

Section II: Antecedents to and Consequences of Violence Against Women and Family Violence

Overview

by Bonnie S. Fisher

In *Understanding Violence Against Women* (Crowell and Burgess, 1996), the Panel on Research on Violence Against Women stated that the precursor to preventing violence against women is understanding its causes. Better insight into the sources of violence, the panel argued, is “useful in designing both prevention programs and interventions with offenders” (p. 89). The panel also stated that understanding the consequences of violence “is necessary for planning and implementing interventions to deal with those consequences” (p. 74).

The importance of understanding both the antecedents to and consequences of violence against women and family violence remains a priority for the research and practitioner communities. The two issues are especially salient as researchers and practitioners partner to plan, design, and implement prevention programs and interventions with perpetrators and to address the consequences of violence. Much researcher/practitioner attention has been shaped in part by two considerations: increased recognition of a multitude of interrelated antecedents to being victimized and to offending; and the realization that the consequences of violence extend well beyond the lives of the women victims into the lives of their children and other family members, friends, and society as a whole.

Gaps still exist, however, in what is known about identifying and understanding the interrelationship between antecedents to and consequences of violence against women and family violence. The panel made the following three recommendations about how to fill those gaps.

- , More substantive knowledge is needed regarding precursors to violence, including socioeconomic factors and cultural and ethnic differences among demographic subgroups.
- , Methodological issues directly related to the advance of substantive knowledge should be addressed, such as the limitations of using clinical samples, general population surveys, and cross-sectional datasets.
- , The direct and indirect consequences of violence for women, their families, and society as a whole, including lost productivity, should be explored.

The contributions in section II address the gaps identified by the panel in *Understanding Violence Against Women*. Intertwined with the authors’ substantive contributions are methodological innovations in research design, sample composition, and measurement of key concepts that set these works apart from past methodological strategies. First, the authors present an updated understanding of the antecedents to violence. Their work examines a number of antecedents and demonstrates how they

contribute to the likelihood of committing violence against another person or experiencing violence as a victim.

Research by Patricia Cohen, Elizabeth Smailes, and Jocelyn Brown reinforces the importance of childhood experiences in determining the likelihood of being arrested for a crime. Using data from the Children in the Community cohort born between 1965 and 1974, the authors find that victims of childhood physical and sexual abuse and individuals who experienced above-average use of punishment in early childhood were more likely as adults to have been arrested for crimes against persons.

Research by Amy Salomon and her colleagues supports the theory that childhood risk factors have a significant role in later adult life; they find that extremely poor women who had been sexually abused as children were most at risk of experiencing intimate partner violence as adults.

Contributors also emphasize that deviant behavior and experiences in dating relationships during adolescence can have a profound effect on adult deviant and criminal behavior related to adult dating experiences. Using a sample of men who were married or cohabiting with a partner of the opposite sex (drawn from a longitudinal component of the National Youth Survey), William D. Norwood and his colleagues examined whether committing domestic violence was concurrently related to other deviant behavior and whether past deviant acts were related to committing domestic violence. Their work suggests that both concurrent and past engagement in at least one act of deviant behavior are associated with committing domestic violence. Jacquelyn W. White and Paige Hall Smith examine childhood and adolescent antecedents of dating violence in high school among a sample of college women in a longitudinal study. Overall, their findings suggest that physical and sexual victimization during childhood and adolescence place women at risk for dating violence during the high school and college years. White and Smith report that women who were physically victimized as children were most at risk for physical victimization in dating relationships during adolescence, and women who experienced physical victimization alone or physical and sexual victimization together in high school were most at risk for dating violence in college.

Unfortunately, the antecedents to violence continue to have an effect in adulthood (see also “Using Longitudinal Data to Understand the Trajectory of Intimate Violence Over Time,” by Cris M. Sullivan and Deborah I. Bybee, in section III). Using research based on two waves of the National Survey of Families and Households, Michael L. Benson and Greer L. Fox suggest that periods of male unemployment and feelings of financial strain increase the likelihood of violence against women in an intimate relationship. Their work also draws attention to the influence that neighborhood characteristics might have on the likelihood of experiencing intimate partner violence. Even when controlling for several variables, including demographic characteristics and “a comprehensive set of known precursors of intimate violence,” their results indicate a significant relationship between neighborhood disadvantage and intimate partner violence.

The papers in this section innovatively address some of the methodological limits of previous studies by using strong research designs, new measures and data collection strategies, and both newly created

datasets and secondary datasets that were already available but had not been widely used in previous violence against women and family violence research.

The complexity of the substantive issues that these contributors have addressed has required them to look beyond the usual cross-sectional research designs. Two studies employed case-control research designs. Jacquelyn C. Campbell and her colleagues used a 12-city, case-control design with female homicides by intimate partners as cases and randomly identified abused or stalked women living in the same city as controls to assess particularly dangerous risk factors among the two groups of women. Amy Salomon and her colleagues used randomly selected homeless mothers as the cases and randomly selected mothers who lived in low-income housing as the controls in their longitudinal study of the etiology, course, and consequences of intimate partner violence among extremely poor women.

Some authors moved beyond the secondary data and criminal justice data that traditionally have been employed in studies of intimate partner violence. The Chicago Women's Health Risk Study, headed by Carolyn Rebecca Block, employed two sources of primary data to identify factors associated with significant life-threatening injury or death resulting from abuse by an intimate partner. These sources included a sample of all homicides involving women who had killed or who had been killed by their intimate partners over a 2-year period and longitudinal interviews with a sample of women who sought any type of treatment in two selected health clinics and a public hospital. These studies by Campbell and colleagues and by Block underscore that death is the ultimate consequence many women face as a result of violence at the hands of an intimate partner.

Contributors Lynda A. King and Daniel W. King analyzed a secondary dataset that is not widely used in the violence field: the National Vietnam Veterans Readjustment Study. This dataset enabled them to examine a large yet sometimes overlooked subgroup—male veterans and their female partners. Each of their four studies of male veterans and their female partners examined an aspect of the relationships among veterans' childhood experiences and behaviors, exposure to war-zone stressors, marital and family functioning, current mental status, partners' psychological stress, and family violence.

Some contributors merged secondary and primary datasets for their respective purposes. For example, to identify factors that contributed to the 25-year decline in intimate partner homicide in the United States, Laura Dugan, Daniel S. Nagin, and Richard Rosenfeld aggregated data from the Supplementary Homicide Reports of the FBI's Uniform Crime Reports to the city level. They then merged this information with data from an inventory of police and advocacy resources, prosecutor policies, and content analysis of State statutes. In turn, they used these data in their time-series analysis. Other contributors combined two secondary datasets. Benson and Fox, for example, merged data from the National Survey of Families and Households with U.S. census tract data so they could estimate the relationship of neighborhood contextual characteristics to the incidence of conflict and violence in couples.

The papers also address the gap in documentation of how intimate partner violence affects women's well-being and labor market participation. Using a panel design, Mary Ann Dutton and her colleagues

interviewed women who had experienced intimate partner violence every 3 months over a 12-month period to determine their emotional well-being, level of depression, and employment history.

The authors' findings suggest that the overall consequences of intimate partner violence can be devastating for women. Some women developed greater distress over time. Violence against women causes serious economic harm to victims and their families. Salomon and her colleagues report that poor women who had experienced recent intimate partner violence were less likely to maintain employment than poor women who were not abused. For these women, escaping poverty becomes even more of a challenge. Furthermore, the economic consequences of being battered do not stop with the victimized women; they can extend to the mental, physical, and economic well-being of children in the household.

The contributors in section II have made substantial advances in unraveling the complex interplay of a multitude of antecedents to violence against women and family violence and the consequences throughout the life course of women. Although their work collectively identifies numerous antecedents to violence against women and family violence, the interrelationship and cumulative effects of these antecedents remain topics for further consideration by researchers and practitioners.

Reference

Crowell, N.A., and Burgess, A.W., eds. 1996. *Understanding Violence Against Women*. Washington, DC: National Academy Press.

Effects of Childhood Maltreatment on Adult Arrests in a General Population Sample¹

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Several studies have found that children and adults with a history of childhood maltreatment are at increased risk of engaging in illegal behavior and being arrested (Geller and Ford-Somma, 1984; Maxfield and Widom, 1996; Smith and Thornberry, 1995; Widom, 1989; Zingraff et al., 1993). These studies used a variety of methods to measure the maltreatment history and illegal and aggressive behavior, each method with certain advantages and limitations. For example, some studies employed self-reports of maltreatment from clinical, justice, high-risk, and general population samples. The difficulties of using such self-reports are well known and include potential self-interest or bias in reports; a failure to report actual maltreatment due to forgetting, embarrassment, or interpretive variation; and potential self-reports of abuse so minor as to be barely distinguishable from normal discipline. On average, self-reported maltreatment is likely to be less severe and long lasting than system-detected and verified maltreatment, so that lesser consequences may be attributable to these factors.

An alternative is to follow up with those who have an official record of childhood victimization. In such cases, the existence of maltreatment is confirmed, although it is clear that not all such maltreatment is detected and recorded. Officially identified cases are generally compared either to population rates of illegal or aggressive behavior or to rates in samples selected for comparability on other relevant risks. In these studies, the attribution of excess delinquent or criminal behavior to maltreatment as such may be in error. It is extremely difficult to match control samples on other relevant risks, especially parental criminal history, family disorganization and conflict, more general maladaptive parenting, child misbehavior prior to the maltreatment, and even associated demographic factors such as parent age, marital status, income stability and adequacy, family health, and family support network. Therefore, one cannot be sure that elimination of childhood victimization would necessarily have an impact on crime.

Studies also vary in their measurement of juvenile and adult delinquent, criminal, and aggressive behavior. Reports of such behavior may come from parents, agency files, youth or adult self-reports, or arrest or detention data. Each of these methods also includes certain measurement risks. For example, such behavior may be unknown to parents, unrecorded by agencies, and unrecalled or otherwise unreported by individuals. There are also serious problems inherent in the use of arrest records as a proxy measure of criminal behavior (Geerkin, 1994). Attention to the widespread practice of racial profiling has directed public attention to the ways in which members of an ethnic or social group may be at excess risk of arrest solely because they are more likely to be subjected to closer police scrutiny. Most officially identified victims of child maltreatment have come to the attention of the police either because of the maltreatment itself or because of parental failure to supervise and control the child. Thus, it is possible that such children may be at risk of becoming a “usual suspect” by the simple fact that they are known to the police.

The current study used longitudinal data on childhood risks and adult outcomes from a sample of randomly selected young people from a mixed urban and rural, demographically diverse population when they were an average of 6 years old. When participants were over 18 years old they were asked to report their history of maltreatment. Thus, it is possible to include comparisons and controls for family risks that may lead to both maltreatment and adult criminal behavior. In addition, it is possible to compare cases officially identified with cases in which the maltreatment is identified only by a

retrospective report from the young adult. However, the low rates of identified childhood victimization and adult arrests for particular charges mean that there is a deficiency of statistical power to detect elevated rates with conventional Type 1 error rates (e.g., $\alpha < .05$). Subsequent reports will compare the findings reported here to those based on self-reported illegal and aggressive behavior.

The study goals were to—

- , Identify higher adult arrest rates in those with a history of maltreatment.
- , Determine the extent to which higher arrest rates may be attributable to common risks for maltreatment and arrest.
- , Estimate the fraction of young adult arrests that may be attributable to child maltreatment and compare that fraction to the fraction attributable to punishment that is more widely employed and considered acceptable in the general population.

Study Sample and Measures

The data were drawn from the Children in the Community (CIC) cohort originally sampled on the basis of residence in two upstate New York counties in 1975 (Kogan, Smith, and Jenkins, 1977). The members of this cohort were born between 1965 and 1974, and data were collected by maternal interview on a range of health, behavioral, and environmental factors. Parents and children were interviewed separately in three followups in 1983, 1985–1986, and 1991–1994. The sample as constituted in 1983 was demographically representative of the sampled areas, and family followup rates have been 95 percent since that time. Full details on the sample characteristics, protocols, and followup are available in earlier publications (Cohen and Cohen, 1996).

Data on abuse history were obtained from the New York State Child Protection Agency, self-reports of abuse from study respondents who were 18 years old or older, and selected maternal responses to questions that researchers judged to be extreme and that might indicate emotional neglect. Of the 35 officially identified cases, 4 were cases of sexual abuse with or without other abuse or neglect, 16 were cases of physical abuse with or without neglect, and 15 were cases of neglect. About one-fourth of the sample had lived a portion of their childhoods in one or more other States, from which no information on officially detected abuse or neglect was obtained. For these and other reasons, the records constitute a minimum estimate of cases with official identification. The overlap between self-reported and official determinations of abuse or neglect history was only nine cases (Brown et al., 1998). The neglect self-report asked only about lack of overnight supervision before the age of 10 and yielded too few positive responses to be analyzed separately. Self-reports of two or more sexual abuse incidents were coded as sexual abuse in order to increase the specificity of this inquiry. Because of sparse data, self-reported sexual abuse cases were combined with officially identified cases. Maternal self-reports of emotional neglect were coded based on extreme responses to parenting items in the early interviews.

The members of the six groups analyzed for this report were assigned hierarchically as follows:

- , Official physical abuse record ($n = 16$).
- , Official or self-reported sexual abuse ($n = 20$).
- , Official neglect record ($n = 15$).
- , Maternal report of emotional neglect ($n = 16$).
- , Self-reported physical abuse ($n = 22$).
- , No detected abuse or neglect ($n = 579$).

Numbers in analyses vary slightly depending on available data.

These groups differ on basic demographic variables. Women predominated in the self-reported abuse groups, especially in the sexually abused group. More than one-fourth of the official cases of abuse or neglect involved black children, while self-reported cases were proportional to the total sample with regard to race. Official cases were more likely to be from a nonintact family, below the official U.S. poverty line, and of very low socioeconomic status (SES) on a standardized measure. Self-reported physical abuse cases were not significantly distinguishable from the noncases with regard to demographics. Self-reported sexual abuse cases were more likely to involve children from a somewhat lower SES, those living in poverty, and those with nonintact families.

Arrest data were combined from New York State and FBI records. Because this was a general population sample, in order to keep numbers sufficiently large for reasonable statistical power, arrests were grouped into the following charge groups, regardless of severity: offenses against people, property offenses, drug offenses, DWI and DUI offenses, weapons possession, offenses against a minor, and other miscellaneous minor offenses.

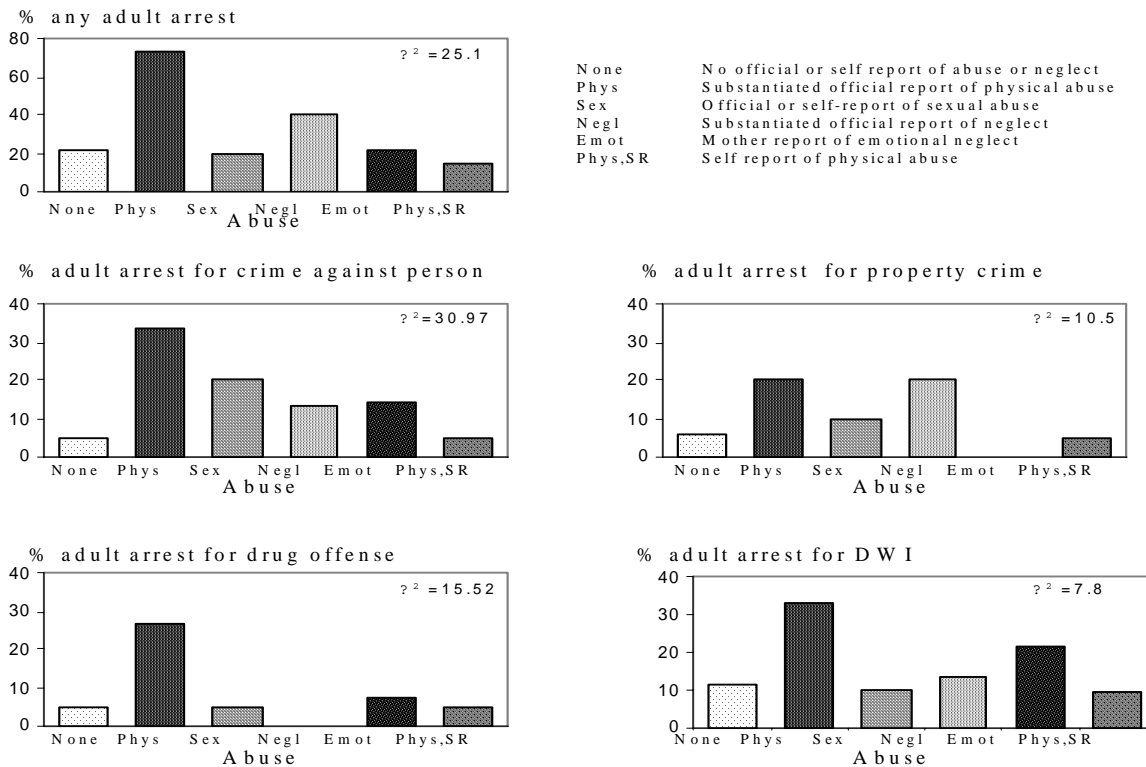
Findings

This study found that victims of officially identified physical abuse were more likely to be arrested as adults and more likely to have been arrested for a variety of crimes, including crimes against persons (“violence”). When combined with other official cases of child maltreatment, they were also more likely to have been arrested for property crimes. The most distinctive findings was that victims of sexual abuse were also more likely to have been arrested for crimes against persons, despite the fact that this group was mostly self-reported. These findings were not erased by controls for demographics risks, or by inclusion of early childhood punishment history. The fact that other self-reported maltreatment was not related to arrests in these data may have been due to low statistical power, or it may raise questions about the influence of official abuse detection on police scrutiny of families and the consequent probability of arrest.

A comparison of the attributable risk of arrest associated with maltreatment history with that of simple above-average use of punishment in early childhood showed the latter to have much greater influence, especially on arrests for crimes against persons.

Arrests for each of the abuse and neglect groups are shown in exhibit 1. Although the proportion of each group ever arrested as an adult varied significantly, the effect is overwhelmingly attributable to high rates among those with an official record of physical abuse, with a lesser elevation among those with an official history of neglect. Among those arrested for a crime against a person (assault, robbery, threats), high rates are seen for the officially identified physical abuse victims and for those with either self-reported or official histories of sexual abuse. The overall differences by maltreatment history in proportion to those arrested for a property offense, a drug offense, or drunk driving were not statistically significant, although significantly more of those with official maltreatment records had been arrested for a property offense than any other group. The most substantial differences were seen in the crimes against people.

Exhibit 1. Childhood maltreatment and adult crime



Exhibits 2 and 3 present the findings from the logistic regression analyses of the odds of being arrested for any offense or for a crime against a person, respectively. Each odds ratio (OR) is a comparison with the reference (no identified maltreatment) group. ORs empirically less than the expected 1.0 are indicated by dashes. The first columns of ORs estimate the effects of maltreatment, controlling only for the known difference in likelihood of arrest of males compared with females. Only those with officially identified physical abuse were more often arrested as an adult, while both that group and sexual abuse victims were more at risk for arrest for a crime against a person. Some other maltreated groups also

had ORs noticeably greater than the expected 1.0 but, given the low statistical power of these small samples, differences were not significant.

Exhibit 2. Odds ratios for any adult arrest from simultaneous logistic regression ($n = 662$)

Predictor	OR controlling only gender	OR controlling demographic and family risks	OR controlling demographic and punishment
Physical abuse record	10.74*	7.57*	7.46*
Sexual abuse	1.27	1.27	1.01
Neglect abuse	2.73	1.65	1.58
Emotional neglect (MR)	–	–	1.13
Physical abuse (MR)	–	–	–
Gender (male)	3.34*	3.52*	3.64*
Demographic risk index		1.26*	1.17*
Childhood punishment			1.25*

* $p < .05$

Exhibit 3. Odds ratios for adult arrest for crime against person from simultaneous logistic regression ($n = 662$)

Predictor	OR controlling only gender	OR controlling demographic and family risks	OR controlling demographic and punishment
Physical abuse record	9.91*	4.14*	9.53*
Sexual abuse	7.12*	7.27*	9.45*
Neglect record	3.33	–	2.10
Emotional neglect (MR)	3.24	3.79	5.03
Physical abuse (SR)	1.16	1.11	1.54
Gender (male)	2.95*	3.05*	3.45*
Demographic risk index		1.93*	1.77*
Childhood punishment			1.74*

* $p < .05$

The next columns of ORs in exhibits 2 and 3 add a demographic risk index to the prediction equation to determine whether it may account for the excess arrests in these groups. The demographic risk measure developed in this study was designed to determine whether abuse could be detected by measures generated in the early childhood data (Brown et al., 1998). It includes poverty, young maternal age at first childbearing, welfare support, nonwhite race, large family size, and low maternal education. Additional risks reflecting parental characteristics, parenting patterns, and child characteristics that

predicted one or another kind of maltreatment were not employed in these analyses, as they did not influence the findings.

Adding the demographic risk index to the equations lowered the estimated effects of officially detected physical abuse but did not change the significant predictors. On the other hand, for each additional demographic risk, the odds of ever being arrested increased by 26 percent (OR = 1.26), and the odds of ever being arrested for a crime against a person nearly doubled (OR = 1.93).

The final OR column includes a measure of punishment techniques reported by mothers in interviews when the children were an average of 6 years old. Forty sample members were missing some data, so these estimates are not quite comparable to those in the other two columns. The estimated significant effects of childhood maltreatment were not negatively influenced by inclusion of this variable, and each increase of one standard deviation in this measure was independently associated with a 25-percent increase in the odds of arrest and a 74-percent increase in the odds of arrest for a crime against a person.

