 months earlier.

Standard errors were not adjusted for design effects because we condition on having been married at the time of the last interview and therefore reduce the clustering. Thus the dependent variable is a measure of change in marital status. It is highly unlikely that those who live in the same cluster are any more or less likely to be recently divorced or separated, unless they just moved into an affordable neighborhood. We control for length at residence, and therefore for those who recently moved. Results are similar regardless of whether we adjusted for the design effect.

To test hypotheses H2b and H3a, we restrict our attention to those who were violently victimized at least once by their current spouse, who reported being married 6 months earlier, and who are currently married, divorced or separated. To make this sample more general, we also include those victims who recently moved into the sample who were likely to be married 6 months earlier.<sup>14</sup> Because we are modeling only the experiences of victims, we can test the influence of different indicators of attack costs on changes in routine activities. We use three dependent variables as indicators of change in routine activities. The first two are incident specific—contacting the police and receiving help from a victim agency. We conduct these analyses at the incident level and adjust the standard errors to account for clustering within the same victim. We measure only police contact that the victim initiated. Help from a victim agency is implied when the victim responds affirmatively to the question, “did you (or someone in your household) receive any help or advice from any office or agency—other than the police—that deals with victims of crime?” Finally, the third dependent variable denotes the ending of the marriage. We measure this when the victim reports his or her current marital status as divorced or separated. This analysis is conducted at the respondent level.

We test our hypotheses using the following logistic model,

$$\Pr(Y = 1) = \frac{\exp(\mathbf{X}\boldsymbol{\beta})}{1 + \exp(\mathbf{X}\boldsymbol{\beta})}, \quad (5)$$

where

$$\mathbf{X}\boldsymbol{\beta} = \beta_0 + \beta_1 \text{Attack Costs} + \beta_2 \text{Other Incident Characteristics} + \beta_3 \text{Other Victim Characteristics} + \beta_4 \text{Controls}$$

and  $Y$  is one of the three dependent variables listed above. Attack Costs include whether the attack led to a serious injury (or the total number of

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14. Our strategy was to add males and females who (1) were not interviewed during the previous reporting period, (2) reported living at the current residence for 6 months or less, (3) were violently victimized at least once by a person who was their spouse at the time of the incident, (4) were victimized prior to their move, and (5) are currently married, divorced, or separated. We expect that by supplementing with this subsample, the data are more representative of all incidents of spousal violence regardless of whether the marriage ended. Even if victims report that the offender was their spouse at the time of the incident, some couples could have already been separated but not divorced. Still, by moving, victims are significantly altering their routine activities.

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serious injuries for the respondent-level analysis),<sup>15</sup> whether a weapon was brandished by the offender, whether the offender has attacked before, and whether the household includes at least one child under the age of 12. As the competing hypotheses H2b and H3a suggest, different attack costs may be more strongly associated with different sides of the rational choice equation (equations 1 and 2). For instance, having children could factor more into the severity of the attack costs in equation (1) if victims believe that without a change in the status quo is made the spouse will eventually attack the children. If the victim makes a change, the offender will more likely only retaliate against the victim—not the children. Conversely, victims who are seriously injured may expect to be even more severely injured during retaliation if they seek a change. Since the effects of attack costs are hypothesized to be either positive or negative, all tests are two-tailed.

Other Incident Characteristics in equation (5) include whether another household member over the age of 12 was present during the attack. It is unclear whether another's presence during the event would arouse change or normalize the violence and suppress potential change. Also, when it is not the dependent variable, we include an indicator of whether the victim informed the police and whether the victim was helped by a noncriminal justice agency. If the victim calls the police and has contact with a victim service agency after the same final incident, there is no indication of which initiative happened first. Without clear temporal ordering any finding may suffer from simultaneity. However, our interest here is more about whether they covary and less on the temporal ordering of the events.