Exhibits 4 and 5 combine the maltreatment groups and compare rates of arrest both by maltreatment status and by whether punishment in early childhood was above or below the sample mean. The likelihood of having been arrested was about 50 percent higher for those with an abuse history, regardless of the punishment history. Among those without a maltreatment history, those who experienced more punishment than average had arrest histories 38 percent more often than those who experienced less punishment. The impact of these two variables on the total likelihood of arrest, however, gives a very different picture. If the whole sample had been equivalent to the nonabused sample, the arrest history would have been 6 percent lower. On the other hand, if the rate of the below-average punishment had characterized the whole sample (in the absence of abuse, although this does not affect the answer), the proportion arrested would have been 21.6 percent lower. Thus, the attributable risk or effect on the total population rate is influenced more by the more prevalent risk of higher-than-average punishment than by the groups of children who were frankly maltreated.²

Exhibit 4. Percent arrested as an adult by maltreatment and punishment history

	Childhood punishment	
	Below average	Above average
Any abuse or neglect		
None known	16%	22%
Present	24%	34%

Attributable risk: Maltreatment = 6%, Childhood punishment (among nonabused) = 21.6%

Exhibit 5. Percent arrested for offense against person by maltreatment and punishment history

	Childhood punishment	
	Below average	Above average
Any abuse or neglect		
None known	1.6%	14.3%
Present	5.4%	19.1%

Attributable risk: Any abuse or neglect = 24.5%, Childhood punishment (among nonabused) = 56%

These estimates are even more startling when the rates of having been arrested for a crime against a person are examined. The likelihood of such an arrest history was more than three times as high among the abused whose mothers reported below-average punishment and also elevated in the higher punishment group. On the whole, the risk of having been arrested for a crime against a person that is attributable to a history of maltreatment is estimated at 24.5 percent. On the other hand, the rates of such arrest were also strongly related to maternal reports of punishment in early childhood. If the entire nonabused population had experienced punishment below the sample average, the risk of arrest for a violent offense (a crime against a person) might decline 56 percent. This estimate is not made with a presumption that such punishment would entirely disappear, but only that it is equivalent to the lower half of this general population sample.

Implications for Future Researchers

Data on maltreatment, both by self-report and by official record, are critical to understanding the underpinnings of adult antisocial behavior, particularly adult interpersonal aggression. Inclusion of such data in future research, however, does not eliminate the need to consider other demographic and childhood risks.

Implications for Practitioners

Histories of physical and sexual abuse are common among those who exhibit violent behavior as adults, but such a history does not account for all of the relationship between demographics and crime or between parenting and crime. These findings suggest that it may be useful for prevention efforts to focus on the negative effects of punishment, which may be largely replaced by parental preventive interventions, clear standards for behavior, and positive reinforcement of prosocial behavior. Although frank maltreatment clearly deserves ongoing attention, punishment is such a prevalent, although less potent, risk that improvements in this area could potentially have an even larger positive impact on the violent behavior of offspring.

Notes

1. This report is a summary of a presentation at the NIJ conference, Violence Against Women and Family Violence, October 1–3, 2000.
2. This estimate is not materially affected by restricting the abuse group to the more extreme groups (e.g., officially identified) because while the differences increase, the size of the group declines.

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A Longitudinal Perspective on Physical and Sexual Intimate Partner Violence Against Women

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There is mounting evidence (Desai et al., 2002; Koss, Gidycz, and Wisniewski, 1987; Roodman and Clum, 2001) that the onset of serious acquaintance violence begins in early adolescence and tends to persist into adulthood. Physical and sexual assault mark the lives of a significant segment of American teenagers and young adults; early victimization, whether by a family member, other adult, or peer tends to lead to repeated victimization later in life.

Yet little is known about how acquaintance violence begins, how patterns of victimization and perpetration are formed, or what risk and protective factors influence the path of acquaintance violence and its adverse consequences. Although the prevalence of intimate partner violence is well documented, its precipitants are less well understood.

What is known about the precipitants of acquaintance violence is largely derived from cross-sectional analyses. These studies have been more successful in identifying possible risk factors than they have at assessing the predictive power of those factors. Our understanding of violence against women has been hampered by—

- ◆ The largely atheoretical nature of prior investigations.
- ◆ The inability of cross-sectional designs to discern the relative predictive power of previously identified risk factors for victimization and perpetration.
- ◆ A lack of consideration of the changes in risk factors for victimization and perpetration across developmental stages (childhood, adolescence, and early adulthood).
- ◆ Inattention to the predictors of multiple victimizations and perpetrations.
- ◆ The lack of analysis of the co-occurrence of physical and sexual assault.

The analyses conducted in the present project were designed to address some of these gaps in our knowledge of violence against women.

This study examined experiences with interpersonal violence in childhood, adolescence, and early adulthood. Childhood and adolescent data were retrospective; data collected across the 4 collegiate years were prospective. The investigation focused on physical violence against women among acquaintances, paralleling existing analyses of experiences with sexual coercion (Humphrey and White, 2000). The co-occurrence of sexual and physical assault and the relationship between experiences of sexual and physical violence as a victim were also addressed. Specific goals were to explore whether and how the characteristics of the victim and the environment (situational/contextual effects) individually and in combination affect the risk of physical victimization during adolescence and young adulthood, and to examine how these factors evolve from one developmental stage to the next to predict the onset of victimization and the occurrence of revictimization.

Sample and Methods

In 1990, the National Institute of Mental Health awarded Drs. Jacquelyn White and John Humphrey a grant to conduct a 5-year longitudinal study (1990–1995) of the risk of sexual and physical assault among university students (see White and Humphrey, 1997, for a further discussion of the conceptualization and methods). The study was designed to examine prospectively the relationship among the major risk factors that retrospectively have been identified as the best predictors of sexual victimization and perpetration among university undergraduates. The project involved obtaining permission from the university administration to survey students during the first day of orientation. Orientation leaders were trained to administer the survey, thus making participation in the study an integral part of the student orientation activities. This ensured almost 100 percent compliance (approximately 50 percent of all incoming students attended orientation). Students who did not attend orientation, which was not required, were contacted by phone. The overall participation rate was approximately 83 percent. According to the Carnegie Foundation for the Advancement of Teaching (1987), the chosen university is considered representative of State colleges, which are attended by approximately 80 percent of all college students.

Before the initial survey was administered, its purpose and methods were explained and signed consent was obtained from the students. Students also provided contact information to enable followup by the researchers. To ensure confidentiality and still permit the matching of surveys across time, each survey and corresponding contact sheet was assigned a random code number. Only code numbers appeared on surveys and answer sheets. To further ensure confidentiality of the data and to bolster students' confidence in the researcher's commitment to protecting confidentiality, a Federal Certificate of Confidentiality was obtained.

Toward the end of each spring semester, students were contacted and asked to complete a followup survey during one of several sessions held at various locations around campus (i.e., student center, dormitories, classrooms). Postcards were sent to remind students of the followup survey and to announce times and locations for the sessions. These sessions were conducted by trained undergraduate psychology majors and graduate students. Students who did not attend one of these sessions were contacted by telephone and invited to participate. They were given the option to attend a session being held on campus or to receive the survey in the mail. This was particularly useful for students who had withdrawn from the university and resided out of town. All students who participated in the followup surveys received \$15 each time they participated. Students who had withdrawn from the university were also resurveyed. During the first 3 years of the project, 300 students (150 women and 150 men) also participated in one-on-one interviews.

Two incoming classes of women (1990 and 1991) were surveyed regarding a variety of social experiences (see exhibit 1). Approximately 83 percent of the 1990 class ($n = 825$) and 84 percent of the 1991 class ($n = 744$) provided usable surveys. Of the women surveyed, 24.3 percent were African-American, 72 percent were white, and 3.6 percent were from other ethnic groups. Successive retention rates for each followup survey for the 1990 sample were, 88.2 percent, 83.2 percent, 83.6 percent, and 78.1 percent (47.9 percent of the original sample participated in the entire project; this number is only slightly lower than the percentage of students who remain in

the university during a 5-year period, which is 55 percent). For the 1991 sample, successive retention rates were 90.2 percent, 83.9 percent, 77.9 percent, and 77.1 percent (45.4 percent of the original sample were retained throughout the entire project).

Exhibit 1. Incoming Women Students

	Cohort 1 (1990)	Cohort 2 (1991)	Total
Sample size	825	744	1569
African-American	24.3%	20.3%	22.3%
White	72.0%	76.6%	74.3%
Other ethnic groups	3.6%	3.2%	3.5%
Year 1 retention % (<i>n</i>)	88.2% (728)	90.2% (671)	89.2% (1399)
Year 2 retention % (<i>n</i>)	83.2% (605)	83.9% (563)	83.5% (1168)
Year 3 retention % (<i>n</i>)	83.6% (506)	77.9% (439)	80.9% (945)
Year 4 retention % (<i>n</i>)	78.1% (395)	77.1% (338)	77.6% (733)
Total retention % (<i>n</i>)	47.9% (395)	45.4% (338)	46.7% (733)

Three incoming freshmen classes of men (1990, 1991, 1992) were also administered a survey of a range of social experiences (*n* = 835). Of the total number of incoming men, 65 percent completed the first survey and the yearly retention average was 71 percent. Twenty-two percent of the original sample completed all five phases of the study. Of the original sample, approximately 87.4 percent were white; 9.3 percent were black; and 3.3 percent belonged to other ethnic groups. Data from the male participants are not discussed in this report. (For information on male participants, see White and Smith, 2004.)

A classic longitudinal design was used and replicated over two cohorts (those born in 1972 and 1973), who were each assessed first at 18 years old, and again at 19, 20, 21, and 22 years old. It was assumed that there would be no significant time-of-measurement effects. Each survey covered a non-overlapping year in the student’s life. Students were given a fixed reference point that limited the recall interval to the previous year.

Findings

Physical and sexual dating violence are normative—fully 88 percent of the women indicated having experienced at least one incident of physical or sexual victimization between adolescence and their fourth year of college. Only 12 percent of the women indicated no incidents of physical or sexual victimization between age 14 and the end of the fourth year of college. The proportion of women experiencing any physical victimization (77.8 percent) and any sexual victimization (79.2 percent) was nearly identical.

Analyses indicated that young women were at greatest risk for physical dating violence in high school, paralleling Humphrey and White’s (2000) finding that sexual assault was also greater during adolescence than during college. Just under half of the women (42.9 percent) were physically victimized in adolescence; this dropped to 27.2 percent the first year of college,

24.3 percent in the second year, 22.7 percent in the third year, and 18.6 percent in the fourth year of college. For young women who were not victimized in high school, the risk of first victimization in college was low.

Analyses further indicated that the co-occurrence of physical and sexual victimization was common and exceeded the rates expected given the base rate of each. By the end of their fourth year in college, 63 percent of the women had experienced both physical and sexual victimization. Covictimization was highest in high school, with 26.1 percent of the women reporting both physical and sexual victimization. For all time periods, women who experienced one form of dating victimization were at much greater risk for experiencing the other form. This risk increased over time so that by the fourth year of college, women who experienced one form of victimization were 4.5 times more likely to experience the other also.

The timecourse of victimization indicates that childhood victimization increases women's risk of high school victimization and that different types of childhood victimization place women at risk for different types of dating violence. For example, being physically abused as a child and witnessing domestic violence in the home were both associated with an increased risk of adolescent physical victimization in a dating relationship, but childhood sexual abuse was not. In contrast, childhood sexual abuse increased young women's risk of sexual victimization in adolescence. Furthermore, high school women who experienced physical victimization alone or physical and sexual victimization together, but not sexual victimization alone, were at increased risk for physical victimization in college. In the absence of dating victimization in high school, young women who experienced or witnessed family violence or who experienced childhood sexual abuse were not at increased risk for dating violence in college. Hence, although young adults who experienced childhood victimization were, in general, at greater risk for dating violence victimization in high school, those who had been victimized as children but were not victimized in high school were no more likely than those not abused as children to experience physical or sexual victimization in college.

Although injury reports declined over time, women who had experienced covictimization during adolescence and the first year of college remained at higher risk for further injury in subsequent college years relative to women who had experienced no victimization or sexual victimization only. Additionally, women who experienced covictimization reported higher levels of psychological distress than other women in the study did. This difference was maintained over time. By the fourth year in college, women who had experienced covictimization in both adolescence and the first year of college or who had been sexually assaulted continued to suffer higher levels of psychological distress than other women. During the fourth year of college, women's ratings of their overall physical health and their reported number of visits to a medical doctor in the past 6 months indicated that the experience of sexual and physical assault during adolescence and the first year of college had a significant effect. Women who experienced covictimization at both points in time reported more visits to the doctor than women who reported no assaults did.

In general, women who had repeatedly experienced physical assault alone rated their overall health lower than other women did. Women who experienced covictimization during adolescence were more likely to report suicidal thoughts during adolescence, but suicidal

thoughts in subsequent years were unrelated. With regard to sexual behaviors, an increased number of sex partners was associated with all types of victimization. Women who had experienced covictimization and those who had been only sexually victimized during adolescence had the greatest number of sex partners during adolescence, followed by those who had been only physically assaulted. These patterns were maintained during the college years.

Also, by the end of the fourth year of college, women who had been victimized in adolescence or during the first year of college were more likely to have engaged in unprotected sex at some time during college; the likelihood was greatest for those who had experienced covictimization.

Finally, covictimization had a significant effect on alcohol use. Alcohol use was highest for women who experienced covictimization in adolescence and the first year of college, while women with no history of victimization reported the lowest rates of alcohol use, and other victimized women reported intermediate use. Although alcohol use declined across time, this same ordering persisted.

Implications for Future Research

There are three key findings from this research:

- ◆ Dating violence victimization is normative and affects many women who have no identifiable risk factors (e.g., exposure to violence in the home, risky sexual behavior, etc.).
- ◆ Women who experience one type of dating violence victimization (e.g., physical assault by a boyfriend) are at greater risk for victimization of the other type (e.g., sexual assault).
- ◆ Prior victimization places women at risk for future victimization.

Women at highest risk for dating violence victimization during adolescence were those who were victimized as children; women at highest risk for victimization in college were those who were victimized in adolescence, independent of their childhood victimization status.

Hence, this study indicates a need for research that addresses the normative nature of dating violence victimization and seeks a better understanding of covictimization and revictimization.

The study recommends further research addressing three specific areas. First, because so many victims are from low-risk populations, research that addresses factors that place all women at risk for victimization is suggested. The integrative contextual model of violence against women (White and Kowalski, 1998) provides a useful conceptual framework for formulating hypotheses about factors (including the sociocultural, social network, dyadic, situational, and intrapersonal) that may increase the risk for victimization. White et al. (2000) recently extended this model to the study of stalking.

Second, research is needed that recognizes how sexual and physical victimization by dating partners co-occur in women's lives. Such research must link the often-distinct literatures on these two forms of victimization. A better understanding is needed of the factors that place women

who are the victims of one type of violence at greater risk for another type, by different perpetrators, in the same year. Similarly, more research on the co-occurrence of different types of victimization in the same relationship is needed. In addition, these studies should expand their scope to include battering as a distinct type of partner victimization (Smith, Smith, and Earp, 1999; Coker, et al., 2000).

Third, we need to better understand revictimization. Specifically, research that seeks to understand the factors that mediate the relationship between childhood victimization (broadly defined to include sexual abuse, physical abuse, and witnessing domestic violence in the home) and later adolescent victimization is needed, as well as studies that investigate the relationship between women's experiences with adolescence victimization and their revictimization in college.

Implications for Practitioners

Overall, this study supports a multipronged approach to primary, secondary, and tertiary prevention that includes programs that target both the general population and high-risk populations and that seek to change the social environments that support violence and improve social supports for young victims.

Suggestions for primary prevention that emerge from this study include:

- ◆ Targeting young men and women in high school and college, as well as others who are in positions to help potential victims (e.g., parents, teachers, churches).
- ◆ Working to modify factors at the dyadic, situational, social network, and sociocultural levels that support or condone physical and sexual violence against women.
- ◆ Integrating gender-based violence prevention activities into other programs that target adolescent boys and girls, such as substance abuse and pregnancy prevention programs.
- ◆ Evaluating the impact that nondating, violence-specific programs for adolescents have on gender-based violence.
- ◆ Educating professionals who have contact with adolescents (including those in schools, churches, social groups), as well as parents, about the importance of taking seriously any violence that occurs during adolescence.

The findings that women who were physically or sexually abused or who witnessed domestic violence in childhood are at greater risk for physical and/or sexual victimization in high school and that women who were victimized in high school are at greater risk for physical and/or sexual victimization in college highlight the importance of directing targeted interventions toward these high-risk groups. The limited evaluation literature to date suggests that the interventions currently being implemented to prevent dating violence are, by and large, school-based educational programs targeted to the general population and designed to change norms and attitudes regarding the use of violence in relationships.

Although the literature indicates that these interventions do result in some changes in attitudes and beliefs, at least in the short term, only one study has reported short-term changes in victimization and/or perpetration and even these changes were not sustained. It is not clear how effective education-only approaches are in preventing dating violence in high-risk populations. It is important that interventions with abused children incorporate issues related to gender-based violence perpetration and victimization to help prevent revictimization in young adulthood.

Secondary prevention strategies also need to be developed for young women who have been victimized in adolescence that—

- ◆ Encourage them to report the violence;
- ◆ Support them when they report the violence;
- ◆ Promote better psychological healing and social resolution; and
- ◆ Help women reduce their risk for revictimization in college.

Finally, the finding that women who experience one form of victimization are at elevated risk for experiencing another form suggests that better community and school-based services are needed to address the physical and psychological health consequences of cumulative and episodic victimization.

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Concentrated Disadvantage, Economic Distress, and Violence Against Women in Intimate Relationships

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Criminologists long have known that crime rates tend to be higher in neighborhoods that are socioeconomically disadvantaged (Shaw and McKay, 1942; Bursik, 1988; Sampson and Groves, 1989). Neighborhood socioeconomic disadvantage also appears to be related to rates of intimate violence (Miles-Doan, 1998). Studies of calls to the police indicate that domestic violence calls tend to come disproportionately from disadvantaged areas (Sherman and Berk, 1984; Miles-Doan, 1998). But the significance of these findings is not clear. The association of intimate violence with neighborhood socioeconomic conditions may result from the structural features of neighborhoods, the composition of their resident populations, or finally, reporting differences between advantaged and disadvantaged communities.

Although intimate violence is found among all social classes, rates tend to be higher in families of lower socioeconomic status who are experiencing underemployment or unemployment (Straus, Gelles, and Steinmetz, 1980). Recent research has found that economic distress predicts individual and family outcomes, including marital dissatisfaction and family conflict (Conger et al., 1990; Fox and Chancey, 1998; MacMillan and Gartner, 1999). The significance of the connection between economic distress and intimate violence, however, is uncertain. Does economic distress motivate intimate violence as some have hypothesized (Fagan and Browne, 1994) or are economic distress and intimate violence simply different manifestations of some underlying individual characteristic such as low self-control (Gottfredson and Hirschi, 1990)? Longitudinal research on violent street crime indicates that cross-sectional correlations between violence and other individual-level characteristics, such as employment status and educational attainment, often are substantially reduced in size if prior propensity to violence is controlled (Sampson and Laub, 1993; Wolfgang, Figlio, and Sellin, 1972; Nagin, Farrington, and Moffitt, 1995).

Social disorganization theory suggests a number of reasons why neighborhood context may be related to patterns in intimate violence against women. Disorganization theorists argue that ecological correlations between neighborhood characteristics and violence result from variation in the relative effectiveness of neighborhood informal and formal social control mechanisms (Sampson and Groves, 1989; Bursik, 1988; Kornhauser, 1978). Disadvantaged areas are thought to have low levels of informal social control, and this condition may provide a fertile soil in which violence against women can flourish. Abusive men who reside in these areas are not constrained by strong normative expectations against violence. Hence, they are free to commit violence against their spouses and cohabitators without fear of social disapproval. Residents of disadvantaged areas also are more likely to have weak social bonds to their neighbors (Sampson, Raudenbush, and Earls, 1997). Thus, women involved with potentially abusive partners are more likely to be isolated and at greater risk of violent victimization (Stets, 1991). Women in disadvantaged areas are likely to live in overcrowded households, which often leads to pathological consequences for family relationships (Gove, Hughes, and Galle, 1979). Finally, official forms of social control are thought to be weaker in disadvantaged areas (Stark, 1987). Despite suggestive empirical findings and theoretical plausibility, little is known about how community context affects intimate violence and even less about how community context interacts with economic distress to influence the risk of intimate violence against women (Sampson and Lauritsen, 1994). This project was designed to investigate these issues.

Study Design

Research Questions

This report focuses on three specific research questions:

- ◆ Does the correlation between neighborhood socioeconomic disadvantage and intimate violence represent a contextual effect or is it the result of compositional or reporting differences between neighborhood populations?
- ◆ Does the correlation between economic distress and intimate violence against women represent a causal effect or is it a spurious association?
- ◆ Do community context and economic distress influence the likelihood of intimate violence in a relationship over and above the effects of other known individual and household-level correlates of intimate violence?

Research Methods

This project is a secondary analysis of data drawn from wave 1, completed in 1988, ($n = 13,007$) and wave 2, completed in 1994, ($n = 10,005$) of the National Survey of Families and Households (NSFH) and from the 1990 U.S. Census. NSFH is a nationally representative sample of households and is an extremely rich data source, containing literally thousands of variables on a broad range of individual, couple-level, and household characteristics, events, and experiences. For this project, the authors abstracted variables from NSFH relevant to our research questions. The variables were grouped into three major categories: (1) indicators of conflict and violence in the couple, (2) indicators of the economic status of the couple, and (3) individual-, couple-, and household-level sociodemographic characteristics.

To assess violence, NSFH asks a series of questions of both members of the couple. Both the male and the female are asked if during the past year arguments became physical and, if yes, how often during the past year fights resulted in the male hitting, shoving, or throwing things at the female. Response categories range from zero to four or more times. Followup questions ask whether the female was “cut, bruised, or seriously injured” in a fight with a spouse or partner (yes or no). Because the distribution of responses is highly skewed, the authors constructed dichotomous measures of violence against the female for both waves (0 = no violence, 1 = violence). They also constructed a measure of the severity of violence (0 = no violence, 1 = one-time violence without injury, 2 = violence with injury or repeated violence).

The authors’ conceptualization of *economic distress* was guided by the work of Voydanoff and Donnelly (1988) and reflects both subjective and objective aspects of employment and income. Preliminary analyses revealed that two types of economic distress—employment instability and subjective financial strain—are particularly potent risk factors for intimate violence against women. Hence, this report concentrates on them. *Employment instability* was operationalized as the number of periods of unemployment for the male between waves of the NSFH. *Subjective financial strain* refers to perceptions of financial inadequacy and was operationalized by

combining responses to questions about satisfaction with finances and questions regarding worry about money.

To measure community context, the authors merged the NSFH data with census tract data abstracted from the 1990 U.S. Census. The conceptualization and measurement of community context was guided by recent work on the structural sources of collective efficacy (Sampson, Morenoff, and Earls, 1999; Sampson, Raudenbush, and Earls, 1997). An index of neighborhood disadvantage was created based on where the respondent was living in wave 2 of NSFH. The index includes five census tract measures that reflect *concentrated disadvantage*. It is defined by the percentage of single parents, percentage nonwhite, percentage unemployed, percentage of families on public assistance, and percentage below the poverty line. After transforming the items to z-scores, the authors took the mean of the items to form the index, which has an alpha reliability of 0.92.

Sampson and Wilson (1995) argue that the crime-related effects of community disadvantage are not linear across levels of disadvantage. Rather, they tend only to appear in the most distressed neighborhoods as “concentration effects” (Sampson and Wilson, 1995). The same appears to be true with respect to concentrated disadvantage and the risk of intimate violence. In NSFH, rates of intimate violence are significantly higher among respondents who were located in neighborhoods that score in the upper 30 percent of the index of concentrated disadvantage. Accordingly, the authors collapsed the index of disadvantage into a dichotomous measure at the 70th percentile. Consistent with a long line of research in the social disorganization tradition, a measure of residential instability was included in the analyses.

As control variables in these multivariate analyses, household income-to-needs ratio, number of children under age 18 in the household, age of primary respondent, race, male drinking problems, and violence in wave 1 were included.

Findings

At the bivariate level, neighborhood disadvantage is associated with increased prevalence and severity of intimate violence against women. The rate of violence in disadvantaged neighborhoods is 8.7 percent compared with 4.3 percent in advantaged neighborhoods. Similarly, the rate of serious violence, defined as repeated violence or violence with injury, is more than twice as high in disadvantaged as opposed to advantaged neighborhoods (5.8 versus 2.4 percent). These results confirm those obtained in studies of calls to the police. They indicate that the higher rate of calls to the police for domestic violence in disadvantaged neighborhoods is not simply the result of reporting differences between neighborhoods. Rather, they reflect real differences in the risk of intimate violence against women.

Two indicators of economic distress also are related to the risk of intimate violence against women. First, the rate of violence increases as the number of periods of male unemployment increases. In couples in which the male is always employed, the rate of violence is 4.7 percent. The rate rises to 7.5 percent when the male experiences one period of unemployment and to 12.3 percent when he experiences two or more periods of unemployment between waves. Second, a strong relationship is found between subjective feelings of financial strain and the likelihood of

violence against a woman in an intimate relationship. The rate of violence among couples with high levels of subjective financial strain is roughly three and a half times as high as it is among couples with low subjective strain (9.5 versus 2.7 percent).

The results presented above indicate that in the NSFH, rates of intimate violence against women vary with community-level socioeconomic disadvantage and individual-level economic distress. It is important to keep in mind, however, that individual economic distress and community economic disadvantage are also related to one another, because access to financial resources influences housing decisions. Financially advantaged couples are more likely to live in well-to-do neighborhoods than financially disadvantaged couples. The correlation between couple-level and community-level economic disadvantage raises the possibility that the higher rate of intimate violence in disadvantaged neighborhoods merely reflects a compositional effect. By definition, disadvantaged areas are populated mainly by disadvantaged people.

To investigate this possibility, the authors constructed three-way contingency tables to examine the effects of economic distress in advantaged compared with disadvantaged neighborhoods. For couples with low levels of subjective strain, there is little variation in rates by neighborhood type. Couples with low levels of subjective strain who live in disadvantaged neighborhoods report violence in 3.8 percent of the cases, but only 2.3 percent of the low-strain couples in advantaged neighborhoods report violence. For couples with high levels of subjective strain, however, neighborhood location appears to be much more important. Among couples with high levels of subjective strain, the rate of intimate violence is 13.8 percent in disadvantaged neighborhoods compared with 7.3 percent in advantaged neighborhoods. Within neighborhood types, the relative increase in violence across levels of subjective strain is roughly similar. For couples in disadvantaged neighborhoods, those with high levels of subjective strain report violence at a rate 3.63 times higher than couples with low strain. In advantaged neighborhoods, the violence rate increases 3.17 times between couples with low compared to high levels of subjective strain.

Employment instability is related to intimate violence regardless of neighborhood type. Couples in which the male experienced two or more periods of unemployment between waves have notably higher rates of violence against women than couples in which the male had more stable employment. In advantaged neighborhoods, the rate of violence increases dramatically from 4 percent for males with stable employment to 10.6 percent for males with unstable employment. In disadvantaged neighborhoods, the percent reporting violence increases from 8.2 percent to 15.6 percent. The results of the three-way analysis of community context, economic distress, and intimate violence indicate that higher levels of individual economic distress in disadvantaged neighborhoods do not account entirely for the association of neighborhood economic disadvantage and intimate violence. Rather, the association appears to represent in part a contextual effect of neighborhoods on intimate violence.

Other compositional differences between neighborhood types that are unrelated to economic distress, however, may account for the higher rate of intimate violence in disadvantaged neighborhoods. To test for this possibility, the authors used logistic regression to analyze a model that included concentrated disadvantage, residential instability, male employment instability, subjective financial strain, and a comprehensive set of known precursors of intimate

violence, including age, race, education level, alcohol use, and number of children in the household.

The effects of concentrated disadvantage and economic distress remain significant even after all of the control variables are included in the model. Thus, the aggregate correlation between concentrated disadvantage and intimate violence appears to reflect a contextual effect. The measures of individual economic distress—subjective strain and employment instability—also are significant in the full model. At both the aggregate and the individual levels, then, socioeconomic disadvantage increases women’s risk of intimate violence.

It is possible that prior violence may account for the apparent effects of community context and economic distress on intimate violence. If men with prior histories of intimate violence are more likely to locate in disadvantaged neighborhoods and to experience economic distress, then the correlations observed in this study may yet be spurious.

To test this possibility, the study focused on continuing couples, defined as those who were married or cohabiting in wave 1 and who were still together in wave 2. The authors knew whether the men in these couples were violent in wave 1; hence, they added violence in wave 1 to the model tested above. As expected, violence in wave 1 has a sizable and positive effect on the likelihood of violence in wave 2. Concentrated disadvantage, employment instability, and subjective financial strain, however, continue to have significant effects on the likelihood of violence against women. This result confirms the importance of both neighborhood socioeconomic disadvantage and individual-level economic distress for the problem of violence against women.

Implications for Researchers

This project is the first ever to conduct contextual and individual-level analyses of intimate violence against women in a longitudinal framework. Despite its uniqueness as a data set, NSFH has several problems that researchers should seek to correct in the future. One general shortcoming of NSFH for longitudinal analyses is the relatively long gap of 6 years between waves 1 and 2. Couples may have exhibited violence between waves that the survey items did not detect. In addition, NSFH focuses on physical violence related to arguments and does not capture violence by men that does not arise out of arguments, for example, when a male gets drunk and attacks his partner without provocation. The NSFH items also are poorly suited to identifying nonphysical forms of violence against women, such as verbal or emotional violence.

In addition to improving the measurement of violence, researchers should also try to investigate whether the connection between neighborhood characteristics and intimate violence is mediated by the same social organizational processes that appear to mediate the effect of neighborhood characteristics on street violence. Concentrated disadvantage may be related to intimate violence through the processes associated with collective efficacy; unfortunately, the data available in NSFH are insufficient to construct measures of this intervening concept. Hence, the exact nature of the mechanism that connects neighborhoods and intimate violence is unclear.

Implications for Practitioners

A long tradition of research shows that community socioeconomic disadvantage and economic distress can have pathological consequences for couples and individuals across a broad range of personal outcomes. With respect to intimate violence, however, little is known about the effects that community context and economic distress can have on victimization risks. Little is known about the ways in which community context may influence the reasons why women stay in abusive relationships or why they leave them. This project was designed to shed light on these issues and to help articulate the relationship between community context, economic distress, and intimate violence. While the nature of our data and analyses do not lend themselves to specific policy recommendations, we hope our results will enable policymakers to better target the types of communities in which intervention and prevention programs are most likely to be needed.

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Risk Factors for Death or Life-Threatening Injury for Abused Women in Chicago*

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Findings and conclusions of the research reported here are those of the author and do not reflect the official position or policies of the U.S. Department of Justice.

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Purpose

The Chicago Women's Health Risk Study (Block, Devitt, Fugate et al., 2000) was designed to give nurses, patrol officers, and other primary support people the information they need to help women who are experiencing violence at the hands of an intimate partner lower their risk of life-threatening injury or death. Previous research did not provide this practical information. The purpose of the study was to identify risk factors for life-threatening injury or death in situations in which an intimate partner is physically abusing a woman.

Although previous research focused on who in the general population was most likely to be abused, it did not tell practitioners about risk patterns for women who were experiencing violence. Previous research also tended to measure only one or two factors and did not consider the interaction of events and circumstances as they change over time. Practitioners need to know how changing factors, such as attempting to leave, pregnancy, having children at home, or firearm availability, may affect the risk of a lethal outcome.

Field practitioners also need to know whether risk patterns differ for different racial or ethnic groups, for women in same-sex relationships, or for pregnant women, and they need to be able to respond to women who may be in high-risk situations but have not sought help from helping agencies or support networks. Prior to the study, information about the needs and best interventions for these groups was very limited.

The Study Methodology

The Chicago Women's Health Risk Study compared longitudinal data on abused women with similar data on women who had been killed by or who killed their intimate partners. The study design had a "homicide sample" of all intimate partner homicides involving a woman that occurred in Chicago over a 2-year period, and a "clinic/hospital sample" of detailed, longitudinal interviews with women sampled as they came into hospitals and clinics in Chicago neighborhoods where the risk for intimate partner violence was high.

Clinic/Hospital Sample

The study conducted domestic violence screening for 2,616 women as they came into a hospital or health care clinic for any kind of treatment. The screening, given as part of the clinic or hospital routine, included three short questions regarding current violence, current sexual abuse, and whether the woman was afraid to go home. Women aged 18 or older who were in a relationship and who answered "yes" to at least one question screened positive and those who answered "no" to all questions screened negative. An attempt was made to interview all women who screened positive and about 30 percent of the women who screened negative. In addition, about 66 percent of the abused women who were interviewed were reinterviewed at least once during the following 12 months.

The staff of each study site (two health clinics and a public hospital) worked hand in hand with the interviewers and project staff to ensure that safety and privacy standards were upheld. To ensure that high-risk but understudied groups, such as women who were at high risk but who

were not known to be at risk by any helping agency, would not be excluded from the sample, instruments and procedures were designed to minimize selection bias.

Homicide Sample

The homicide sample included all of the 87 intimate partner homicides in 1995 or 1996 that had a woman victim or offender age 18 or older. Up to three people who knew about the relationship (friends, family, the woman herself) were interviewed (Block, McFarlane et al., 1999), using the same questionnaires as for the clinic/hospital sample (to the extent possible). Information was also gathered from the Chicago Homicide Dataset, medical examiner's office records, court records, newspapers, and other sources.

Questionnaires

Members of the collaborating team developed study instruments over many months of intense work. Advocates, activists, community members, academics, and researchers all took an active role in finding, evaluating, and devising scales for the various dimensions researchers hoped to capture, including household composition, mental and physical health, substance use, firearm availability, social support network, power and control, harassment or stalking, and help-seeking. Women who had experienced violence in the past year developed a "calendar history" of every violent incident and other important events that had happened in the year. The followup interview included a calendar history for the period from the first interview.

The study covered highly sensitive topics, and there was a possibility that women from different cultural backgrounds could have different perceptions of these sensitive issues. The collaborators invested a great deal of effort to word questions carefully and to provide a context that would encourage women to disclose their sensitive experiences. They tried to keep the questionnaire short enough so that the women would not be fatigued, and to build in enough flexibility to encourage a natural flow of talk. The study design and the dedication of the collaborators who made the design a reality produced a rich dataset with the necessary detail and accuracy to answer the questions practitioners ask.

Findings

Findings revealed the combinations of factors that indicate that a woman in an abusive situation is at high risk for serious injury or death. Although practitioners working with women will not be surprised by most of the study's results, the data provide measurable confirmation of knowledge gained in the field. Other results, however, may challenge commonly held beliefs.

Past Violence as a Risk Factor for Homicide

The conventional wisdom that violence in the past predicts violence in the future was borne out by the Chicago Women's Health Risk Study. The majority of women who were killed or who killed their partners had experienced violence at the hands of their partners in the previous year (85 percent of homicide victims and 80 percent of offenders). Of the abused clinic/hospital women who were reinterviewed, 29 percent experienced an incident in the followup period that the study defined as "severe or life threatening" (permanent injury; being completely "beaten up," being choked or burned; or suffering an internal injury, a head injury, broken bones, or a

threat or attack with a weapon), and another 25 percent experienced other physical violence.

However, the study results go beyond conventional wisdom to reveal three specific aspects of past violence that make some women's situations more risky than others:

- ◆ Type of past violence (threat or use of a weapon, having been choked or strangled).
- ◆ Recency (number of days since the last incident).
- ◆ Frequency or an increase in frequency.

In addition to weapon use, attempted strangulation or choking were also important risk factors. In 20 percent of the homicides committed against a woman intimate partner, the man strangled his partner, and in an additional 4 percent, he smothered her. Of all the women killed by a male partner, those who had been choked or grabbed around the neck in the previous year were more likely to have been strangled or smothered in the fatal incident than those who had not (40 percent compared to 20 percent). In addition, when a partner had tried to choke or strangle clinic/hospital women, followup incidents were more likely to be severe or life threatening (63 percent compared to 40 percent).

Regardless of the severity of the last incident, the more recently it had happened, the higher the woman's risk. Half of the women homicide victims and 75 percent of the women offenders had experienced violence within 30 days of the homicide, some within a day or two beforehand. Frequency was important for all women, but especially for abused women who killed their partners. For 71 percent of women offenders, the violence had been increasing in frequency, compared to 44 percent of abused women homicide victims and 38 percent of abused clinic/hospital women.

The First Incident Can Be Fatal

For a substantial minority of study participants, a fatal or life-threatening incident was the first physical violence they had experienced from their partners. For 27 percent of the 143 clinic/hospital women who experienced only one incident in the previous year, that incident was life threatening. In 15 percent of the 74 homicides for which the study had good information, the fatal incident was the first incident. The important risk factors for these women were—

- ◆ Their partner's controlling behavior (especially jealousy).
- ◆ Their partner's drug use.
- ◆ Their partner's violence outside the home.

In 40 percent of female homicides by a man where there was no prior violence, the fatal incident was sparked by his extreme jealousy (compared to 28 percent with prior violence). Almost a quarter (24 percent) of clinic/hospital women with one incident that was very severe answered "yes" to all five "power and control" questions, but only 9 percent of other women with one incident did so.

More than half (56 percent) of clinic/hospital women who had experienced one incident that was very severe said their abusers used drugs, compared to 20 percent of other women; 41 percent compared to 21 percent said that the abuser was violent outside the home.

Leaving or Trying to End the Relationship

The connection between serious violence and the woman leaving or trying to end the relationship will be familiar to field-level workers. The potential gain from leaving is substantial, because a woman's risk of being seriously injured or killed by an intimate partner declines if the partner has no more contact with her. The potential risk is also substantial because the partner may use increased violence to keep her from leaving.

Women do try to escape abusive relationships. When people hear about a severely abused woman, many ask, "Why doesn't she leave?" Women do try to leave abusive partners. Most clinic/hospital women in this study (85 percent) who had experienced severe violence in the previous year had left or tried to end the relationship in the previous year, and most women homicide victims (75 percent) had left or tried to end the relationship in the previous year. In contrast, 66 percent of clinic/hospital women who had experienced less severe incidents and only 25 percent who had not experienced violence in the previous year had left or tried to leave.

Leaving can be related to a lower chance of future violence. In reinterviews over a period of 1 year, only 47 percent of women who had experienced less severe violent incidents and had tried to leave in the previous year told of any additional violent incident, compared with 67 percent of women who also had experienced less serious violence but had not tried to leave.

Leaving can be fatal. In 45 percent of the homicides in which a man killed a woman, an immediate precipitating factor of the fatal incident was the woman leaving or trying to end the relationship. For clinic/hospital women who were abused on followup, 69 percent of those who had left or tried to leave an abuser in the previous year but whose abuse continued despite their attempted departure experienced severe incidents compared to 44 percent of women who had not left or tried to leave.

Risk Factors for the Fatal Incident

Many study participants were in high-risk situations but did not experience a fatal or life-threatening incident. Sometimes the only difference between women who were killed and women who were not lay in aspects of the specific incident. Someone was more likely to die when one of the following factors was present in the violent situation:

- ◆ The partner threatened to use or used a knife or gun.
- ◆ The woman was being choked, grabbed around the neck, or strangled.
- ◆ The woman, the partner, or both were drunk.

Risk Factors for Abused Women Becoming Homicide Offenders

Abused women who killed their partners differed from abused women who were killed and from abused clinic/hospital women in the following ways (Block, Devitt, Donoghue et al., 2000):

- ◆ Abused women who killed their partners had experienced more severe and increasing violence in the previous year.
- ◆ They had fewer resources, such as employment or high school education.

- ◆ They had a more traditional relationship (e.g., they were married, had children, or were in a long-term relationship).

Seeking Help

Even when they had experienced severe violence, clinic/hospital women were less likely to consult a counselor or agency (24 percent) than to seek medical help (41 percent) or to contact the police (53 percent). However, 34 percent of severely abused Latina/Hispanic women had consulted a counselor or agency in the past year, while 29 percent had sought medical help and 43 percent had contacted the police. In contrast, none of the 11 women who were severely abused by a woman had contacted the police, although 45 percent sought medical care, and 18 percent talked to a counselor.

More than 30 percent of the clinic/hospital women who had experienced severe or life-threatening violence in the previous year had not sought any kind of formal help (medical, counseling, or contacting the police). Ten percent of severely abused clinic/hospital women and abused homicide women had sought neither formal nor informal help (talking to someone) in the previous year.

Implications for Researchers

Study researchers offer three suggestions:

1. Recognize the complexity of women's lives. The study asked women to discuss the real circumstances of their lives, provided many opportunities for them to describe their relationships, and avoided constraining language and predetermined categories. This interview style was comfortable and appropriate for women from a wide variety of cultural and racial/ethnic backgrounds and for women in nontraditional intimate relationships.
2. Add a separate category for strangulation as a method of attack or cause of death to law enforcement and public health datasets to improve preventive policies and interventions for intimate partner homicides. Currently, these cases are scattered under various weapon categories (e.g., belt or scarf) or as "hands, fists, and feet."
3. Develop a collaborative culture. A collaborative culture is a climate characterized by shared standards for research and practice, equalized power, permeable roles, group decisionmaking, and the assumption of good will (Block, Engel et al., 1999a; 1999b). This was the foundation of the high quality of study data.

Implications for Practitioners

Clinic/hospital women who had experienced severe violence were more likely to have sought help than other abused women. Women who were killed or who killed their partners were even more likely to have sought help. Seeking help, by itself, indicates that a woman's situation may be serious.

Study researchers found the following questions to be important to ask a woman to assess her risk for lethal or life-threatening violence. (Most of these questions are part of the Campbell [1986; 1995] Danger Assessment.)

- ◆ When a woman is being physically abused by an intimate partner, ask her—
 - When did the last incident happen?
 - Did your partner ever threaten you with a gun or knife or try to strangle or choke you?
 - Has the violence been increasing in frequency?

- ◆ When a woman is not experiencing physical violence, ask her—
 - Is your partner violent outside the home?
 - Does your partner use drugs?
 - Does your partner control all or most of your daily activities?
 - Is your partner violently and constantly jealous of you?

Abused women often consult medical staff or call the police before they go to a counselor or agency for help. Medical staff and the police should recognize their pivotal gatekeeping role. They may be able to refer abused women to counseling or other resources.

When a woman is being physically abused, both partners are at risk for homicide. Women who kill a partner tend to be severely abused, to be in a marital or other long-term relationship, and to have few material resources. They are much more likely than women who are killed or than clinic/hospital women to contact the police after an incident. Law enforcement agencies need to develop a protocol for linking women in this situation to places where they can get help.