Other Victim Characteristics, which are race dummy variables for white and Hispanic, are included in the female model only. The female sample has relatively few women of different races, and the male sample is mostly white. Finally, Controls include whether the incident was reported by a victim who recently moved into the sample and the year. The control for having just moved is especially important because this sample could include respondents who were already separated at the time of the incident, but reported that the offender was the spouse instead of ex-spouse at the time of the incident. By adding a dummy variable for this group, we reduce any systematic bias introduced by the supplemental sample. By including the year variable, we control for increasing or decreasing trends of help seeking and divorce.<sup>16</sup>

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15. An injury is considered serious if the assault that led to it was classified as serious or the victim suffered from rape injuries, knife wounds, gunshot wounds, broken bones or similarly serious affects.

16. We are less concerned about issues of dependency across observations for these models. Because only persons who reported being married 6 months earlier remain in the sample, it is unlikely that the sample will include more than one male or female who live together. (Recall that all models are estimated separately for males

## RESULTS

We first turn to the distribution of victimization type by gender of the victim. Of the 1,314,883 interviews recorded in the NCVS, most make no mention of a violent victimization (97.7 percent males and 98.4 percent females, respectively). Yet, with the large sample size, the data include reports from more than 25,000 victims (57 percent male and 43 percent female). Of the females, 0.77 percent are victimized by a domestic, whereas only 0.33 percent of the males are victimized by a domestic. Similarly, a larger percentage of females are victimized by strangers (but not domestic) compared to the percent male victimized by strangers (73 percent versus 60 percent). Finally, a larger percent of males (39 percent) are more likely to be victimized by someone other than a stranger or domestic compared to females (26 percent).<sup>17</sup>

### TEST OF THE DIFFERENTIAL RISK OF RETALIATION IN THE ROUTINE ACTIVITY MODEL

A summary of the effects of home environment and attainment on type of victimization is found in Table 1. Here we compare the relative risk ratios (RRRs) for domestic and stranger violence.<sup>18</sup> The top panel lists the RRRs for that are significantly larger for domestic violence than for stranger violence, and are consequently consistent with H1a and H1b. The middle panel lists the RRRs that are significantly lower for domestic violence than for stranger violence, and are thus inconsistent with H1a and H1b. Finally, the bottom panel lists the RRRs that are not significantly different.<sup>19</sup>

The overwhelming pattern suggests that, for females, lifestyle factors that are associated with an elevated risk of violent victimization produce a higher risk of domestic compared to stranger violence. In other words, females who have close relational distance with their attackers are more vulnerable to domestic retaliatory violence vis-à-vis factors that increase exposure to predatory victimization. This is not true for men, however.

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and females.) This restriction also reduces the degree of clustering in the sample. Therefore, we make no adjustments to the standard errors.

17. These numbers are different from published BJS reports using NCVS data because those reports are based on incident level data. The percentages presented here are calculated from individual interviews and are operationalized according to our dependent variable. Hence, if someone was victimized by a stranger and a domestic, they would fall in the domestic but not stranger category.

18. Contact the authors for the complete set of findings.

19. Only findings in which at least one of the RRRs is significantly different from one are reported.



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Thus, our hypotheses about the differential risk of retaliation for exposure reduction (H1a and H1b) are confirmed for women but not for men.

Regardless of sex, individuals who are separated, divorced or have less than a high school education are more vulnerable to domestic violence than they are to stranger violence. Females, however, are more vulnerable to domestic violence than stranger violence if they have a history of moving frequently, live in a household with only one adult and at least one child, live in a home with more children under the age of 12, have only a high school education, have less than four years of college, or live in an owned home. These RRRs are statistically equivalent between domestic and stranger violence for males, with the exception of low education.

**Table 1. Comparing the Relative Risk Ratios of Domestic and Violent Victimization for Females and Males**

*Higher Risks for Domestic Violence Compared to Stranger Violence*

<b>Females</b>	<b>Males</b>
High mobility (2.60 vs. 1.96)	
Separated/divorced (2.37 vs. 1.17)	Separated/divorced (2.96 vs. 1.27)
One adult with kids (1.90 vs. 1.26)	
# of kids under 12 (1.205 vs. 1.062)	
Less than H.S. education (2.02 vs. 1.02)	Less than H.S. education (1.99 vs. 1.21)
H.S. diploma only (1.84 vs. 0.93)	
Only some college (1.79 vs. 1.06)	
Own home (N.S. vs. 0.742)	

*Lower Risks for Domestic Violence Compared to Stranger Violence*

<b>Females</b>	<b>Males</b>
Having a job (N.S. vs. 1.26)	Having a job (0.682 vs. 1.04)
Months at residence (0.997 vs. 0.998)	

*Similar Risks for Domestic Violence Compared to Stranger Violence*

<b>Females</b>	<b>Males</b>
Urban (N.S. & 1.22)	High mobility (2.40 & 1.86)
	Urban (N.S. & 1.33)
	One adult with kids (N.S. & 1.16)
	# of kids under 12 (1.14 & 1.05)
Out every night (1.32 & 1.48)	Out every night (N.S. & 1.49)
Low income (1.36 & 1.21)	Low income (N.S. & 1.20)
	H.S. diploma only (1.77 & 1.34)
	Only some college (2.07 & 1.55)
Having a job in H.S. (1.72 & N.S.)	
Married (0.48 & 0.57)	Married (N.S. & 0.59)

Notes: In the top two panels, only significant findings with  $p < 0.01$  are reported. The bottom panel reports findings that are not significantly different. N.S. indicates nonsignificance.

Two results oppose the hypothesis for each sex. Having a job produces a higher risk for stranger violence than domestic violence regardless of sex. This finding makes sense, though, because in most cases having a job removes the suitable target from the home where he or she is at risk of domestic violence and protected from stranger violence. Also understandable is that males who are currently attending high school have less risk of domestic violence than stranger violence. Finally, females who have lived at their residence longer seem to be more protected from domestic violence than stranger violence, though the difference in RRRs is not substantively significant.

#### TEST OF A VICTIM-BASED RATIONAL CHOICE PERSPECTIVE

To test our ideas stemming from a victim-based rational choice perspective, we first simply ask whether those marriages with spousal abuse are more likely to end compared to other marriages (H2a). Of the 33,743 and 30,134 females and males (respectively) who reported being married six months earlier, 30.9 percent and 23.6 percent are currently divorced or separated. Also, only 254 females and 28 males reported that they had been violently victimized by their spouse in the previous six months. Even with few cases, simple t-tests show that the probability of marital dissolution is statistically greater for those who reported being victimized than those who did not (females: 0.783 vs. 0.305, males: 0.750 vs. 0.236). To reduce the chances that this finding is spurious, we controlled for factors that can jointly be related to both spousal violence and separation, and find that strong associations remain. The odds that a female who was attacked by her husband divorces or separates within the next six months are nearly 60 times that of married women who were not attacked. While the odds for married male victims of spousal violence are statistically similar to married women, the magnitude is greater (76.4).<sup>20</sup> See Appendix B for the full set of results.

We now turn to the results from the models generated from the subset of victims of spousal violence to determine whether high attack costs are more or less strongly associated with whether a victim seeks a change (H2b and H3a). Tables 2 and 3 report the estimated odds ratios of the variables described in equation (5) on three outcomes separately for females and males: calling the police, receiving help from another agency and ending the marriage. The findings show support for both sides of the rational choice equation. Some costs are associated with increasing the

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20. This finding may be unstable because very few males reported being violently victimized by their spouse.

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chances that the victim takes help-seeking action. When the wife was previously attacked by her husband, she is more likely to have contact with a noncriminal justice victims' service agency. Also, if the couple has young children, the violent marriage is more likely to be dissolved. Other costs appear to reduce the chances that the victimized wife seeks a change. Specifically, if the attack leads to serious injury, the wife is less likely to call the police or leave the marriage.