Note

*Although most of the collaborators of the Chicago Women's Health Risk Study were silent partners in writing this report, they were equal partners in the project. They include Olga Becker, Nanette Benbow, Jacquelyn Campbell, Debra Clemons, James Coldren, Alicia Contreras, Eugene Craig, Roy J. Dames, Alice J. Dan, Christine Devitt, Edmund R. Donoghue, Barbara Engel, Dickelle Fonda, Charmaine Hamer, Kris Hamilton, Eva Hernandez, Tracy Irwin, Mary V. Jensen, Holly Johnson, Teresa Johnson, Candice Kane, Debra Kirby, Katherine Klimisch, Christine Kosmos, Leslie Landis, Susan Lloyd, Gloria Lewis, Christine Martin, Rosa Martinez, Judith McFarlane, Sara Naureckas, Iliana Oliveros, Angela Moore Parmley, Stephanie Riger, Kim Riordan, Roxanne Roberts, Martine Sagan, Daniel Sheridan, Wendy Taylor, Richard Tolman, Gail Walker, Carole Warshaw, and Steven Whitman. Collaborating agencies in the study were the Mayor's Office on Domestic Violence; the Chicago Police Department Domestic Violence Unit; the Erie Family Health Center; the Chicago Department of Public Health; the Cook County Medical Examiner's Office; the Cook County Hospital; the Chicago Abused Women Coalition; and the Illinois Criminal Justice Information Authority.

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Research Results From a National Study of Intimate Partner Homicide: The Danger Assessment Instrument¹

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Findings and conclusions of the research reported here are those of the authors and do not reflect the official position or policies of the U.S. Department of Justice.

The majority (67 to 80 percent) of intimate partner murders of women by a husband, boyfriend, or ex-husband or boyfriend involve physical abuse of the female by the male prior to the murder, no matter which partner is killed (Greenfield et al., 1998; Moracco, Runyan, and Butts, 1998; McFarlane et al., 1999; Pataki, 1997; Campbell, 1995). To prevent this form of homicide, therefore, the battered women most at risk need to be identified. The Danger Assessment (DA) is a short (15 items) yes/no instrument that was developed in 1986 to help women assess the risk of lethality in their abusive intimate partner relationships. It has been used in many domestic violence programs by shelter advocates, criminal justice practitioners, and health care professionals as well as in prior research (Campbell, 1995; Campbell, Sharps, and Glass, 2000). Two small, independent evaluations of the DA showed that it is also useful in predicting repeat arrest in battering relationships (Bennett, Goodman, and Dutton, 2000; Weisz, Tolman, and Saunders, 2000).

The purpose of this study was to test the ability of the DA to predict intimate partner homicide among women in violent relationships in a large national study. A group of researchers in 12 cities across the country partnered with police departments, district attorney offices, domestic violence shelters, and medical examiners to conduct the study. A case control design was used with interviews of proxy informants for females killed by an intimate partner (cases) compared with information from abused women (abused controls).

Methods

A 12-city²¹ case-control design was used with consecutive intimate partner homicides as cases and randomly identified abused women living in the same metropolitan area as controls. Sampling quotas for cases and controls for each city were determined by annual rates of intimate partner homicides. Institutional review board approval was obtained as required by each site.

Homicide Cases ($n = 220$). Police or medical examiner records were abstracted at each site, and at least two potential proxy informants for the victim were identified from the records and contacted by mail or phone. When a proxy informant knowledgeable about details of the relationship was found, informed consent was obtained. In 373 of the 545 (68 percent) total homicide cases, a knowledgeable proxy was identified and located. Proxies agreed to participate in 82 percent (307/373) of those cases. Cases (87) were excluded from the analysis if the victim did not meet the age inclusion criteria (18 to 50 years) or if the proxy reported no prior abuse by the perpetrator. Telephone or in-person interviews lasting 60 to 90 minutes were conducted by researchers and doctoral students who were experienced in working with victims of domestic violence.

Abused Control ($n = 356$). Stratified random digit dialing was used to select women ages 18 to 50 years who had been in a relationship in which they were “romantically or sexually involved with someone” at some time in the past 2 years in the same cities as the intimate partner homicides occurred. A woman was considered abused if she had been physically assaulted, threatened with serious violence, or stalked by a current or former intimate partner during the past 2 years, as determined using a modified Conflict Tactics Scale (CTS) with stalking items added (Straus and Gelles, 1990). English- and Spanish-speaking telephone interviewers from an experienced telephone survey firm completed sensitivity and safety protocol training (Johnson

and Sacco, 1995). Of the 1,954 women who met the age and relationship criteria and were read the consent statement, 845 (43 percent) agreed to participate. Of these, 356 had been abused by a current or recent intimate partner.

Risk Factor Survey Instrument

As well as the DA, the interview included demographic and relationship characteristics including type, frequency and severity of any violence, psychological abuse and harassment, alcohol and drug use, and weapon availability. Scales measuring partners' controlling behaviors and stalking were constructed based on factor analysis of the risk factor items. Each scale was internally consistent ($\alpha = .83$ and $.75$, respectively).

Analysis Plan

Bivariate logistic regression was used to estimate the independent association between each of the hypothesized risk factors from the DA and the risk of intimate partner homicide. Psychometric analysis of the DA included internal consistency and discriminant group validity using mean scores. In addition, the sensitivity and specificity for a series of cutoff scores were calculated as a beginning step toward establishing a usable cutoff score for the DA for practitioners.

Results

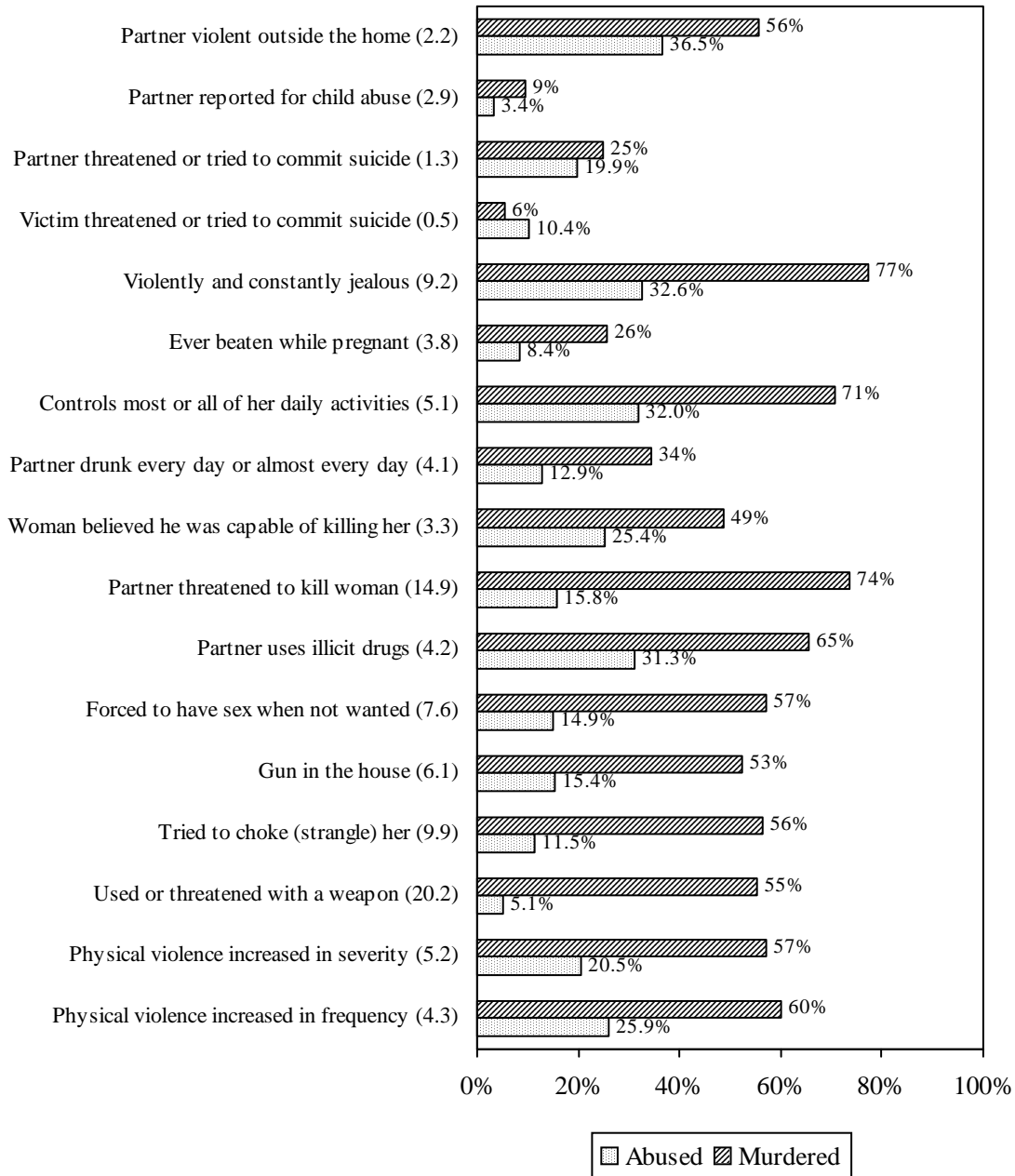
Danger Assessment Risk Factors

In our analysis of the DA risk factors, 15 of the 17 items distinguished intimate partner homicide victims from abused women (see exhibit 1). The factor with the strongest risk (highest odds ratio) was use (or threatened use) of a weapon. Those women were 20 times more likely to be killed as other abused women. Women who had been threatened with being killed were almost 15 times more likely to be among the homicide victims rather than among the abused controls.

Perpetrator drug abuse and serious alcohol abuse (drunkenness every day or almost every day) (Sharps, Campbell, Campbell, et al., 2001) also differentiated batterers who killed from those who did not, as did prior gun ownership. One item on the DA asks about the presence of a gun in the house when perhaps the more important risk factor is whether or not the perpetrator owns a gun or, if he is separated from the victim, has access to a gun. Exhibit 2 demonstrates the difference between perpetrator and victim gun ownership between cases and controls. Gun access became even more dangerous when the partners were living apart (Campbell, Webster, Koziol-McLain, et al., 2003).

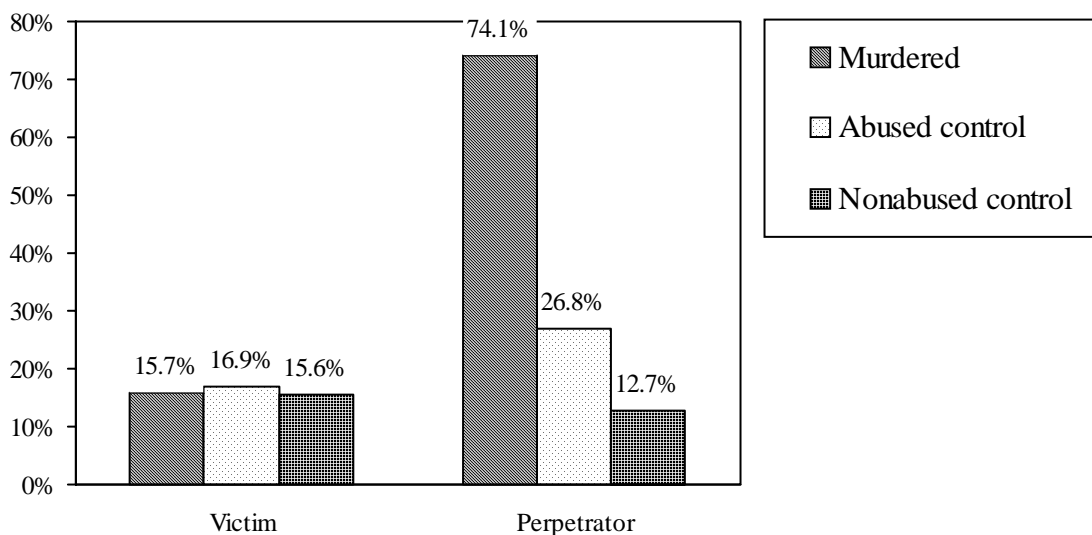
To avoid making child abuse reports, researchers did not ask if the perpetrator was currently violent toward the children (the item on the DA), but whether he had ever been reported for child abuse. Even so, almost 10 percent of the intimate partner homicide cases had a history of such reports. Practitioners may also want to word the item to ask about prior reports, unless the respondent is clear that attesting to violence toward the children will necessitate a child abuse report.

Exhibit 1. Danger Assessment Risk Factors Among Murder Victims and Abused Women (Odds Ratios)



Note: All items had significant odds ratio (95% confidence interval excludes the value of 1) except last two (partner and victim suicidality).

Exhibit 2. Victim and Perpetrator Gun Ownership



The two items on the DA that did not significantly differentiate intimate partner homicide victims from abused women regarded suicidality. Approximately one-third of the cases were homicides followed by perpetrator suicides and researchers are examining those cases to see if perpetrator suicidality was more of a risk factor in those particular circumstances. Victim suicidality was included on the DA because of its association with battered women who killed male abusers (Browne and Williams, 1998). The DA was originally developed to assess the risk of intimate partner homicide, regardless of the gender of the perpetrator. The present study did not assess the risk of male victims of intimate partner homicide and therefore, the importance of this item was not really tested. Even so, victim suicidality is important in preventing mortality and should be retained on the DA.

Danger Assessment Psychometrics

Internal consistency (alpha coefficient) of the DA was acceptable among the homicide cases (0.73) and among the controls (0.76). In the completed analyses the average scores (obtained by adding yes answers) on the DA were 7.4 for the cases and 3.2 for the controls. This significant difference ($p = .004$) supports the validity of the instrument in discriminating between battered women who are likely to be killed and those who are not (discriminant group validity).

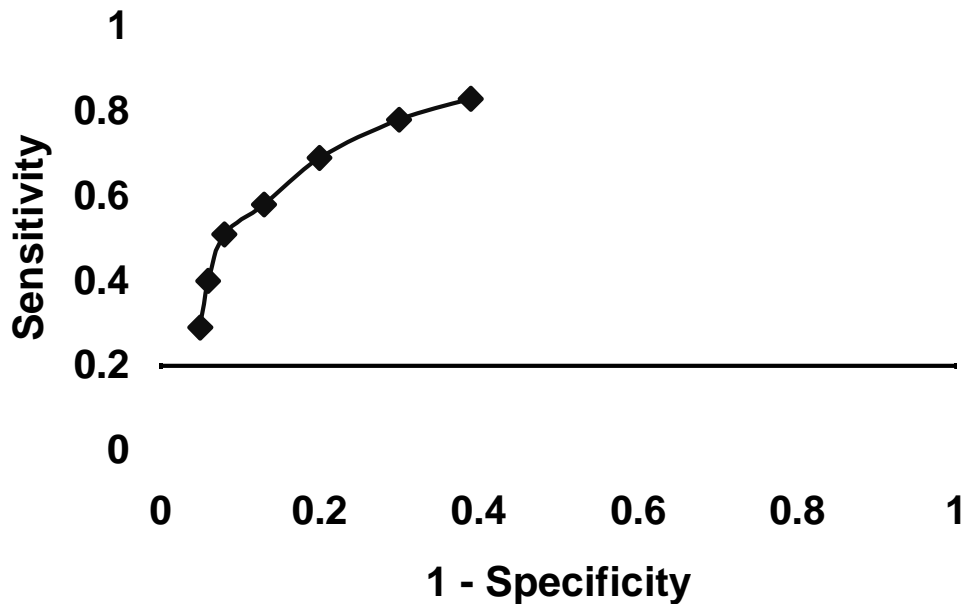
Researchers are continuing to analyze the data to determine a DA cutoff score. Cutoff scores on a lethality risk instrument need to be evaluated in terms of their ability to correctly identify those who end up being killed or “true positives” (sensitivity), as well as their ability not to put women in that category who do not belong there (1-specificity) (Webster, Harris, Rice, Cormier, and Quinsey, 1994). Both of these are important because if the cutoff score is too high, practitioners will fail to predict lethality in too large a percentage of women who are indeed in extreme danger. If the cutoff score is too low, too many women can be frightened unnecessarily, and the criminal justice system may take measures to restrict the liberty of perpetrators unfairly. Thus, determining cutoff scores is both extremely difficult and extremely important.

Exhibits 3 and 4 show the sensitivity and specificity at various scores as a preliminary analysis of various scoring options on the DA. In this beginning cutoff score analysis, researchers found that 83 percent of the women who were killed had a score of 4 or more (greater than 3), which indicates a high level of sensitivity. However, at that score, specificity is relatively low, with almost 40 percent of the abused controls who were *not* killed also at this score. At a cutoff score of 9 (more than 8), specificity is good, with 94 percent of the women who were below that score in the control group. However, only 40 percent of the murders scored that high on the DA (sensitivity). At a cutoff of 7 (greater than 6) both sensitivity (58 percent) and specificity (87 percent) are fairly good, but the 42 percent of women in extreme danger who would be missed at that cutoff are a matter of concern.

Exhibit 3. Sensitivity and Specificity of Various Danger Assessment Cutoff Scores

Cutoff Score	Percent Scoring Above Cutoff	Sensitivity	Specificity
> 3	55.2	83.4	60.8
> 4	47.2	77.9	70.2
> 5	38.0	69.1	79.6
> 6	29.2	58.0	87.1
> 7	23.8	50.8	91.5
> 8	18.4	39.8	93.7
> 9	13.4	28.7	95.3

Exhibit 4. Receiver Operating Characteristics of Various Danger Assessment Cutoff Scores



Implications for Practitioners

Almost half (49 percent) of the women who were killed did not accurately perceive their risk (did not think the perpetrator would kill her) according to the proxy who was interviewed. Therefore, an instrument like the Danger Assessment or some risk assessment process is definitely needed for women to be fully aware of their risk. The study found some support for the DA as it is currently published.³² One important aspect of the DA that the study did not address is the calendar portion of the DA. The calendar exercise helps women to recall how much violence is occurring in the relationship and to counteract their normal tendencies to underestimate the violence. This is an important part of the process of risk assessment using the DA.

As indicated in the directions printed on the DA, practitioners and battered women should regard a higher score (adding all yes responses) on the DA as an indication of higher risk. The results of this analysis suggest that for practitioners working with battered women, a score of 4 or higher should be considered as indicating serious risk, and great assertiveness should be used in safety planning. The risk factors of batterer threats or prior use of a weapon and threats to kill should be considered particularly dangerous. Perpetrator access to a gun needs to be assessed and a careful inventory of all guns must be taken. The provisions of the Brady Bill prohibition against gun ownership for those convicted of domestic violence assault become especially important to enforce, and any order of protection should have firearm search and seizure provisions.

For criminal justice practitioners making decisions about batterer bail or sentencing, it should be kept in mind that at a cutoff score of 4 (greater than 3), almost 40 percent of women were not in the homicide group. It is not until a score of 7 to 8 or more is recorded that an acceptable level of correct identification of those who were not killed is reached and the DA can therefore be used in making criminal justice decisions about abusers.

These results indicate that any cutoff score of the DA is suggestive, not definitive, and that practitioners should use the instrument (like all of the intimate partner violence current risk assessment instruments available) within a process of risk assessment rather than as a definitive actuarial⁴³ (Roehl and Guertin, 1998; Quinsey, Harris, Rice, and Cormier, 1998) instrument with established cutoffs. Even so, it should also be noted that scores of 8 or 9 or more suggest both great risk and acceptable accuracy and should be kept in mind when using the DA.

Implications for Researchers

Although the study supported the use of the DA, more precision is needed in predicting abused women's risk of being murdered by their intimate partners. Weighting DA items according to their relative risk is a strategy that is being pursued. Refining assessment questions and perhaps adding others is another strategy. The researchers are examining DA items in light of other risk factors that were collected, such as estrangement, stalking, and partner unemployment. Finally, risk assessment for homicide followed by suicide and the killing of other family members requires further study. Whatever research strategies are undertaken to refine the DA, the items will be validated with battered women and domestic violence advocates before they are finalized. The development of the DA has always been carried out in close collaboration with women and

advocates. The wording of the items and the need for user-friendly administration and scoring will reflect advocate and survivor realities as well as research results.

Notes

¹ Modified text and figures from “Assessing Risk Factors for Intimate Partner Homicide” by Campbell, J.C. et al. (Issue no. 250, 2003) is printed with permission from the *National Institute of Justice Journal*.

² Baltimore, Maryland; Chicago, Illinois; Houston, Texas; Kansas City, Kansas and Missouri; Los Angeles, California; New York, New York; Portland, Oregon; St. Petersburg and Tampa, Florida; Seattle, Washington; and Wichita, Kansas.

³ The DA can be printed from <http://www.son.jhmi.edu/research/CNR/homicide/DANGER.htm>, which also gives directions regarding permission of use.

⁴ An actuarial instrument is one that provides weightings and published scores that have been shown through formal and independent research to actually *predict* violent outcomes.

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The Effects of State and Local Domestic Violence Policy on Intimate Partner Homicide

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In the United States, rates of homicide involving “intimate partners”—spouses, ex-spouses, boyfriends, girlfriends—have declined substantially over the past 25 years. Public awareness of and policy responses to intimate partner violence have increased during the same period. The coincidence of the two trends leads naturally to the question of their relationship: To what extent has the social response to partner violence contributed to the decline in intimate partner homicide? Research evidence addressing that question is highly limited, but the few existing studies suggest that domestic violence resources such as hotlines, shelters, and legal advocacy programs may be associated with lower rates of intimate partner homicide, while controlling for other influences (Browne and Williams, 1989; Dugan, Nagin, and Rosenfeld, 1999).

The authors have assessed the relationship between intimate partner homicide and domestic violence resources for a larger number of places over a longer period of time and with a richer set of outcome and resource measures than used in previous research. That relationship is interpreted in terms of the *exposure-reducing* potential of domestic violence resources. Simply put, those policies, programs, and services that effectively reduce contact between intimate partners involved in a violent relationship reduce the opportunity for further abuse and violence. This perspective on intimate homicide assumes that any mechanism that reduces the barriers to exit from a violent relationship will lower the probability that one partner will kill the other. For example, the availability of welfare benefits, by hypothesis, reduces a woman’s exposure to violence by providing financial support for her and her children to leave an abusive partner.