**Table 2. Logistic Odds Ratios Predicting Help Seeking and Divorce or Separation for Female Victims of Spousal Violence**

<i>Variable</i>	<i>Call Police</i> <i>(n = 643)</i>	<i>Other Agency</i> <i>(n = 643)</i>	<i>Separation Divorce</i> <i>(n = 497)</i>
<i>Attack costs</i>			
(Total) serious injuries	0.492*	1.119	0.628*
Offender used a weapon	1.053	1.059	1.447
This happened before	1.227	1.813**	0.967
Has children under 12	1.329	1.060	1.839**
<i>Other incident characteristics</i>			
Others present	0.760	1.455	0.205***
Victim informed police	–	1.152	1.487*
Helped by non-CJ agency	1.157	–	1.283
<i>Other victim characteristics</i>			
White	0.759	1.177	1.347
Hispanic	1.769*	0.387*	0.651
<i>Control Variables</i>			
Recently moved into sample	1.042	0.844	7.446***
Year	1.066	1.067	0.944

Note: \* $p < .10$ , \*\* $p < .05$ , \*\*\* $p < .01$ , \*\*\*\* $p < .001$ , all tests are two-tailed.

**Table 3. Logistic Odds Ratios Predicting Help Seeking and Divorce or Separation for Male Victims of Spousal Violence**

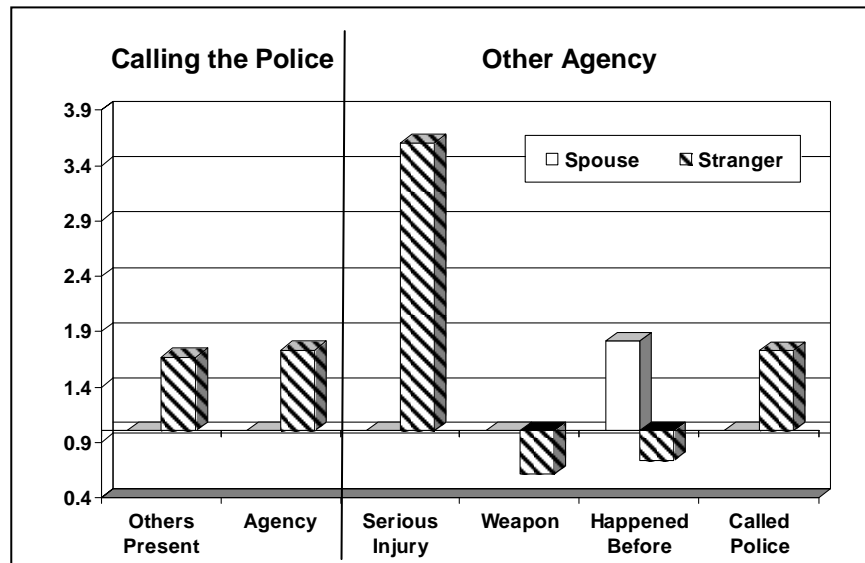
<i>Variable</i>	<i>Call Police</i> <i>(n = 81)</i>	<i>Other Agency</i> <i>(n = 81)</i>	<i>Separation Divorce</i> <i>(n = 73)</i>
<i>Attack costs</i>			
(Total) injuries	0.705	1.676	1.055
Offender used a weapon	0.594	0.698	0.304*
This happened before	1.428	0.682	1.788
Has children under 12	1.457	1.065	0.398
<i>Other incident characteristics</i>			
Others present	0.775	0.560	0.072***
Victim informed police	–	2.659	1.250
Helped by non-CJ agency	2.566	–	1.404
<i>Control variables</i>			
Recently moved into sample	1.165	0.352	16.200*
Year	1.030	1.246*	0.868

Note: \* $p < .10$ , \*\* $p < .05$ , \*\*\* $p < .01$ , \*\*\*\* $p < .001$ , all tests are two-tailed.

Other results are also intriguing. When other family members are present during the attack, the wife is more likely to remain married to her perpetrator. However, if the victim does contact the police, the marriage is more likely to end. Finally, we see that Hispanic wives are much more likely to call the police than to receive help from a noncriminal justice service agency.

Relatively few results are significant in the model for males. Other than the increasing temporal trend in receiving help from a non-criminal justice agency, virtually none of the other characteristics predicts whether the husband who was attacked by his wife contacts the police or receives help from an outside agency.<sup>21</sup> However, we do find that, like women, men who were attacked by their spouse in the presence of another family member are highly unlikely to end the marriage.

Figure 2. Odd Ratios Predicting Help Seeking by Female Victims' Relational Distance to Offender



Notes: Only significant differences are reported ( $p < 0.10$ ). Insignificant odds ratios are set to one.

Finally, we turn to the results that test whether victims of severe spousal violence are less likely to seek outside help compared to victims of severe

21. Almost none of the injuries against the husbands were serious, so instead of measuring serious injury, we included all injuries.

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stranger violence.<sup>22</sup> Because none of the cost variables in the male equations were significant and because Table 1 suggests that females are more sensitive to relational distance than males, we focus exclusively on female victims. The models in equation (5) were estimated using female victims of stranger violence and the coefficients were compared to those for spousal violence using z-tests (Paternoster, Brame, Mazerolle and Piquero, 1998).<sup>23</sup> Figure 2 displays only the odds ratios of the findings for victims of spousal and stranger violence that are significantly different at the 0.10 level. Hypothesis 3b predicts that victims of stranger violence would be more likely to seek help than those victimized by their husbands. We find that this is the case most of the time. Victims of stranger violence are more likely to call the police if other family members were present or if a victims' agency helped the family. Also, those victims of stranger violence who were seriously injured or had called the police were more likely to receive help from a victims' service agency. Two findings, however, oppose our prediction. Victims of stranger violence are less likely to receive help from an outside victims' agency if the offender had a weapon or if they had been previously victimized by a stranger. See Appendix C for the full set of results.

## DISCUSSION

In this research, we elaborate on a routine activity model of violent victimization. As it currently stands, the model's usefulness to policy makers is limited because it addresses only violence in which offenders' targeting strategies are opportunistic. In this context, policy simply provides safer alternatives to dangerous public spaces to reduce likely targets' exposure to the routine spaces of motivated offenders. But how does a routine activity model of violence inform policy when offenders deliberately select targets with whom they share common private space? One approach is to provide safer private spaces to those potential targets to reduce the chances of convergence. Here is where the routine activity model falls short. In order for these strategies to be effective, targets must choose to change their routines to benefit from additional safety. Hence, we elaborated routine activity theory by incorporating a model of rational choice to account for at-risk targets' decision-making considerations. Specifically, we examine how the costs of the attack and possible retaliation influence changes in victims' status quo.

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22. We do not compare the effects on divorce outcomes since divorce is only a strategy to avoid re-offense when the perpetrator is a spouse.

23. We used the test for independent samples even though some of the victims of stranger violence were also victims of spousal violence. Findings should be loosely interpreted.

A key contribution of this research is the distinction between opportunistic and deliberate targeting by the offender. We expected that targets of deliberate offenders are less insulated by traditional protective factors because deliberate offenders are more motivated to attack a single, specific target.<sup>24</sup> Consequently, they might retaliate against targets who seek relief. We tested this hypothesis by comparing the magnitudes of risk and protection posed by traditional measures of routine activities and lifestyles for domestic and stranger violence (specifically, rape, robbery and assault). We did find support for this hypothesis, but only for females. This is not surprising, since women are almost three times more likely to be targeted by deliberate offenders (that is, domestic offenders) than are men. Women therefore face a higher risk of retaliatory violence if they try to separate themselves from their intimate offenders.

Our next step was to directly assess whether some victims change their activities or lifestyles expressly to reduce their exposure to violent offenders. We examined the predictors of marital dissolution among women and men and found, overwhelmingly, that spousal violence is the strongest predictor. Although this seems to establish that some victims of deliberate violence are willing to change their lifestyles (as measured by marital status, that is), it falls short of revealing their considerations in the course of making these difficult decisions.