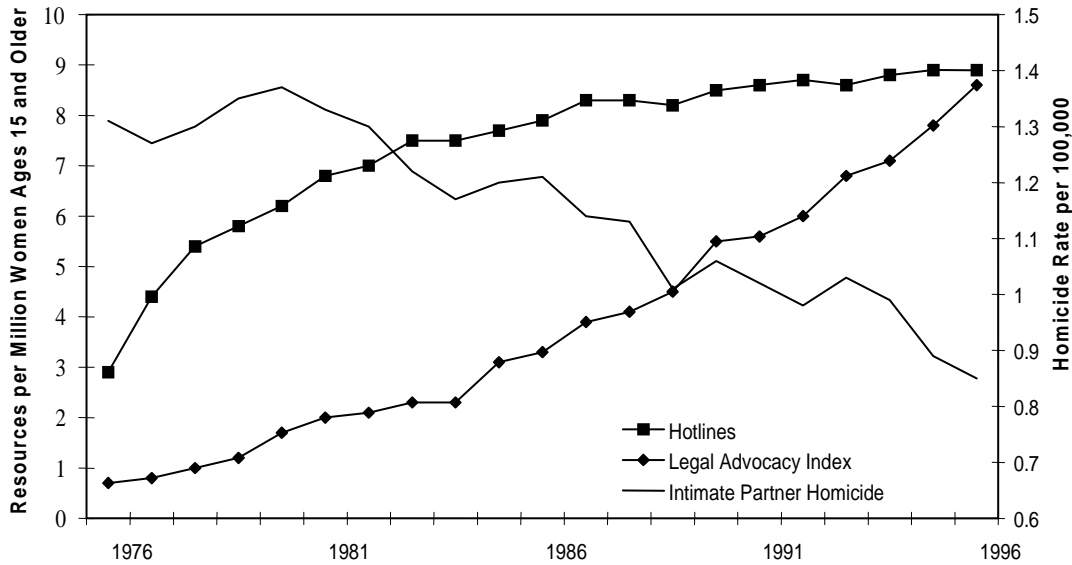
Although the idea of exposure reduction is relatively straightforward, its effects on violence need not be. Substantial evidence shows that the highest homicide risk is during the period when a battered victim leaves the relationship, suggesting a potential “retaliation effect” from exposure reduction associated with domestic violence interventions (Bernard and Bernard, 1983; Campbell, 1992). Such *retaliation effects* could occur if the intervention (e.g., restraining order, arrest, shelter protection) angers or threatens the abusive partner without effectively reducing contact with the victim. The authors evaluated the exposure-reducing and retaliation effects of a broad range of domestic violence resources on levels of heterosexual intimate homicide by victim gender, race, and marital relationship to the offender for 48 large U.S. cities between 1976 and 1996, controlling for changes in marriage and divorce rates, women’s status, and other time- and place-varying influences.

Contrasting Trends

The coincidence of the contrasting trends for decreasing intimate homicide and increasing social response is especially notable because the overall rate of homicide is trendless during the same period. The general decline in intimate homicide varies substantially by victim gender, race, and marital relationship to the offender. Larger decreases have occurred for males, blacks, and married victims (including ex-spouses) than for females, whites, and unmarried intimates (Greenfield et al., 1998; Rosenfeld, 1997, 2000). The differing time trends by victim type highlight the importance of assessing the separate effects of domestic violence resources by victim gender, race, and marital status.

Domestic violence policies and programs in the United States have expanded dramatically since the early 1970s, when the battered women's movement began pressing for a social response to the needs of women abused by their spouses (Schechter, 1982). Policymakers responded with enhanced criminal justice sanctions, specialized procedures, and targeted services to accommodate the special needs of victims who are intimately involved with their abusers. Exhibit 1 displays the pronounced growth in domestic violence hotlines and legal advocacy programs in 49 large U.S. cities between 1976 and 1996. The intimate-partner homicide rate, by contrast, dropped to roughly 0.9 from 1.3 victims per 100,000, or by about 30 percent.

Exhibit 1. U.S. Intimate Partner Homicide Rates and Domestic Violence Services, 1976–1996



Source: FBI Supplementary Homicide Reports, 1976–1996, and the authors

Domestic Violence Resources

Exposure reduction can come in many forms. This research focuses on State laws governing protection orders and associated local implementation and enforcement policies. It considers whether States allow the courts to order *no contact* with the victim, whether *eligibility* is expanded to cover victims who do not live with the abuser, and whether the court is authorized to award temporary *custody* of children to the victim. Further, it considers whether the State statutes allow for a *warrantless arrest* when a protection order is violated and if the State *mandates* arrest. Finally, once an arrest is made, the study documents whether violators may be charged with *contempt* (either civil or criminal), a *misdemeanor*, or a *felony*.

Local policy reinforces State law by affirming its importance to local police and prosecutors, by providing specific implementation procedures, or by augmenting statutory requirements where such discretion is permitted. *Proarrest* and *mandatory arrest policies* encourage or require officers to arrest an individual who violates a protection order. Police departments may have specialized *domestic violence units* and *training*. The effectiveness of the criminal justice response to domestic violence also depends on local prosecutorial policy, including the

willingness to prosecute domestic violence cases, written policies for these cases, specialized domestic violence units, legal advocates on staff, and a “no-drop” policy. Community-based legal advocacy programs for victims of domestic violence may facilitate access to police and prosecutorial resources, especially if they have *dedicated funding* for personnel and employ *lawyers on staff*. One additional type of domestic violence resource is included in this analysis—the prevalence of *hotlines* for abuse victims. Finally, previous research has documented higher levels of violence in the lives of women on welfare (Allard et al., 1997; Browne and Bassuk, 1997; Tolman and Rosen, 2001). The authors, therefore, incorporate in their analysis benefit levels for Aid to Families with Dependent Children (AFDC).

Hypotheses

The researchers expect that State laws with provisions for no contact between victims and abusers and for warrantless and mandatory arrest of abusers will be associated with lower rates of intimate partner homicide. The exposure-reduction effects of State statutes should be strengthened, in turn, by aggressive and specialized local enforcement and strong legal advocacy services. However, the researchers do not expect that each of these factors will have similar effects for all victim types, for at least five reasons. First, discrepancies in implementation of policy or services can limit exposure reduction. Second, not all victims of domestic violence have equal access to the types of protection mandated by law and policy. For example, protection orders were originally restricted to women who were married to their abuser. Third, victims may perceive barriers preventing access to legal protection. This may be more common for women of color and low economic status (Peterson, 1999). Fourth, violent relationships between unmarried partners may be more sensitive to outside intervention because the partners typically have fewer legal and financial dependencies than spouses, and therefore are freer to leave. Finally, some interventions may increase the risk of lethal violence for intimate partners if they increase strain in the relationship or anger batterers without reducing contact, and the increased risk of retaliation may vary by marital status, race, and gender.

Data and Methods

Homicide Data

The homicide data were extracted from the Supplementary Homicide Reports (SHR) of the FBI’s Uniform Crime Reporting program (UCR) (Federal Bureau of Investigation, 1998). The authors aggregated to the city level for each year the number of homicides by the victim’s gender, race, and marital relationship to the offender. Married persons include ex-spouses and common-law; unmarried persons include the SHR categories of “boyfriend” and “girlfriend.” The small number of intimate partner homicides involving a victim and offender of the same sex were excluded from the analysis.

Domestic Violence Resources

The crux of the data collection strategy was to seek out informants within the local agencies of the 50 largest cities and ask them to complete a survey inventorying policies or activities by type and year of implementation. All resource data were collected by legal experts and practitioners. Even though repeated callbacks were required in some cases, response rates were impressively

high, especially given the long timespan for which detailed information was requested. The researchers received completed surveys with no missing data on prosecutor policies for all but two of the cities, yielding a final sample of 48 cities. (The survey instruments for the local agencies and the coding protocol for the State statutes are available from the authors by request.)

The authors formulated 11 indicators of domestic violence resources. Four are measures of State statutes, including provisions for warrantless and/or mandatory arrest, an index of the legal consequences for violating a protection order (contempt, misdemeanor, or felony), and an exposure reduction index that increases in value with provisions for no-contact orders and custody relief. Five of the indicators measure components of local policy, including police arrest policies, the presence of domestic violence units and training in police agencies, the willingness of prosecutors' offices to take domestic violence cases and the use of written policies for prosecuting them, the presence of domestic violence units and legal advocates in prosecutors' offices, and whether the prosecutor's office has a "no-drop" policy. Two final indicators measure the strength of legal advocacy programs and the prevalence of hotlines in the city.

Control Variables

The authors followed conventional practice in welfare analysis of measuring AFDC benefit levels in constant dollars based on the benefit received by a family of four persons (House Ways and Means Committee, 1996). Also included were race-specific marriage and divorce rates for each city and year and the ratio of the proportion of women to the proportion of men age 25 or older with at least 4 years of postsecondary education. Other controls are the overall change in adult homicide (not including adults killed by their intimate partner), a variable to capture any bias introduced by the adjustment procedure for underreporting of SHR data, and, to measure potential risk for homicide, the natural logarithm of the number of persons in the relevant demographic subgroups (e.g., married white males, married black males). See Dugan, Nagin, and Rosenfeld (2000) for explanations for the choices of control variables.

Methods

Because the dependent variable is a count of homicide victims within a discrete period, and rare events such as these likely conform to a Poisson process, the authors use the Poisson likelihood function to estimate models, with each observation weighted by the 3-year average of the city's population. Additional methodology was also used to address issues common to longitudinal analysis and to assure robustness. For a detailed methodological discussion, see Dugan, Nagin, and Rosenfeld (2000).

Findings

Consistent with previous research, the authors found that much of the decline in intimate-partner homicide over the past 25 years is associated with declining marital domesticity (defined as decreasing rates of marriage and increasing rates of divorce). A full description of the results is in Dugan, Nagin, and Rosenfeld (2000). In this paper, researchers focus on the more policy-relevant results. A summary of the robust findings for the domestic violence resources and

AFDC is displayed in exhibit 2. Each column represents a victim type while each row represents a type of resource. Listed in each cell is an indicator of whether the finding supports the hypothesis of exposure reduction (ER), or suggests retaliation (RET). Blank cells indicate no association that passed the researchers' several robustness tests.

Exhibit 2. Findings Supportive of Exposure Reduction (ER) or Retaliation (RET)

	Married				Unmarried			
	Male		Female		Male		Female	
	Black	White	Black	White	Black	White	Black	White
Warrantless Arrest				ER	ER			ER
Mandatory Arrest		ER		RET				RET
Violation Index			ER				RET	
Exposure Reduction			ER		RET		RET	
Legal Advocacy				ER			RET	
Hotlines							RET	
Police Arrest Index		RET			ER		ER	
Police Commitment							RET	
DA Willingness		RET		RET	RET		RET	RET
DA Specialization						RET		
No-Drop Policy								
AFDC	ER				ER	ER	ER	

In total, there are 28 robust policy-related findings. Of those, 13, or 46 percent, support the predictions of the exposure reduction theory. These results suggest that increases in alternatives to living with, or depending upon, an abusive partner contribute to the decreasing homicide rates of intimate partners. The remaining findings support the retaliation hypothesis: Resources that are intended to reduce exposure to violence are associated with higher levels of intimate homicide. One interpretation of this result is that batterers increase their violence once their partners try to leave.

Two findings consistently support the exposure reduction hypothesis: those for AFDC benefit levels and warrantless arrest law. As AFDC benefits decline, more men, particularly black men, are killed by their girlfriends. An interpretation of this result is that reductions in AFDC limit financial opportunities for unmarried women with children to live independently of their abusers,

thereby increasing the likelihood of unmarried women killing their abusers or, in the case of black women, being killed by them. However, white women are unaffected, suggesting that African-Americans are more sensitive to variations in AFDC (see also the results for married men). That interpretation is consistent with the higher rates of AFDC participation of blacks compared with whites (House Ways and Means Committee, 1996).

The findings for warrantless arrest law are consistent with exposure reduction for white women in both marital and nonmarital intimate relationships. A warrantless arrest law gives officers more discretion to arrest immediately after a protection order is violated. This reduces the period that the victim is exposed to the offender by the amount of time that it would take the officer to obtain a warrant. This period is also the most dangerous, because the batterer is likely to be antagonistic after police intervention.

Two findings consistently support retaliation predictions—those for prosecutor willingness and specialization. As the willingness of prosecutors to take cases increases, so does homicide for married white and unmarried black partners. Prosecutor willingness to take cases is also associated with higher levels of victimization among unmarried white women, and the measure of prosecution specialization is associated with greater victimization of unmarried white men. These results imply that the willingness and capacity to prosecute cases of protection order violation may aggravate already tumultuous relationships.

The remaining robust findings are less consistent across victim type. Increased strength of legal advocacy, for example, is associated with fewer killings of white wives but more deaths of black unmarried females. The most pronounced contrast in the remaining results is between married and unmarried homicide victimization. With few exceptions, these results show retaliatory effects for unmarried partners resulting from access to domestic violence resources—especially for black women.

Discussion

The goal of this project was to identify factors that have contributed to the 25-year decline in intimate partner homicide in the United States. The researchers hope that the conclusions drawn from this work will assist policymakers and service providers in designing more effective prevention strategies. The research was premised on a theory of exposure reduction, predicting that any factor that shortens the time that violent intimates are exposed to one another will reduce the probability that the relationship ends in homicide. Investigation produced mixed support for the theory. Clearly, domestic violence prevention resources are not uniformly associated with reductions in intimate-partner homicides, and some may result in increased victimization. Support for the latter interpretation is most evident in the findings for unmarried partners.

Implications for Researchers

More research is needed to better understand the dynamics of successful exposure reduction compared to unsuccessful cases, so policymakers and practitioners can reduce prevention failures. Much research has already been conducted on failed efforts to leave abusers. Homicide case reports and interviews often provide rich details of the events leading to the homicide. Yet,

that is only half the story. For comparison, researchers need to understand how severely violent relationships avoid lethal consequences.

Progress is being made with longitudinal research on battered women by Campbell and colleagues that examines how women who differ in individual and relationship attributes respond to partner abuse and compares battered women, including homicide victims, to other women in several cities (Campbell et al., 1998; Campbell and Soeken, 1999; see, also, Block, 2000). It is only with more research documenting successful and unsuccessful cases of relief from partner violence for a heterogeneous group of women that we will be able to design policy customized to meet their safety needs.

Implications for Practitioners

The findings suggesting a retaliatory effect do not mean that designing prevention strategies based on exposure reduction is a bad idea, but rather that prevention should be tailored to the particular needs and situations of different groups. The results also imply that a little exposure reduction, or unmet promises of exposure reduction, can be worse than the status quo for severely violent relationships. Absolute reduction of exposure in such relationships is an important policy objective. Without any contact, neither partner has the opportunity to kill the other. But achieving this type of protection is not easy. A starting point suggested by the research is case-by-case review of local prosecution policy and practice, with special attention to the needs of victims who are not married to their batterers.

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Male-Perpetrated Domestic Violence: Testing a Series of Multifactorial Family Models

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Background, Rationale, Purpose, and Conceptual Framework

There is no shortage of statistics to document that violence is a serious problem in our society and that much of this violence occurs in the home. The likelihood of experiencing a traumatic event in general and the prevalence of postevent psychological disturbance are not trivial. One possible result of trauma exposure is the condition known as posttraumatic stress disorder (PTSD). According to the *Diagnostic and Statistical Manual of Mental Disorders*, PTSD is an anxiety disorder observed in persons who have been exposed to an extreme stressor that evokes feelings of “intense fear, helplessness, or horror” (American Psychiatric Association, 1994). Symptoms include reexperiencing the traumatic event through frightening dreams and intrusive recollections, avoidance of circumstances that might trigger a reexperiencing episode, emotional numbing and retreat from intimate relationships, and increased arousal. The condition frequently coexists or is comorbid with alcohol abuse. PTSD has been documented in victims with various traumatic experiences, including veterans of military combat.

This research project, funded by the National Institute of Justice (NIJ), sought to demonstrate the connection between two important social and health problems—domestic violence and trauma-related psychological disturbance—and that trauma and its consequences (PTSD and alcohol abuse) serve partially to explain aggressive behaviors in families. The goal of the project was to gain a better understanding of risk factors associated with male-perpetrated domestic violence and accompanying partner mental distress and child behavior problems using family data from the National Vietnam Veterans Readjustment Study (NVVRS) (Kulka et al., 1990a, 1990b).

The NVVRS was congressionally mandated and conducted in the mid- to late 1980s. Its primary purpose was to document rates of PTSD and other adjustment difficulties among veterans who fought in the Vietnam War. The NVVRS had more than 4,000 participants and involved a number of components, one of which was an extensive assessment of family life among community-residing male veteran-female partner dyads. Using this subset of the larger database, the NIJ-funded project tested a series of models to gain information about the antecedents, correlates, and consequences of violence against women.

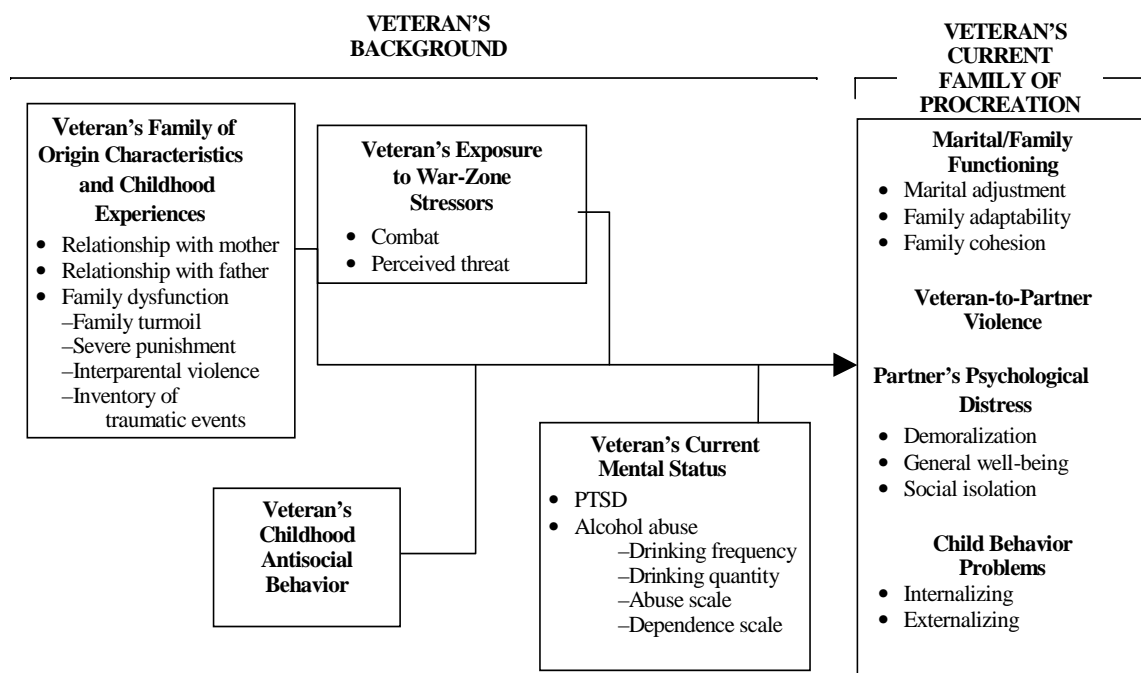
Exhibit 1 presents the conceptual framework for the project. Emphasis was placed on four categories of variables related to the veteran’s background:

- ◆ The veteran’s accounts of his own family of origin characteristics and childhood experiences.
- ◆ The veteran’s conduct and behavioral problems prior to age 15 (childhood antisocial behavior).
- ◆ The veteran’s exposure to war-zone stressors in Vietnam.
- ◆ The veteran’s mental status as represented by PTSD symptomatology and associated alcohol abuse.

The project incorporated four clusters of variables describing the veteran’s current family of procreation:

- ◆ Marital and family functioning.
- ◆ Veteran-to-partner violence.
- ◆ The partner’s psychological distress.
- ◆ Child behavior problems.

Exhibit 1. Conceptual Framework



Component Studies and Hypotheses

The research project was organized into a sequence of four studies, each of which addressed a specific objective and subsumed hypotheses concerning the patterns of relationships among critical variables.

Variables Characterizing Veteran’s Family of Procreation

Study 1 sought to determine the pattern of relationships among variables representing marital and family functioning, veteran-to-partner violence, partner’s psychological distress, and child behavior problems. This initial study laid a foundation for the full project by documenting associations among the key variables that provide a contemporary portrayal of the veteran’s family of procreation. For this segment, a working hypothesis was that the veteran’s perspective on the quality of marital and family functioning and his violent behaviors toward his partner have direct effects on the partner’s psychological distress and on child behavior problems and indirect effects on these outcomes.

Veteran's Early Background and Trauma History

Study 2 aimed to establish the degree to which the veteran's family-of-origin characteristics, childhood experiences (including severe punishment and other forms of childhood trauma) and antisocial behavior, and exposure to stressors in the Vietnam war zone and subsequent PTSD symptomatology related to veteran-to-partner family violence. Researchers predicted main effects for the background and trauma variables emanating from the family of origin, childhood antisocial behavior, and war-zone stressor categories to the violence variable. They also predicted that PTSD would serve at least as a partial mediator of these relationships.