Our next set of analyses was designed to address this shortcoming. We examined the circumstances that might exacerbate the cost of the status quo enough to warrant calling the police, receiving help from a social service agency, or even ending the marriage. We restricted our analyses to victims of spousal violence (an extreme case of deliberate violence), finding that the cost that seems to most strongly lead to help seeking among women is having young children. Abused women with children are almost twice as likely to leave their abusive husbands compared to other abused women. This finding suggests that the cost of putting one's children at risk of violence by staying in the marriage is far higher than the benefit of avoiding retaliatory violence to oneself. This finding is especially relevant to policy makers because it provides insight into facilitating victims' safety by providing support for child care.<sup>25</sup> We also find that

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24. This is not to say that opportunistic elements are not present in domestic violence events. Indeed, as one reviewer noted, "The female victim of domestic violence may kill her husband in the kitchen because the knife happens to be within reach." However, we use the terms opportunistic and deliberate in this article to characterize modes of victim selection as opposed to the *modus operandi* of the offender during the course of the violent event, conditional on a victim being chosen.

25. This becomes critically important in light of research that illuminates the short- and long-term consequences of childhood exposure to domestic violence (see Fantuzzo

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wives are more likely to receive help from a noncriminal justice victims' service agency if this was not the first time they were attacked by their husband. Although no information is provided on who initiated agency contact, the good news for policy makers and service providers is that some victims appear to eventually receive outside support. Finally, victims who call the police are more likely to leave the marriage (for a more general perspective on victim help seeking, we refer readers to Kaukinen, 2002).

We also expected that the decision to seek help will be less likely if the risk of retaliation appears high. The findings seem to support this assertion since serious injury reduces the probability that an abused wife calls the police or ends the marriage.<sup>26</sup> The willingness of the husband to harm his wife could suggest to her that he would harm her even further. This places the husband's actions in a wider context of control over his wife's autonomy (Dobash and Dobash, 1984; Mahoney, 1991; Ptacek, 1997; Wilson and Daly, 1992). Finally, the strongest predictor of marital adhesion in these violent relationships is having another household member present during the violence. It may be that having a witness to the violence tends to normalize it. If the violence is validated (or rationalized) by others, the victim might not recognize the need to seek help (or perhaps is even persuaded to not do so by third parties). Yet this dynamic is unfounded among the findings for stranger violence. When others witness a woman being attacked by a stranger, the victim is more likely to seek help (Figure 2). These results suggest that we may need to expand the rational choice model to account for the "normative climate" of violence. The current data provide little insight into the identity of the witness, other than that he or she was a member of the household. Clearly, more research is needed to better understand the role of witnesses on victim agency.

Our last set of analyses was designed to more directly examine the circumstances whereby female victims of deliberate offenders are less likely than those of opportunistic offenders to seek help. In contrast to victims of stranger violence, those who are seriously injured by their husbands do not seek help or leave the relationship. This raises great concern because serious injury is a predictor of increasing violence and even death (see Campbell et al., 2003). Another concern is that there seems to be a looser connection between victim service agencies and

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et al., 1991; Fergusson and Horwood, 1998; Henning et al., 1996; Mitchell and Finkelhor, 2001).

26. As one reviewer rightly noted, our analyses are limited to violent encounters in which the victim survived, and therefore exclude encounters in which the victim was killed. Thus, conditional on the victim surviving the violent encounter, serious injury is negatively associated with calling the police or dissolving the marriage.

police when the victim is married to the offender. The findings show that women victimized by a stranger and who call the police are more likely to also have contact with a victim service agency, and vice versa. Research by Worden (2001) discusses the importance of a comprehensive community approach to address domestic violence.

Our findings have other clear policy implications. Most important, effective crime policy must recognize that victims of deliberate offenders (especially female victims of spousal violence) fear for their safety if they seek change and might, therefore, resist courses of action intended to help them. They may suspect that their offenders will retaliate given the opportunity. Victims seem to inherently know what others have worked so hard to discover—a little exposure reduction can be more harmful than none at all (see Dugan et al., 2003). The good news is that this research did not find that victims will not seek help. In fact, mothers are more likely than other women to leave a violent relationship. Because this population is highly vulnerable, policy makers and service providers should design means to accommodate their special needs, particularly with respect to children.