Veteran's Current Mental Status

Study 3 examined how the veteran's current mental status is associated with marital and family functioning, violence, and his partner's current psychological distress. This phase of the research program highlighted the role of stress disorder symptomatology and alcohol abuse in accounting for family violence. Hypotheses included the following:

- ◆ A relationship between the veteran's mental status (PTSD and alcohol abuse) and his partner's psychological distress.
- ◆ A direct effect between the emotional numbing aspect of PTSD and marital and family functioning.
- ◆ A direct effect between the hyperarousal feature of PTSD and violence.
- ◆ A disinhibition hypothesis that the presence of the veteran's alcohol abuse exacerbates domestic turmoil and aggression.

Developmental and Intergenerational Perspective on Violence

Study 4 aimed to model a network of relationships explaining the potential transmission of violence across generations, commencing with the veteran's accounts of violence within the family of origin and terminating with reports of child behavior problems (delinquency, aggression, and other externalizing tendencies) within the family of procreation. The evaluation of this model, with mediational influences capturing important stages and events in the life of the veteran and with child behavioral problems as the outcome, was intended to emphasize the relative influence of leading risk factors and suggest mechanisms by which they operate.

Methodology

Sample Description

The NVVRS and the data it produced have much to recommend them. A large multidisciplinary team of researchers and consultants assured a wealth of expertise from diverse perspectives, including psychology, psychiatry, sociology, nursing, epidemiology, and biostatistics. The national area probability sampling approach afforded comprehensive coverage of the full Vietnam veteran population. Response rates were quite good (82 percent), and the data obtained from each participant were extensive. Face-to-face, structured interviews, with some

supplementary self-report paper-and-pencil measures, were administered to participants throughout the United States. Interviews of veterans averaged more than 5 hours; separate spouse-partner interviews averaged more than 1 hour. For the family subsample, the intent was to include families of all veterans who scored high on measures of combat exposure, PTSD, or general psychological distress. Some families were included specifically to represent veterans who did not meet these criteria, thereby enhancing dispersion or score variability in the family subsample while maintaining a focus on high-risk family units.

For the current project, there were 376 male veteran-female partner dyads; 261 dyads had one or more children between the ages of 6 and 16 residing in the home. Data were collected from partners on selected background characteristics of the partner and couple, the partner's perspective on the veteran's mental health and functioning, the partner's own psychological and emotional well-being, interaction problems and violence in the family, and behavior and adjustment problems for all 6- to 16-year-old children in the household.

The original NVVRS researchers were particularly attuned to including sufficient numbers of minority veterans in their sample. As a result of their oversampling strategies, approximately 25 percent of the male Vietnam veteran participants identified themselves as black and 24 percent identified themselves as Hispanic. One can conclude, therefore, that the primary study from which this proposal drew its data was well grounded in its concerns for inclusiveness based on minority status, at least with regard to the two largest minority groups in the United States. In turn, the current project benefited. The racial or ethnic identity for male veterans whose partners provided data for the family interview was distributed as follows: black, 24 percent; Hispanic, 29 percent; and white/other, 47 percent. The partners of these veterans had a fairly comparable distribution: black, 23 percent; Hispanic, 22 percent; and white/other, 55 percent.

The composition of the sample relied on the initial descriptive profiles for the male veteran-female partner units developed by Jordan and colleagues (1992). Almost 33 percent of the veterans in these families scored high on PTSD, and 51 percent scored in the medium to high range on the measure of general psychological distress. With regard to marital problems, Jordan and colleagues (1992) reported that 61 percent of the PTSD-positive veteran families and 44 percent of the total sample had partner-generated marital problem scores in the medium to high range. Thirty-four percent of women with PTSD-positive, male veteran partners reported at least one violent incident in the past year (1–2 incidents, 6.8 percent; 3–5, 10.6 percent; 6–12, 7.3 percent; 13 or more, 9.3 percent). For the full sample, 21 percent reported one or more incidents in the past year, including the complement of tactics on Straus's Conflict Tactics Scales (Straus, 1979) and additional items reflecting extreme threats of violent acts. Another important risk factor for domestic violence, and one that was investigated in this project, is alcohol abuse. For this sample, the lifetime rate of alcohol abuse for veterans was 42 percent, and the current rate was 15 percent.

For studies 1 and 4, in which ratings of child behavior problems were involved, sample sizes were 260 and 254, respectively; for studies 2 and 3, in which all couples were eligible (both those without and those with children in the home), sample sizes were 367 and 372, respectively.

Analytic Approach

Structural equation modeling was the primary analytic strategy. This approach involves solving a series of simultaneous equations that represent associations among variables. Structural equation modeling has two components: the measurement component and the structural component. The measurement component, also known as confirmatory factor analysis, defines latent variables or factors in terms of their observed or manifest indicators. In this project, the latent variable labeled *partner's psychological distress* had three observed or manifest indicators:

- ◆ Scores on the demoralization scale from the Psychiatric Epidemiology Research Interview (PERI) (Dohrenwend, 1982).
- ◆ A general well-being scale (reverse scored).
- ◆ An index of the partner's social isolation.

Latent variables are considered reliable because measurement error is specified and therefore estimated in the analysis. Thus, when latent variables are employed in the subsequent structural component, which tests hypotheses about the relationships among variables, their regression or path coefficients are unbiased (see Bollen, 1989; Hoyle, 1994; Joreskog and Sorbom, 1993). Furthermore, the full-information estimation procedures of structural equation modeling yield parameter estimates that are efficient. Their standard errors are as small as they can be, thereby providing more stable values and a more accurate representation of the pattern of relationships among the variables. This methodology gives researchers more flexibility and powerful tools to enhance measurement precision and to understand complex associations among constructs.

Latent Variables and Their Indicators

Exhibit 2 identifies the sets of latent variables for the project and presents a brief description of how each of their indicators was measured. When possible (e.g., the measures of PTSD and veteran-to-partner violence), existing, well-regarded scales were used. In other instances, conventional psychometric procedures were used to develop content-valid, reliable measures from the existing NVVRS survey data.

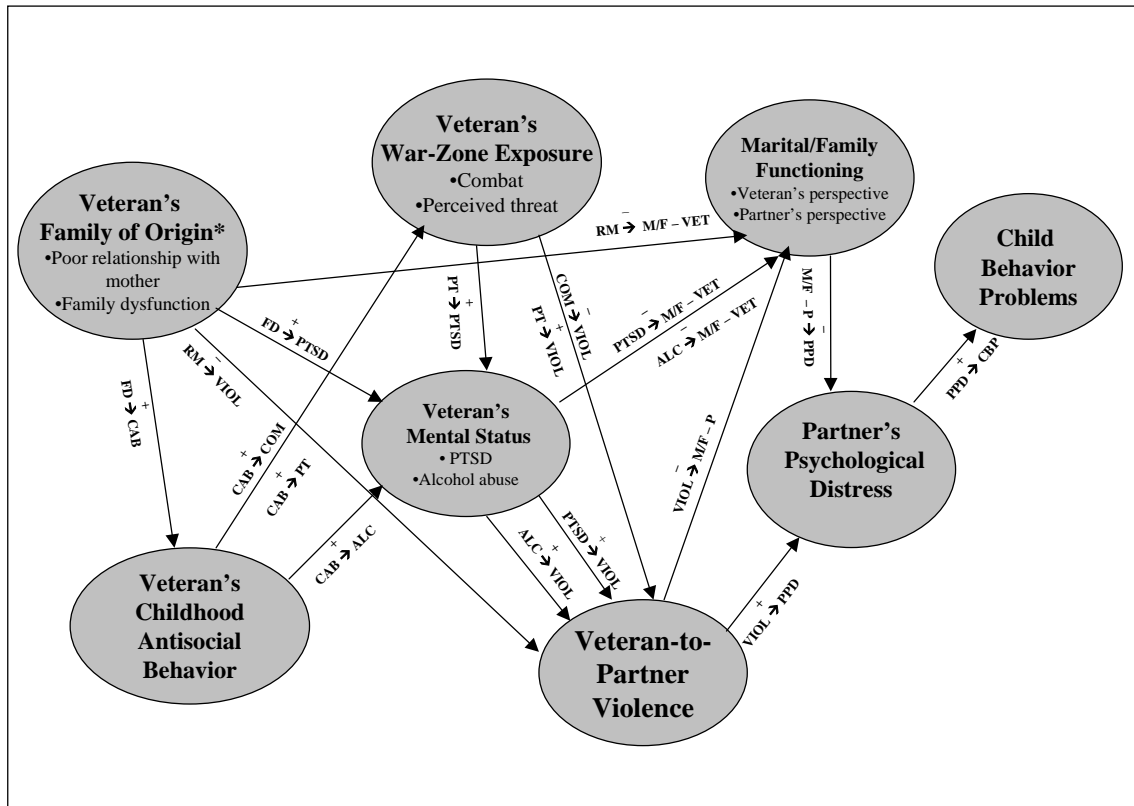
Findings

Exhibit 3 is a simplified and integrated representation of the findings across all four studies in this project. The results offered support for the guiding trauma-focused perspective, that exposure to highly stressful life events in a man's childhood or early adulthood and their psychological consequences may explain later partner battering and concomitant partner psychological distress and child behavior problems. As a general statement, there appeared to be a "chaining" of variables depicting pathways by which a man's adverse childhood experiences are linked to difficulties in his subsequent marriage and family life. In our studies, the veteran's own family background characteristics and childhood experiences contributed to early acting-out behaviors; these experiences were influential in terms of his subsequent exposure to high levels of combat (study 2, especially). Of course, there is the link between trauma exposure (combat

Exhibit 2. Variables

Variable	Description of Measure
Veteran's Family-of-Origin Characteristics and Childhood Experiences	
1. Relationship with mother	6-item measure of closeness of primary mother figure (e.g., time spent together, ability to confide in parent, quality of relationship)
2. Relationship with father	6-item measure of closeness of primary father figure
3. Family dysfunction	
(a) Family turmoil	9-item measure of veteran's disruptive home environment (e.g., serious illness, problem drinking, or substance abuse among family members)
(b) Severe punishment	2-item index of veteran's physical abuse as a child
(c) Interparental violence	Single-item inquiry about parents hitting one another
(d) Inventory of traumatic events	5-item measure of veteran's traumagenic or early life-threatening experiences
Veteran's Childhood Antisocial Behavior	
4. Childhood antisocial behavior	17-item measure of veteran's early behavioral problems (e.g., excessive fighting, school truancy, substance abuse), per Diagnostic Interview Schedule (Robins et al., 1981)
Veteran's Exposure to War-Zone Stressors	
5. Combat	36-item measure of self-reported exposure to circumstances or events considered stereotypical warfare experiences (e.g., firing a gun, seeing wounded or dead bodies)
6. Perceived threat	9-item measure of appraisals of how harmful war-zone events were to personal safety (e.g., fear of bodily injury, judgment of danger)
Veteran's Current Mental Status	
7. PTSD	35-item Mississippi Scale for Combat-Related PTSD (Keane, Caddell, and Taylor, 1988); assesses the core reexperiencing, avoidance, numbing, and hyperarousal symptoms of PTSD, plus associated features of depression, guilt, and suicidality
8. Alcohol abuse	
(a) Drinking frequency	3-item index of how often veteran consumed beer, wine, or liquor
(b) Drinking quantity	3-item index of how much beer, wine, or liquor was consumed on a typical drinking occasion
(c) Abuse scale	10-item measure reflecting problem drinking behaviors (e.g., job troubles due to alcohol, family objections to drinking, incidents of drunk driving), per Diagnostic Interview Schedule (Robins et al., 1981)
(d) Dependence scale	13-item measure of very serious drinking behavior (e.g., binges, early morning drinking, blackouts), per Diagnostic Interview Schedule (Robins et al., 1981)
Marital/Family Functioning (measured from both the veteran and partner perspective)	
9. Marital adjustment	15-item measure assessing general satisfaction with the marital relationship (e.g., marital happiness, companionship, and compatibility)
10. Family adaptability	11-item measure of flexibility of family roles, responsibilities, and operating principles, per Family Adaptability and Cohesion Evaluation Scales (FACES) II (Olson, Bell, and Portner, 1978)
11. Family cohesion	13-item measure of closeness and affiliation among family members; taken from FACES II (Olson, Bell, and Portner, 1978)
Veteran-to-Partner Violence	
12. Veteran-to-partner violence	8-item physical violence subscale per Conflict Tactics Scales (Straus, 1979)
Partner's Psychological Distress	
13. Demoralization	27-item measure of depression, dread, anxiety, hopelessness, and poor self-esteem, per PERI (Dohrenwend, 1982)
14. General well-being	2-item index assessing sense of personal well-being (reverse-scored)
15. Social isolation	4-item measure of social isolation (e.g., lack of close friends, relatives, and confidants)
Child Behavior Problems	
16. Internalizing	internalizing score on the Child Behavior Checklist (Achenbach, 1978, 1991)
17. Externalizing	externalizing score on the Child Behavior Checklist (Achenbach, 1978, 1991)

Exhibit 3. Simplified Representation of Findings



Notes: *The latent variable labeled *relationship with father* was not retained in the final models produced in this project because it was not uniquely related to other variables. Although not depicted in this simplified representation, study 3 of the project demonstrated that the two latent variables within the veteran's mental status category (PTSD and alcohol abuse) were jointly implicated in the prediction of violence; that is, they operated synergistically to increase the incidence of veteran-to-partner violence. Important associations are noted by the codes (e.g., FD > CAB) on each major pathway line, with the associated sign or direction of the association recorded as positive (+) or negative (-).

**ALC = alcohol abuse; CAB = childhood antisocial behavior; CBP = child behavior problems; COM = combat; FD = family dysfunction; M/F-P = marital/family functioning, partner's perspective; M/F-VET = marital/family functioning, veteran's perspective; PPD = partner's psychological distress; PT = perceived threat; PTSD = posttraumatic stress disorder; RM = relationship with mother; VIOL = violence.

and threat in the war zone) and postwar PTSD and alcohol abuse. The synergistic effects of these two latter variables on violence and partner psychological distress are especially tragic (study 3), and the chain extends to negative child behavior in general (study 1) and aggressive, delinquent, and other externalizing behaviors in particular (study 4).

Implications for Practitioners

The pattern of associations among the veteran's family-of-origin dysfunction, childhood antisocial behavior, combat exposure, and perceived threat in the war zone were particularly noteworthy, especially in light of a revictimization interpretation. This network of relationships suggests that early distress and troublesome experiences in the family of origin may lead to the propensity for risky, destructive, and perhaps illegal activities, which then place the individual in

jeopardy for exposure to additional serious life stressors in late adolescence and early adulthood. In the context of this study, these later stressors are war-zone-related combat and the accompanying fear of bodily harm or death, and they have been discussed previously as a selection bias (see King and King, 1991), drawing the more vulnerable members of society into harm's way. Moreover, King and colleagues (1996) noted that male soldiers in Vietnam who reported earlier childhood behavior problems were more likely to have encountered exposure to combat than those who did not have a history of such antisocial behavior, a likely reflection of the selection bias within the military that places those with more limited skills and abilities into combat-related positions. These findings are consistent with other trauma contexts, including rape (e.g., Kilpatrick et al., 1998), wherein the individual's early exposure seems to signify increased risk for later victimization.

Extrapolating these results to persons in distressed childhood environments within chaotic communities may point to a need for enhanced anti-risk-taking training for youth, especially those with documented exposure to traumatic events. Such training might emphasize personal safety education to include the avoidance of potentially dangerous environments, compensatory behaviors to quell sensation-seeking, and alternatives to violent responses to threatening stimuli. The goal would be to break the cycle of vulnerability.

The associations among early adulthood trauma (combat exposure and perceived threat), PTSD symptomatology, and veteran-to-partner violence are also interesting (see exhibit 3). First, there are the expected positive relationships between PTSD and violence and between perceived threat and violence: Those who exhibit more symptomatology or who manifested more fear in the war zone tended to be more violent toward their partners. Yet the direct path between combat exposure and veteran-to-partner violence carries a negative sign, such that those exposed to high levels of combat perpetrated less violence on their partners. This finding may appear counterintuitive. Indeed, consideration of the negligible bivariate association between combat and violence suggests a suppressor effect (Cohen and Cohen, 1983). On further reflection, however, it may impart a message of hope. That is, by controlling for, taking into account, or removing the psychopathological consequences of combat (threat and PTSD), at least some who experience traumatic events may be less inclined to perpetrate violence on their partners.

PTSD is a critical gatekeeper variable through which various factors in the veteran's background make their impact on the family. Indeed, PTSD symptomatology appears to have a pervasive influence on other variables. In addition to positive paths to alcohol abuse, veteran-to-partner violence, and then to partner's psychological distress, its association with the veteran's perspective on marital and family functioning was strong and negative: the greater the level of PTSD symptoms, the less positively the veteran viewed his family situation. PTSD appeared to function as predicted, serving as a pivotal intermediary variable leading to violent behaviors and then to partner and child distress.

Even more intriguing were the findings involving PTSD when it was disaggregated into its component symptom categories and the focus became the emotional numbing and hyperarousal features of the condition (study 3). Examining PTSD in this manner offered insight into the mechanisms by which it may influence different aspects of the marriage and family. As hypothesized, emotional numbing was particularly salient in its association with the veteran's

perspective on marital and family functioning, suggesting that this aspect of stress symptomatology inhibits positive interactions, interpersonal satisfaction, and feelings of warmth and intimacy with the veteran's partner and children. The chain of associations extends through the partner's perspective on marital and family functioning, then to the partner's psychological distress, and subsequently to child behavior problems (exhibit 3).

Also, as hypothesized, hyperarousal was the feature of PTSD (when the condition was disaggregated) that appeared most critical to reports of violence in the family. This conclusion is qualified on the basis of a significant interaction effect between hyperarousal and alcohol abuse. Thus, as proposed, alcohol abuse seemed to be a key exacerbating factor, and the effect of hyperarousal was stronger in the presence of higher levels of alcohol consumption. PTSD symptomatology, in and of itself, is harmful and places the partner at risk, but when coupled with alcohol, male PTSD victims become more likely to batter their partners. Interventions in domestic violence cases should recognize that the veteran's symptoms of PTSD and comorbid substance abuse might be appropriate targets for treatment.

Two final observations deserve mention. First, in the models tested in this project, the partner's (mother's) psychological distress was strongly associated with the child's behavior problems. In fact, this was the sole path that linked all of the other variables to the offspring's behavior. This finding points to the importance of the mother's well-being, or lack thereof, in accounting for the well-being, or lack thereof, of her child. Additionally, the veteran's relationship with his mother emerged as a possible influence on two important variables in his family of procreation: a relatively weak relationship with veteran-to-partner violence and a somewhat stronger relationship with the veteran's perspective on his own marital and family functioning. This latter association suggested that a higher quality relationship with his mother made it more likely that a veteran would be less violent with his wife. Therefore, it appears that the mother plays a substantial role in safeguarding the mental health of her child in the midst of highly stressful life events and negative family experiences, and perhaps the effect carries forward into the next generation. This interpretation reinforces advocacy for shelters and other programs that provide support services to battered women and their children.

If generalized very cautiously, these findings may not be limited to war veterans and their families. The resulting paradigm could be applicable to families in economically depressed neighborhoods in our Nation's larger cities, where, for example, men may be exposed to intensely stressful events in adolescence or early adulthood. If so, these findings have implications for ongoing community and domestic violence. Also, other occupational groups exposed to alternating periods of routine boredom and high stress, like law enforcement officers, may mirror this sample to some degree. Interestingly, these implications may be doubly meaningful because a significant portion of police, security, emergency, and other public safety occupational groups are military veterans. Findings might very well inform targeted employee assistance programs.

The researchers recommend a strong alliance between the criminal justice community and the mental health services community. Such an alliance should recognize the importance of trauma exposure and subsequent PTSD symptomatology and associated alcohol abuse in accounting for the perpetration of violence against women. The results clearly suggest that current batterer

treatment programs can be designed to consider the findings of this study. In this regard, experts in PTSD and comorbid substance abuse may be able to offer training and consultation services that are explicitly targeted at the recognition of classic signs and symptoms among perpetrators and appropriate avenues for effective intervention and treatment.

Implications for Future Research

The research reported here concerns families of survivors of one type of traumatic experience: exposure to the stressors of a war zone. Future research might test components of this study's conceptual framework with other trauma survivors. Moreover, the model prescribes PTSD and comorbid alcohol abuse as primary mediators between veteran characteristics and experiences and outcomes within the family context. Other psychological consequences of exposure to trauma, such as depression, are worthy of future inquiry. Finally, and perhaps most important, the design of this study was retrospective and cross-sectional, leading to necessary ambiguities regarding the direction of causality among variables (King and King, 1991). Future research should apply aspects of this conceptual framework to more rigorous longitudinal designs.

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Domestic Violence and Deviant Behavior

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Theoretical Overview

Physical violence against women by their male intimate partners is a public health problem of enormous importance. From infrequent slaps, pushes, grabs, or shoves to frequent and severe life-threatening assaults, intimate violence in its various forms has significant individual and social consequences. Fear, depression, intense anxiety, and social isolation are common among battered women, and the collateral damage that follows from domestic violence extends beyond the individual suffering of victims (Holtzworth-Munroe et al., 1998; National Research Council, 1996; Stephens, McDonald, and Jouriles, 2000). For example, children of battered women are at high risk for being victimized (Appel and Holden, 1998), suffering significant emotional and behavioral maladjustment (Holtzworth-Munroe et al., 1998; Jouriles et al., 2001; Ware et al., 2001), and perpetuating violence in their interpersonal relationships (O'Leary, 1988).

At the community level, the burden occasioned by violence against women includes lost work time and wages, reduced productivity, and costs associated with the provision of health care and social services for victims and their families (National Research Council, 1996). In short, the individual and social consequences of intimate partner violence are great. A better understanding of the development of domestic violence and its causes and correlates should be a national scientific and public policy priority.

Theories of the development of domestic violence differ in how they conceive of the relation between domestic violence and "other forms of deviance." (Such deviancy encompasses behavior other than domestic violence, such as theft, fraud, violence toward nonfamily members, and illicit substance use that is criminal, antisocial, or otherwise in violation of the prevailing community norms.) Some theorists and researchers have speculated that men's domestic violence is but one expression of a general tendency to engage in deviant behavior (see Simons et al., 1995). Rooted in general theories of crime (Gottfredson and Hirschi, 1990), this view maintains that domestic violence, like other criminal or antisocial behavior, might best be explained by theories that invoke general explanatory principles such as low self-control or antisocial behavior traits. Such theories suggest that domestic violence and other forms of deviant behavior (though not necessarily any *specific* form of deviant behavior) should be associated. Such an association would be indicated by a greater prevalence of deviant behavior among men who engage in domestic violence compared with those who do not.

This theoretical approach contrasts with the argument that domestic violence is a unique form of deviance, distinct in cause and correlates from other forms of deviance, and thus requires its own special theories for adequate explanation. According to proponents of this view, domestically violent men are expected to differ from other men and from one another in a variety of important ways (Gordon, 2000; Holtzworth-Munroe et al., 1997). However, a tendency to engage in criminal, antisocial, or other deviant behavior is not expected to be one of the ways that *most* domestically violent men differ from nonviolent men. That is, men who engage in the most common forms of domestic violence (relatively infrequent slaps, pushes, grabs, and shoves) are expected to be indistinguishable from other men in terms of other deviant behavior (Holtzworth-Munroe et al., 2000; Gordon, 2000). Those men who *do* engage in frequent and severe domestic violence (who are often found in clinic or court-referred samples) also engage in high levels of

other deviant behavior. But these men constitute only a tiny proportion of all domestically violent men and are thought to be very different from men who engage in the most common forms of domestic violence (those men often found in representative community samples). Thus, the high levels of other deviant behavior found among the subset of the most violent abusers are not expected to characterize domestically violent men in general. In short, this theoretical approach suggests that the prevalence of deviant behavior in a representative community sample of domestically violent men should not differ from the prevalence of deviant behavior among men who are not domestically violent.

Exploring the General Deviance Explanation

This research is the first step in an investigation to determine whether domestic violence, as it most commonly occurs in community samples, and other forms of deviance are related in a manner consistent with a general deviance explanation of domestic violence. Although the findings of much previous research appear consistent with a general deviance explanation and suggest that further study is warranted, existing research fails to address the issue directly for several reasons: The nature of the samples selected, the range of deviant behaviors investigated, and other methodological idiosyncrasies create interpretive ambiguity or limit generalization. It is unclear, for example, whether the co-occurrence of domestic violence and other specific forms of deviant behavior (e.g., violence toward strangers) found in clinic or court-referred samples (see Gondolf, 1988; Shields, McCall, and Hanneke, 1988) is likely to be true for community samples as well. It is also unclear whether the relations obtained for specific deviant behaviors are likely to reflect the relation between domestic violence and deviant behavior in general. The few studies that report an association between domestic violence and other forms of deviant behavior in community samples correlate this association in a way that precludes determining the comparative *prevalence* of deviant behavior among men who do or do not engage in domestic violence (see Simons et al., 1995; Magdol et al., 1998).

The present research defines deviance broadly and examines the co-occurrence of domestic violence and other forms of deviance, instead of analyzing the correlation between them. The authors consider the occurrence of one or more of a wide variety of deviant acts rather than one or two specific types, using a community sample of young men rather than a clinic or court-referred sample, so that “typical” rather than extreme domestic violence can be investigated. A longitudinal component is included that accounts for past deviant behavior as well as deviant behavior that is concurrent with the domestic violence. Support for a general deviance explanation of domestic violence as it occurs in the community would increase if the following hypotheses were confirmed:

- ◆ Domestic violence and other forms of deviant behavior are associated concurrently, as indicated by a higher concurrent prevalence rate of deviant behavior among men who engage in domestic violence compared with men who do not.
- ◆ Domestic violence and other forms of deviant behavior are associated prospectively, as indicated by differing past prevalence rates of deviant behavior. That is, men who have

engaged in domestic violence would be more likely to have engaged in deviant behavior in the past than men who have not.

Methods

Data for this research was taken from the National Youth Survey (NYS) and consists of a national probability sample of continental U.S. households that had a youth between the ages of 11 and 17 as of December 1976. This dataset has been widely researched, and the sample characteristics and sampling strategy are presented in other reports (see Huizinga, 1978). This study concentrates on just two of the multiple waves of data that were collected: Wave V (1980) when the participants were between 15 and 21, and Wave VI (1983) when the participants were between 18 and 24. More specifically, it focuses on Wave VI men who were married or cohabiting with a partner of the opposite sex and who completed a measure of domestic violence ($n = 176$).

Measures

Domestic Violence. Men's violence toward their female partners was measured using the eight physical aggression items from the Straus Conflict Tactics Scales (CTS) (Straus, 1979). Men who had engaged in one or more of these behaviors in the year prior to assessment were classified as domestically violent; those who refrained from such behavior were classified as not domestically violent.

Deviant Behavior. Men's general deviance (defined as acts other than domestic violence) was measured by participants' responses to 44 items at Wave VI and 40 items at Wave V that describe illegal or socially proscribed behavior. Items at both waves sampled a range of deviant behavior, from relatively minor (e.g., stole something worth \$5 or less) to more serious deviant acts (e.g., set fire to a building, car, or other property). Most items, however, fell between these extremes (e.g., snatched someone's purse or wallet or picked someone's pocket; stole money, goods, or property from employer). Several of the deviance items differed at the two waves to reflect the age differences of the groups, but most were the same. Illicit substance use was included in this measure of deviance at both waves. Questions about the use of specific substances (e.g., marijuana, cocaine, and heroin) were combined into a single item and scored present (the use of at least one illicit substance) or absent (no report of illicit substance use). Participants were classified according to the number of different types of deviant acts they had engaged in (i.e., none, one or more, two or more, three or more). Deviance data were missing for 13 men at Wave V, reducing the sample size for analyses using Wave V to 163.

Findings

Domestic Violence

Of the 176 married or cohabiting men in the Wave VI sample, 66 (37.5 percent) reported engaging in one or more acts of physical violence against a female partner (as measured by the CTS) in the year prior to assessment. The 1-year prevalence rate for domestic violence (37.5 percent) is comparable to rates obtained from other large samples of young couples (see Magdol

et al., 1997; O’Leary et al., 1989). As expected, the levels of domestic violence in this sample were relatively low, with the domestically violent men reporting, on average, three to four violent acts ($M = 3.7, SD = 3.67$) in the year prior to assessment. This is comparable to the frequency of husbands’ violent acts in other nationally representative community samples (see Straus, 1990). The highest number of acts reported by any participant was 18.

These numbers contrast with the levels of violence typical of clinic, court-referred, or shelter samples. Women in shelter samples, for example, typically report experiencing more than 60 acts of husband-to-wife violence in a year, with the majority reporting severe violence such as repeated beatings and threats with knives or guns (Jouriles et al., 1998; Jouriles et al., 2000).

Deviant Behavior

To measure the co-occurrence of domestic violence with other forms of deviant behavior, the authors created a dichotomous variable to indicate whether the men reported engaging in one or more deviant acts in the year prior to assessment. At Wave VI, 66 percent of the total sample reported engaging in one or more deviant acts; at Wave V, conducted 3 years prior to Wave VI, 75 percent of the total sample reported engaging in one or more deviant acts.

Given the high rates of deviant behavior that were reported using this arguably liberal operationalization of deviance, two additional variables were created: one to reflect whether or not the men reported engaging in two or more deviant acts in the past year; the other to reflect whether or not the men reported engaging in three or more deviant acts in the past year. Sixty percent of the Wave V sample and 54 percent of the Wave VI sample reported two or more acts. Three or more acts were reported by 48 percent of the Wave V sample and 38 percent of the Wave VI sample. The authors examined the co-occurrence of domestic violence and other acts of deviance using each of these increasingly conservative operationalizations of deviance.

Exhibit 1. Co-occurrence of Domestic Violence and Concurrent Deviant Behavior (Wave VI)

Conceptualization of Deviant Behavior	Number Engaging in Deviant Acts (<i>n</i> = 176)	Prevalence of Deviant Behavior		χ^2
		Domestically Violent (<i>n</i> = 66)	Not Domestically Violent (<i>n</i> = 110)	
> 1 act	116 (66%)	76%	60%	4.56*
> 2 acts	95 (54%)	65%	47%	5.31*
> 3 acts	66 (38%)	53%	28%	10.87*

* $p < .05$

The co-occurrence of domestic violence with current deviant behavior (based on the Wave VI sample) is presented in exhibit 1. Seventy-six percent of domestically violent men reported engaging in one or more concurrent deviant acts. Chi-square analyses indicate that a greater proportion of domestically violent men engaged in other deviant behavior than men who were not domestically violent, $\chi^2(1, n = 176) = 4.56, p < .05, \phi = .16$. This was also true for the more conservative definitions of deviance: two or more acts, $\chi^2(1, n = 176) = 5.31, p < .01, \phi = .17$; and three or more acts, $\chi^2(1, n = 176) = 10.87, p < .01, \phi = .25$.

The co-occurrence of domestic violence with past deviant behavior (based on the Wave V sample) is presented in exhibit 2. Eighty-nine percent of domestically violent men reported engaging in one or more deviant acts at the Wave V assessment. Chi-square analyses indicated that domestic violence at Wave VI was predicted by deviant behavior at Wave V, $\chi^2 (1, n = 163) = 10.21, p < .01, \phi = .25$. This was also true for the more conservative definitions of deviance: two or more acts, $\chi^2 (1, n = 163) = 8.95, p < .01, \phi = .23$; and three or more acts, $\chi^2 (1, n = 163) = 12.50, p < .01, \phi = .28$.

Exhibit 2. Co-occurrence of Domestic Violence and Past Deviant Behavior (Wave V)

Conceptualization of Deviant Behavior	Number Engaging in Deviant Acts (<i>n</i> = 163)	Prevalence of Deviant Behavior		χ^2
		Domestically Violent (<i>n</i> = 62)	Not Domestically Violent (<i>n</i> = 101)	
> 1 act	122 (75%)	89%	66%	10.21*
> 2 acts	97 (60%)	74%	50%	8.95*
> 3 acts	79 (48%)	66%	38%	12.50*

* *p* < .05

Discussion

This research investigated whether domestic violence as it typically occurs in the community is associated with other acts of deviance in a way that is consistent with a general deviance explanation of domestic violence. Results indicate that most of the men who had engaged in domestic violence (76 percent) also reported engaging in one or more other deviant acts concurrently. An even larger proportion (89 percent) reported a history of deviant behavior 3 years earlier. Although the rates of deviant behavior among men who were not domestically violent were also high (60 percent and 66 percent, respectively), the rates for men who had engaged in domestic violence were significantly higher.

The high base rates (concurrent and past) reported for deviant behavior across the entire sample indicate that deviance is rather common during adolescence and young adulthood. To determine whether the relationship between domestic violence and other deviant behavior would hold under more stringent definitions of deviance, the authors reanalyzed the data with increasingly conservative operationalizations of deviance: two or more deviant acts in the past year, and three or more deviant acts in the past year. The pattern of results, however, did not change. Domestic violence and other deviant behavior were associated both concurrently and prospectively, regardless of the operationalization of deviance used.

Implications for Researchers

These findings are consistent with a general deviance explanation of domestic violence and suggest a potentially fruitful area of future study. These preliminary but provocative results underscore the need for further investigation of potential developmental antecedents of the most

common forms of domestic violence. The authors intend to follow up these preliminary analyses to clarify the relation between domestic violence and other acts of deviance.

Implications for Practitioners

The nature of the relation between domestic violence and other acts of deviance, and the developmental model of domestic violence this relation may suggest, has important policy and practice implications. If a general tendency to engage in deviant behavior accounts for a significant proportion of domestic violence as it typically occurs in the community, interventions designed to prevent or reduce deviant behavior in general may similarly prevent or reduce domestic violence. However, if the general deviance explanation does *not* account for a significant proportion of domestic violence as it typically occurs in the community, interventions designed to address other distinguishing characteristics of men who engage in this form of domestic violence—perhaps with greater attention to the unique context of intimate partner violence—may be more effective.

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Secondary Data Analysis on the Etiology, Course, and Consequences of Intimate Partner Violence Against Extremely Poor Women

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Although much research has been done over the past 20 years on violence by intimates, research on the impact of partner violence on women who are poor has been limited. Until the mid-1990s, there were few inquiries into the prevalence and severity of intimate violence in community-based samples of low-income women (see Browne and Bassuk, 1997, for review). Although physical abuse of women and children is found at all socioeconomic levels, studies began to focus on poverty as a serious risk factor for interpersonal violence (Wolfner and Gelles, 1993; Hotelling and Sugarman, 1990; Kaplan, 1997). Most recently, and largely in response to Federal welfare policy, a growing body of literature has consistently documented high rates of intimate partner violence among impoverished women on welfare (Browne, Salomon, and Bassuk, 1999; Allard et al., 1997; Browne and Bassuk, 1997; Lloyd and Taluc, 1997; Curcio, 1997).

The current study, conducted by researchers at the National Center on Family Homelessness (formerly The Better Homes Fund), found that nearly two-thirds of impoverished women, most on public assistance, reported at least one episode of severe partner violence. Rates of childhood physical abuse and sexual molestation were also startlingly high, at 63 percent and 42 percent, respectively. When all family/intimate violence was combined across the lifespan, more than 8 in 10 low-income single mothers were found to have experienced some form of severe violence (see Bassuk et al., 1996 for overview).

With prevalence rates at this magnitude, a better understanding of impoverished women's risk for partner violence, its course over time, and its impact on work and substance abuse is critical. The limited research on the impact of trauma on participation of women in the labor force and their economic well-being is a serious gap in knowledge, especially in view of welfare reform's emphasis on putting poor women to work (Crowell and Burgess, 1996; Salomon, Bassuk, Brooks, 1996). Victimization, poverty, and the use of addictive substances among poor mothers may also have profound effects on the children in their care. Study findings provide important insight for policymakers and practitioners in designing strategies for protecting women and children at greatest risk of partner abuse and creating preventive and responsive interventions to help them escape poverty.

Study Purposes

This secondary data analysis project seeks to increase understanding of risk markers for adult partner violence, the effect of partner violence on the use of addictive substances, and the effect of partner violence on the capacity to maintain work among impoverished single mothers. Researchers have completed three papers addressing each of the three project aims (Bassuk, Dawson, and Huntington, submitted; Salomon, Bassuk, and Huntington, 2002; Browne, Salomon, and Bassuk, 1999), which include:

- ◆ **Aim 1.** Describe patterns of partner violence in the lives of poor single mothers and delineate childhood and adult risk markers for partner violence. Researchers hypothesized that childhood molestation and inadequate nonprofessional support in adulthood would be associated with increased risk of partner violence.
- ◆ **Aim 2.** Evaluate the relationship between partner violence and substance abuse among poor mothers, exploring the joint and independent contribution of childhood physical and sexual

abuse, posttraumatic stress disorder (PTSD), and partners' substance abuse. Researchers hypothesized that women who experienced intimate partner violence would have increased odds of subsequently abusing alcohol or illicit drugs.

- ◆ **Aim 3.** Evaluate the relationship between partner violence and women's capacity to maintain employment over time. Researchers hypothesized that experiencing intimate partner violence would decrease a woman's capacity to maintain employment over time.

Research Design and Methods

Description of the Data Set

Data for these analyses are drawn from the Worcester Family Research Project (WFRP), a comprehensive inquiry into the lives of 220 homeless and 216 low-income housed (never homeless) single mothers living in Worcester, Massachusetts (Bassuk et al., 1996). Funded by the National Institute of Mental Health and the Maternal and Child Health Bureau of the U.S. Department of Health and Human Services, this longitudinal study interviewed women at three points in time—at baseline and at approximately 12 months and 24 months. Baseline interviews covered a broad range of domains and lasted 10 to 12 hours over multiple sittings. Followup interviews took about 2 hours. Detailed information was available on interpersonal violence in the lives of extremely poor women across their lifespan.

Respondents

Using a case-control design, homeless mothers were randomly enrolled from Worcester's emergency and transitional shelters and its two welfare motels (3.2 percent of the sample) between August 1992 and July 1995. All homeless women who had been in a shelter for at least 7 days and were pregnant or had custody of at least one dependent child younger than 17 were asked to participate in the study. The comparison group of low-income housed mothers was randomly selected from women who visited Worcester's Department of Public Welfare. To be eligible, comparison mothers had to have no history of homelessness; be pregnant or have custody of at least one dependent child younger than 17; and be currently receiving public assistance. Of the 436 women in the baseline study, 356 were reinterviewed between May 1994 and November 1996 (followup 1), and 327 were again reinterviewed between September 1995 and August 1997 (followup 2).

At baseline, mothers were on average 27 years old; 37 percent were Hispanic (primarily Puerto Rican), 39 percent were non-Hispanic white, and 17 percent were African-American. The mean number of children was 2.2; two-thirds of women had never been married. The mean annual income for homeless mothers was \$7,910; housed mothers had an annual income of \$9,988.

Analysis

For this project, each of the three reports focused on a slightly different subset of women and used various analytic methods relevant to the questions at hand. In general, researchers first explored bivariate relationships to identify crude associations between variables and then used logistic regression modeling techniques to clarify the multivariate relationship between major predictors and outcomes. Researchers also took advantage of the longitudinal design to establish

temporal ordering and ensure that predictive variables preceded outcomes of interest. Covariates for housing status at baseline and ethnicity were included in all models to control for important design and background factors.

Findings

The first report describes patterns of partner violence longitudinally and uses multivariate analyses to delineate *childhood and adult risk markers for partner violence among poor and homeless women* (Bassuk, Dawson, and Huntington, submitted). Researchers found that impoverished women who experienced childhood sexual abuse were significantly more likely to experience intimate partner violence as adults. Child sexual abuse remained the only significant childhood risk marker in multivariate modeling. Two aspects of women's social supports in adulthood were significantly associated with increased risk of partner violence in the multivariate model. Women who experienced no partner violence had significantly higher levels of emotional support from nonprofessional network members and significantly less conflict in their nonprofessional network than women who reported partner violence. In addition, women with lower self-esteem were more likely to be victimized by abusive partners. Women were at greatest risk for partner violence (nearly five times the odds) when their partners had substance abuse problems, however. A partner's poor work history also predicted increased risk for partner violence, but at a less pronounced rate.

Study findings also indicate that although lifetime prevalence of intimate partner violence is high among poor women, most experiences were episodic and limited over time. Following women over four timeframes (i.e., age 17 until 1 year prior to the baseline interview, the year prior to the baseline interview, the year prior to the second interview, and the year prior to the third interview), the study found that less than 2 percent of women reported intimate partner violence across all four timeframes. Among the large group of women whose violence had stopped at some time before the last timeframe, about 28 percent returned to violent relationships.

The second set of analyses focused on the *relationship between intimate partner violence and the subsequent use of addictive substances* by poor and homeless single mothers (Salomon, Bassuk, and Huntington, 2002). It builds on a literature that has documented strong associations between interpersonal violence and substance abuse, although it neither fully clarified causal relationships nor tested more nuanced explanatory theories. The study addressed two major questions: 1) Do poor women who experience intimate partner violence have increased odds of *subsequently* abusing alcohol or illicit drugs? And 2) What role, if any, do childhood victimization, adult PTSD, and partners' substance abuse have in the relationship between adult partner violence and subsequent substance abuse in poor women?

The study found that intimate partner violence is predictive of subsequent drug, but not alcohol, abuse in poor women. Controlling for all factors of interest (including age, ethnicity, education, marital status, homelessness, history of child sexual molestation, PTSD, partner's alcohol/drug abuse, and respondent's baseline drug use), women with a history of adult partner violence had nearly three times the odds of using illegal drugs during the subsequent study years than did women who had not experienced partner violence as adults. Reverse causation (i.e., that women's substance abuse increases the likelihood that they will become involved in physically

violent relationships) did not account for the strong association. Adjusting for past drug abuse did not eliminate the observed association and it was much stronger among women with no history of drug abuse at baseline. The study found a striking interaction between childhood sexual molestation and PTSD (i.e., the effect of each on subsequent drug use depended strongly on the presence of the other), but no interaction between partner violence and PTSD. Finally, women whose partners were substance abusers were twice as likely to subsequently use illicit drugs.

The third paper explored the *impact of recent partner violence on poor women's capacity to maintain work over time* (Browne, Salomon, and Bassuk, 1999). Prior empirical studies focused either on poor women's desire to work or on employment history. Most found that women victims of partner violence were no less likely to have worked or to express a desire to work (Brooks and Buckner, 1996; Lloyd and Taluc, 1997). However, past research did not define work in terms of duration of work experience or hours of work per week. The prominent question for these analyses was whether extremely poor women at recent risk of partner violence are less likely to maintain work over time than are extremely poor women without such experiences. The study found that women who had experienced recent intimate partner violence had less than one-third the odds of maintaining work over time (i.e., for at least 30 hours per week for 6 months or more). Recent experiences with partner violence (in the past 12 months), rather than partner violence prior to baseline, predicted reduced capacity to maintain work during the subsequent year. Although alcohol/drug problems did not independently predict limited capacity to maintain work, mental health variables remained negatively associated with the capacity to maintain work. Job training, job placement services, and past employment experience were highly predictive of enhanced ability to maintain work over time. Controlling for multiple factors, a woman was about seven times more likely to be working if she received job training and four times more likely to be working if she received job placement services. Histories of childhood physical and sexual abuse were significantly associated with partner violence, but did not differentiate women who held jobs over time from those who did not, nor, in the final modeling, were they independently predictive of limited capacity to work.