Our analysis is by no means without weaknesses. First, we use a large-scale victimization survey to measure violence. The NCVS has been criticized for undercounting incidents of intimate violence, despite the fact that efforts were made in the early 1990s to remedy this problem. If victim underreporting is systematically related to characteristics of victims, offenders, or violent situations, then unknown biases are introduced into our analysis. Second, our measures of target selection, victim decision making and routine activity-lifestyle changes are subject to error. For example, we are forced to assume that violent victimization that occurs at the hands of an intimate partner or family member is deliberate, whereas violent victimization that occurs at the hands of a stranger is opportunistic. Measured in this way, relational distance is but a proxy for target selection, as we cannot directly measure offender motivation.

With these limitations in mind, we have attempted to shed light on the full breadth of how victimization theory can inform policy. It raises the important consideration of how a normalized culture of violence might prevent targets from making safer choices. Future research should qualitatively examine this issue with a broad range of at-risk persons. Our findings also highlight the need to longitudinally study the experiences of victims who do seek help and compare them to those who remain living with violence to assess how the lives of these targets truly improve.



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**Appendix A. Variables used in the Multinomial Logistic Models Predicting Violence**

<i>Variable</i>	<i>Possible Values</i>	<i>Description</i>
<b>Home Environment</b>		
Months at Residence	[0, ∞)	The number of months the respondent has lived at his/her current residence
High Mobility	0, 1	The respondent has moved at least five times over the past five years
Own Home	0, 1	At least one resident owns the home
Married	0, 1	The respondent is married
Urban	0, 1	The respondent lives in an urban setting
Public Housing	0, 1	The respondent lives in public housing
Dormitory	0, 1	The respondent lives on a college campus
Other Units	0, 1	The respondent lives in a multiple unit dwelling
Separated/Divorced	0, 1	The respondent is separated or divorced
One Adult with Kid(s)	0, 1	The respondent lives in a household that includes only one adult with at least one child
Kids Under 12	[0, ∞)	The number of children in the household under 12 years old
Out Every Night	0, 1	The respondent reports spending almost every evening away from home for work, school, or entertainment
<b>Activity &amp; Attainment</b>		
Low Income	0, 1	Household income is less than \$15,000/year
Job	0, 1	The respondent has a job
In High School	0, 1	The respondent is currently attending high school (including junior high school)
Less Than High School	0, 1	The respondent has not finished high school and is 19 years or older
High School Diploma	0, 1	The respondent reports completing only 12 years of education
In College	0, 1	The respondent is 22 years or younger and reports less than four years of post high school education
Some College	0, 1	The respondent has less than 4 years of post-high school education and is 23 years or older
Job × In High School	0, 1	The respondent is a high school student with a job
Job × In College	0, 1	The respondent is a college student with a job
<b>Demographics</b>		
Black	0, 1	The respondent is non-Hispanic black
Hispanic	0, 1	The respondent is Hispanic (not including those who identify as Asian/Pacific Islander or Native American)

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**Appendix A. Variables used in the Multinomial Logistic Models Predicting Violence**

<i>Variable</i>	<i>Possible Values</i>	<i>Description</i>
Native American	0, 1	The respondent is Native American or Aleut (including those of Hispanic origin)
Asian/Pacific Islander	0, 1	The respondent is Asian or Pacific Islander (including those of Hispanic origin)
Teen	0, 1	The respondent is under the age of 20
Twenties	0, 1	The respondent is between 20 and 29 years old
60 or Older	0, 1	The respondent is age 60 or older
<b>Survey Issues</b>		
Other Person Present	0, 1	Another person was present during the interview
Proxy	0, 1	The interview was a proxy
Cati	0, 1	The interviewer used Computer-Assisted Telephone Interviewing (CATI)
Unbounded	0, 1	The household was interviewed for the first time
Interview Period	0, 1	The number of times that the housing unit was scheduled to be interviewed
Missing Job	0, 1	The respondent failed to report whether he or she currently is employed
Missing Education	0, 1	The respondent failed to report his/her educational status
Missing Months	0, 1	The respondent failed to report the number of months at the current residence
Missing Income	0, 1	The household respondent failed to report family income
Year 92	0, 1	The interview was in 1992
Year 93	0, 1	The interview was in 1993
Year 94	0, 1	The interview was in 1994
Year 95	0, 1	The interview was in 1995
Year 96	0, 1	The interview was in 1996
Year 97	0, 1	The interview was in 1997
Year 98	0, 1	The interview was in 1998
Year 99	0, 1	The interview was in 1999

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**Appendix B. Logistic Odds Ratios Predicting Separation/Divorce among Respondents who were Married Six Months Ago**

Variable	Females	Males
	(n = 328,235)	(n = 307,211)
Victimized by Current Spouse	58.166 <sup>+</sup>	76.409 <sup>+</sup>
<i>Home Environment</i>		
Months at Residence <sup>+</sup>	0.998 <sup>**</sup>	0.998 <sup>**</sup>
High Mobility	1.344 <sup>+</sup>	1.364 <sup>+</sup>
Own Home	0.638 <sup>**</sup>	0.736 <sup>**</sup>
Urban <sup>+</sup>	1.143 <sup>+</sup>	0.945
Public Housing <sup>+</sup>	1.833 <sup>**</sup>	0.652
Other Units	1.051	1.113
<i>Activity &amp; Attainment</i>		
Less Than High School	1.580 <sup>**</sup>	1.931 <sup>**</sup>
High School Diploma <sup>+</sup>	1.464 <sup>**</sup>	1.934 <sup>**</sup>
Some College	1.560 <sup>**</sup>	1.834 <sup>**</sup>
<i>Demographics</i>		
Black <sup>**</sup>	1.948 <sup>**</sup>	1.235 <sup>+</sup>
Hispanic <sup>**</sup>	1.221 <sup>+</sup>	0.672 <sup>**</sup>
Native American	1.102	0.733
Asian/Pacific Islander	0.543 <sup>**</sup>	0.375 <sup>**</sup>
Twenties <sup>+</sup>	1.036	1.391 <sup>**</sup>
60 or Older <sup>+</sup>	0.199 <sup>**</sup>	0.271 <sup>**</sup>

Note: <sup>+</sup>  $p < .05$ , <sup>\*</sup>  $p < .01$ , <sup>\*\*</sup>  $p < .001$ , all tests are two-tailed.

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**Appendix C. Logistic Odds Ratios Predicting Help Seeking for Female Victims of Spousal and Stranger Violence**

Variable	Spousal Violence (n = 643)		Stranger Violence (n = 12,705)	
	Call Police	Other Agency	Call Police	Other Agency
<i>Attack Costs</i>				
Serious injury	0.492 <sup>+</sup>	1.119	0.745 <sup>***</sup>	3.607 <sup>***</sup>
Offender used a weapon	1.053	1.059	1.678 <sup>***</sup>	0.610 <sup>***</sup>
This happened before	1.227	1.813 <sup>**</sup>	0.913 <sup>+</sup>	0.734 <sup>***</sup>
Has children under 12	1.329	1.060	1.223 <sup>***</sup>	1.133 <sup>+</sup>
<i>Other Incident Characteristics</i>				
Others present	0.760	1.455	1.668 <sup>***</sup>	1.570 <sup>***</sup>
Victim informed police	—	1.152	—	1.731 <sup>***</sup>
Helped by non-CJ agency	1.157	—	1.772 <sup>***</sup>	—
<i>Other Victim Characteristics</i>				
White	0.759	1.177	0.857 <sup>**</sup>	1.331 <sup>**</sup>
Hispanic	1.769 <sup>+</sup>	0.387 <sup>+</sup>	1.027	0.761 <sup>**</sup>
<i>Control Variables</i>				
Recently moved into sample	1.042	0.844	1.321 <sup>***</sup>	0.959
Year	1.066	1.067	1.030 <sup>**</sup>	1.04 <sup>**</sup>

Note: <sup>+</sup>  $p < .10$ , <sup>\*</sup>  $p < .05$ , <sup>\*\*</sup>  $p < .01$ , <sup>\*\*\*</sup>  $p < .001$ , all tests are two-tailed.

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