Implications for Researchers

The three studies outlined above suggest a number of directions for future research. In the first study, for example, the limited influence of the individual-level factors measured by WFRP suggests that future research should consider contextual factors, such as policing practices (e.g., arrest rates of the perpetrator), as well as the complex interplay of economic, social, and cultural factors, in delineating risk factors for adult partner violence. The second study suggests that there are multiple pathways from adult partner violence to poor women's substance abuse, supporting the need for further research that examines other theoretical models. Although the authors confined their analysis to PTSD, future research might explore other indicators of emotional distress that are potentially associated with both partner violence and substance abuse, such as depression, anxiety, or helplessness. Although this study looked exclusively at illicit drug use, the use and abuse of prescription drugs, especially as they relate to health and mental health consequences, including later illicit drug abuse, should also be examined. Finally, the third study suggests the need for further analyses of the mechanisms by which recent partner violence affects women's ability to work and a better understanding of the dynamics that limit women's

stay in jobs over time. Also, future research needs to include the characteristics of children in the household in analyses of mothers' work patterns and the circumstances that affect them.

Implications for Practitioners

As the results of this research using the WFRP data set indicate, women and children who live in poverty are at extremely high risk of physical and sexual victimization by intimates. For thousands of women, a lack of economic resources has devastating consequences for their ability to alter their environments or to live in safety, particularly if they have dependent children. For the subset of women addressed in these reports, issues related to partner violence may make it especially difficult to escape poverty or make the transition to independent employment as mandated by current welfare reform law.

As these reports demonstrate, women who are involved with abusive partners are at significantly increased risk for subsequent illicit drug use and have limited capacity to maintain employment over time. Both these factors have a profound effect on women's ability to be financially self-sufficient, escape violence, and live in safety. Although substance abuse did not independently predict incapacity to maintain employment, the authors found that when controlling for potentially confounding variables, women who experienced recent partner violence were far less likely to hold jobs over time. The significant effects of partner violence on work emerged only when the level and duration of work was defined more specifically. For women who are unable to hold jobs over time, escaping poverty through work becomes even more challenging. Low-wage entry-level employment can be transformed into work that produces true economic independence only when workers are able to invest enough time in the workplace to secure promotions or to move progressively to new and higher paying jobs.

In addition to the contribution of abuse by partners to women's illicit drug use, the current report indicates that substance abuse by partners independently contributes to women's later drug and alcohol abuse. Understanding these joint and independent contributions to women's substance abuse is an important step in structuring treatment and policies that respond to women's real needs. Drug involvement of young women is a major contributor to their increased incarceration over the past 15 years and has other devastating consequences for families and society (Beck and Gilliard, 1995). Health and mental health risks, economic deprivation, loss of child custody, mounting stigma—all have been identified as long- and short-term consequences of drug abuse for women (Maher, 1992, Brown et al., 1994; David and Lucile Packard Foundation, 1999; Blume, 1992; Finkelstein et al., 1998). Practitioners report that use of illegal drugs can negatively affect women's sense of self and their ability to take charge of their lives. Drug involvement may thus make it more difficult for women to leave abusive partners due to financial dependence and to protect the children in their care (Finkelstein, 1994; Finkelstein, et al., 1998). Furthermore, understanding the impact of partner substance abuse on a woman's use of illegal substances and on her risk for partner abuse, as well as the risk in a partner's poor job history, all underscore the importance of working with the offending partner to prevent further violence and drug abuse.

As we also learn from these reports, children who grow up in abusive, threatening, and unpredictable environments are less able to protect themselves in adulthood from abusive men.

Specifically, sexual molestation during childhood was most highly associated with the likelihood of adult intimate partner violence. In addition, women with histories of childhood sexual molestation and diagnoses of PTSD are far more likely to abuse drugs. This report's finding that survivors of child sexual molestation are vulnerable to involvement with abusive partners and to subsequent PTSD and drug abuse suggests an important direction for programs and policies. Programs that serve drug-abusing women need to better understand the impact of trauma on health and mental health across the lifespan. Relapse and treatment may be compromised if issues related to childhood sexual molestation, its interaction with PTSD, and adult partner violence are not identified. Targeted treatment and prevention strategies that start in early childhood, including parenting programs designed for survivors of child sexual abuse, are essential.

These reports also suggest the importance of nonprofessional supports, such as family, friends, and neighbors, in protecting women from involvement with abusive partners. Enabling women to sustain work over time may provide an opportunity to develop more robust and protective support systems in the workplace and to escape poverty. The findings reported here demonstrate the positive impact of job training and placement services on women's capacity to maintain employment over time. They also point to the importance of developing job-related supports for welfare-to-work efforts that are sensitive to women's psychosocial needs, especially as they relate to mental health and violence. The episodic nature of partner violence for most of the women in this study also highlights the potential to identify safe times for interventions.

Responding to the complex relationship among childhood sexual molestation, partner violence, substance abuse, and employment is especially important today as thousands of families are forced to leave welfare rolls because of time limits. A subset of families may fall into extreme poverty as a result of the circumstances outlined here and may contribute to an increasing population of women and children at risk for further violence and its aftereffects. These complex relationships call for cross-system solutions that include health, mental health, substance abuse, battered women's services, criminal justice, and child welfare systems. Increasing demands on an already overburdened criminal justice system may risk jeopardizing the well-being of our Nation's most vulnerable families.

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**Longitudinal Patterns of Intimate Partner
Violence, Risk, Well-Being, and Employment:
Preliminary Findings**

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Although much research on intimate partner violence has been conducted over the past 25 years, still relatively little is known about how battered women's experiences of abuse and its consequences change over time, especially during and following specific community and legal interventions. The Panel on Research on Violence Against Women, established by the National Research Council in 1995, recommended that "longitudinal research should be undertaken to study the developmental trajectory of violence against women" (Crowell and Burgess, 1996, p. 90). Despite this recommendation, only a few studies have tracked battered women's experiences of intimate partner violence and its consequences over time, and fewer still have documented factors that predict patterns of reabuse.

Most longitudinal studies of victims of intimate partner violence have focused on patterns of reabuse over time. Feld and Straus's (1990) 2-year panel study represents the largest of these studies. Based on a national probability sample of married and cohabiting couples, the study found that of men who had committed three or more severe acts of domestic assault in the year prior to the first interview, about two-thirds committed additional acts during the following year. A second, smaller longitudinal study found that in a community sample of 51 intimate partner violence victims who responded to advertisements about the study (Campbell et al., 1994), 25 percent of participants reported continued abuse 2½ years later. A third longitudinal study, which focused on batterers under court-ordered treatment (Gondolf, 2000), found that 41 percent of the men committed a reassault during the 30-month followup, according to victims' reports. This represents a 7-percent increase over the 15-month assault rate. Two-thirds of first reassaults, however, occurred within the first 6 months. Finally, findings from a comprehensive longitudinal study of intimate partner violence victims recruited from a shelter in the Midwest, half of whom received volunteer advocacy services, show that median time to first reabuse was 3 months for the control group and 9 months for the advocacy group (Sullivan and Bybee, 1999; Sullivan, 2002). The probability of reabuse in the future leveled off at approximately 15 months for the advocacy group, but continued to escalate to the end of the 24-month followup period for the control group. Altogether, 3 of 4 women in the advocacy group and 9 of 10 women in the control group experienced recurrent intimate partner violence at some point across the 24 months of postintervention followup, either from the original assailant or from a new intimate partner.

These studies underscore the wide variation in patterns of repeat abuse, and they highlight the dangers of generalizing findings based on one type of sample to different populations. They also suggest the need to develop common forms of measurement, followup intervals, and definitions across studies. Although none of these longitudinal studies focused specifically on battered women's emotional well-being over time, Campbell and Soeken (1999) found, not surprisingly, that women who continued to be abused after 3½ years reported significantly higher levels of emotional distress (including depression and stress) than those who remained free of abuse. Furthermore, Sullivan, Bybee, and Allen (2002) found that women who participated in the advocacy intervention reported higher quality of life, higher social support, and fewer depressive symptoms than those in the comparison group; however, both groups reported improvements along these dimensions during the followup period. Although these findings are interesting and important, they do not provide a clear picture of how the emotional well-being of battered women shifts over time.

Furthermore, none of these studies explored the potential contribution of intimate partner violence to women's ability to sustain employment over time. Yet a review of several studies documenting the relationship between domestic violence and welfare concludes, "domestic violence presents a barrier to sustained labor market participation" (Raphael and Tolman, 1997, p. 22). For example, a recent study (Browne, Salomon, and Bassuk, 1999) involving a sample almost exclusively composed of recipients of Aid to Families with Dependent Children found that those who had experienced domestic violence during a previous 12-month period had only one-third the odds of maintaining employment for at least 30 hours a week for 6 months or more compared to those who had not experienced domestic violence during that period. However, this study was not able to examine the temporal relationship between violence and work within the 12-month period or the factors that contribute to battered women's employment difficulties.

Finally, none of these studies thoroughly explored the range of individual, interpersonal, and community factors that might contribute to violence cessation or escalation. Without a deeper understanding of the longitudinal patterns of intimate partner violence and factors that influence these patterns, it will be difficult to develop new methods for combating intimate partner violence, to determine whether specific interventions are working to reduce intimate partner violence and its consequences, or to advise women on which risk factors represent the greatest risk. The longitudinal study described in the next section attempts to address some of these gaps.

Purpose

This study was designed to deepen understanding of the experience of victims of intimate partner violence over time. Specific goals of the study are to examine 1) trajectories of intimate partner violence, including women's subjective appraisal of risk; 2) women's strategies for responding to intimate partner violence over time; and 3) potential predictors of these patterns, identified on the basis of an ecological or contextual model (Bronfenbrenner, 1986). This model situates the individual and her characteristics within her larger social context by investigating the influence of a broader set of factors on individual-level phenomena. Thus, this study goes beyond individual characteristics of the batterer or victim to identify contributors to patterns of intimate partner violence that are rooted in the larger community and the battered women's social support system. Below are preliminary data on patterns of intimate partner violence, subjective appraisal of risk, emotional well-being, and employment.

Methods

Recruitment Procedures and Sample Description

Over 7 months (June 1999 to January 2000), researchers recruited 406 women from one of three sites in a Northeastern city at the point they were seeking help for intimate violence at the hands of a current or former male partner. The first site, the Shelter ($n = 68$, 16.7 percent), is the main crisis shelter for battered women and their children in the city. Participants were recruited within the first 30 days of their shelter stays. The second site, the District Court, Civil Division ($n = 220$, 54.2 percent), offers services to domestic violence victims seeking civil protection orders. Participants were recruited at the point they were seeking an initial temporary restraining order. The third site, the District Court, Domestic Violence Criminal Docket ($n = 118$, 29.1 percent), is

a specialized court that handles all domestic violence misdemeanor cases in the city. Participants were recruited outside the courtroom following the final disposition of the case.

Written informed consent was obtained and participants completed the study questionnaire either through an interview or as a written questionnaire ($n = 294$) at the time of recruitment. Others returned the questionnaire by mail ($n = 112$) if they were willing to participate but unable to do so at the time of recruitment. The overall refusal rate was 28.6 percent.

To participate in the study, a potential participant had to be a victim of violence by a man who was a current or former intimate partner, English speaking, sober, and without significantly impaired mental status at the time of the initial interview. As part of informed consent, each potential participant was advised that a researcher would contact her by telephone every 3 months for the next year. She was asked to provide detailed contact information and to answer a series of questions about how to maximize her safety during followup phone contacts. Participants were paid \$20 for the first interview and for each successive interview, with the exception of the 12-month interview, for which they were paid \$50. At the 1-year point, 80.5 percent of the women in the sample had been retained.

African-American women predominated in the sample (81.2 percent). A large majority were currently separated from their abusive partners (81.5 percent), although most (73 percent) had been living with their partners at the time of the incident that brought them to the shelter or courts. Nevertheless, a significant proportion expected either to have ongoing contact (39.3 percent) or to continue in a relationship (17.3 percent) with their abusive partner. (Exhibit 1 presents demographic and other characteristics.) Although the women were recruited from three different communities or legal systems, many reported involvement with more than one of these communities, as is reflected in the following categories: Criminal Only ($n = 79$, 20.2 percent); Civil Only ($n = 145$, 37 percent); Criminal + Civil ($n = 100$, 25.5 percent); and At Least Shelter (including either civil or criminal, or neither, or both) ($n = 68$, 17.3 percent).

More than one-third of the participants (39.4 percent) reported prior experience with physical violence by another intimate partner. In addition, 53.1 percent of women in the sample reported some form of childhood physical or sexual abuse.

Measures

Intimate partner violence was measured using a modified version of the Revised Conflict Tactics Scales (CTS-2) (Straus et al., 1995). The items in each subscale ask if, in the past year, the participant has experienced specific acts of sexual abuse and physical abuse or specific types of injuries from the abuse. For ease and speed of administration as well as consistency with the rest of the protocol, participants were given a yes/no response choice rather than asked about frequency. Also, the seven sexual abuse items were consolidated into four. Stalking items were included from the National Violence Against Women Survey (Tjaden and Thoennes, 1998). Subjective appraisal of risk was measured using a new 14-item instrument developed for this study. Mean scores reflect overall risk and range from 1 to 5. Items assessed violent, nonviolent, and child-related risks. Emotional well-being was measured using the quality of life measure adapted from Sullivan (Sullivan and Bybee, 1999), the Post Traumatic Stress Disorder (PTSD) Checklist (Blake et al., 1995; Blanchard et al., 1996), and the CES-D (Center for Epidemiological Studies—Depression) scale for depression (Radloff, 1977).

Exhibit 1. Sample Characteristics

	Percent ¹	Mean (S.D.)	Range
Demographic Characteristics			
Ethnicity			
African-American	81.2		
Caucasian	13.0		
Other	5.8		
Length of relationship		72.2 months (72.8)	1–427 months
Age		32.5 years (8.7)	17–65 years
At least one child	90.9		
Number of children		2.2 (1.4)	0–8
Children living in home	78.9		
Children in common with abusive partner	45.4		
Employment			
Unemployed	25.4		
Employed	62.9		
Full time	51.0		
Part time	11.9		
Income			
Less than \$5,000	37.5		
\$6,000 to \$15,000	28.7		
\$16,000 to \$25,000	20.2		
\$26,000 and above	13.4		
Public Assistance			
Any type	35.2		
Public housing	7.0		
WIC	28.9		
Food stamps	65.6		
Education			
Less than high school	27.0		
High school	28.7		
Technical school	7.2		
College	38.1		
Some courses	27.7		
2-year graduate	3.5		
4-year graduate	3.7		
Some graduate	2.2		
Relationship			
Married	42.1		
Boyfriend	57.9		
Living together at time of incident	73.0		
Currently estranged relationship	81.5		
Expect to continue relationship	17.3		
Expect to have contact	39.3		
Protective Services Involvement			
Child removed from home for any reason	8.9		
If removed, removal due to abuser's violence	25.0		

¹ Percent within subcategory reflects percent within parent category

Findings

Violence and Abuse

Exhibit 2 shows the prevalence of different forms of abuse and injury reported by participants at baseline. Eighty-eight percent of participants reported some form of serious violence during the previous year (e.g., slammed against wall, strangled or choked, punched, object thrown at, twisted arm or hair, beaten up, kicked, threatened with or used knife or gun, burned or scalded), 46.9 percent reported some form of sexual abuse, 77.7 percent reported some form of injury, and 82.9 percent reported some form of stalking during the previous year.

Exhibit 2. Frequencies of Physical Violence, Sexual Abuse, Injury, and Stalking in the 12 Months Prior to the Study (n = 406)

	Percent		Percent
Physical Violence		Stalking	
Any serious physical violence	88.1	Any stalking	82.9
Push/Shove	86.3	Destroyed property	57.4
Grab	85.3	Followed or spied on	49.1
Slam against wall	57.6	Unwanted phone calls	49.1
Slap	56.1	Stood outside home, office, work	40.1
Strangle or choke	50.9	Showed up without reason	38.8
Punch	50.6	Sent unwanted letters/note	21.0
Throw object	47.3	Hurt or killed pets	9.8
Twist arm or hair	49.9		
Beat up	41.8	Injury	
Kick	36.0	Any injury	77.7
Use or threaten with knife, gun	35.8	Pain the next day	67.7
Burn or scald	5.8	Sprain, bruise, or cut	64.4
Sexual Abuse		Lost consciousness	13.7
Any sexual abuse	46.9	Broken bone	8.5
Refused to wear condom	31.8	Received medical attention	32.3
Coerced sex – fear	29.9	Needed to, but did not receive medical attention	31.1
Forced sex	27.4		
Coerced sex – explicit threats	21.4		

By the first 3-month followup period (Time 2), nearly one-third (29.6 percent) of the participants reported recurrence of some form of physical violence, 20.4 percent reported an injury, and 18.1 percent reported sexual abuse. Stalking between Time 1 and Time 2 was reported by 46.9 percent of participants. For the subgroup reporting some physical violence at Time 2, 71.6 percent reported severe violence and 55.2 percent reported being injured.

By the 1-year followup (Time 5), 38.8 percent of participants reported at least some recurrence of physical violence within the past year, 24.3 percent some type of injury, 23.4 percent some form of sexual abuse, and 59.1 percent some form of stalking by the original abusive partner.

Appraisal of Violence and Future Risk

Participants were asked to rate on a five-point scale the level of severity of the index violent episode that brought them to the shelter, civil protection order court, or criminal court. Most participants in each site rated the violence as severe (rating 4 or 5): shelter, 73.6 percent; civil court, 63.1 percent; and criminal court, 56 percent. A little more than half (56.8 percent) of the women overall indicated that this was the worst incident and 35.9 percent overall indicated that it was the first. For a significant proportion (43.2 percent), the incident that brought them into contact with these institutional agencies was not the most serious.

Participants also were asked about their appraisal of intimate partner violence-related risks within the next 12 months. At Time 1, a significant number of participants indicated their level of risk as high.² The types of risk most commonly rated as high were the risks that the abusive partner would violate a protection order (44.1 percent), track down the participant and find her (43.4 percent), humiliate her (43.2 percent), create financial problems for her (42.1 percent), and destroy her property (42.1 percent). The percentage of participants rating the risk of being injured (28.1 percent) or killed (25.4 percent) as high also is remarkable.

Participants' mean scores for appraisal of future risk were significantly lower after 3 months (Time 2) ($M = 2.16$ vs. 2.09 , $t = 7.28$, $df = 274$, $p \leq .001$). Nevertheless, at Time 2, a significant portion of participants still perceived as high their risk of being assaulted (15 percent) or injured (12.8 percent). At 1-year followup, the risks of being assaulted and of being injured were both reported as high by 10.2 percent of the sample.

These findings indicate that for many women, exposure to violence and abuse continues past their contact with a community or legal agency. Further, for most of those revictimized, that violence appears to be serious and to result in injury. Taken together, results suggest different trajectories for violence and abuse following participants' involvement with community and legal system interventions.

Emotional Well-Being

Mean scores on each of the measures of well-being indicated an overall improvement in reported quality of life at Time 2 compared to Time 1 (29.5 vs. 33.4, $t = -7.8$, $df = 287$, $p \leq .0001$). Likewise, an overall mean decrease was observed in reported depressive symptoms (29.6 vs. 21.4, $t = 11.33$, $df = 286$, $p \leq .0001$) and PTSD symptoms (47.3 vs. 37.3, $t = 10.53$, $df = 288$, $p \leq .001$).

However, this progress was not uniform. When the proportion of women who reported clinically significant levels of depression was examined (16 or higher on the CES-D scale), 69.2 percent of the 83.4 percent of women who met criteria for depression at Time 1 remained depressed 3 months later. Perhaps more surprising, 18 percent of those *not* reporting clinical levels of depression at Time 1 did so at Time 2. Overall, 60.2 percent reported depression at Time 2.

Of the 70 percent who met diagnostic criteria for PTSD at Time 1, more than half (59.2 percent) continued to do so at Time 2. Furthermore, 26.1 percent of those who did *not* meet diagnostic criteria for PTSD at Time 1 did so at Time 2, indicating an increase in PTSD symptomatology for some participants. Overall, 49 percent of all women met diagnostic criteria at Time 2.

One year after having entered a legal system or shelter because of domestic violence, 46.3 percent of the overall sample met criteria for clinical depression and 29.8 percent met all the criteria for PTSD. More than half of the sample reported experiencing significant posttraumatic symptoms 1 year later: 56.3 percent, 34.2 percent, and 52.5 percent met criteria for intrusion, avoidance, and arousal symptom clusters, respectively. Overall, these findings indicate ongoing distress for a large number of participants. Further, they indicate different trajectories of well-being, with some participants making strides toward improvement and others experiencing greater distress over time.

Employment

Employment patterns indicate a slight increase in employment over the 1-year period. At Time 1, 59.6 percent of the participants reported being employed either full or part time. One year later, 63.4 percent of participants reported having some form of employment. Of those employed at Time 1, 78.2 percent remained employed 1 year later. A substantial proportion of those not employed at Time 1 (41.9 percent) were employed 1 year later.

Implications

Much is yet to be understood about battered women's experience over time, but these results help point to some important considerations for both researchers and practitioners.

Implications for Researchers

These preliminary findings indicate different patterns of revictimization across different types of intimate partner violence acts: physical violence, sexual abuse, and stalking. For researchers, this underscores the importance of including all these categories of intimate partner violence in their protocols. Furthermore, it is desirable that research protocols incorporate variables that measure appraisal of risk along with intimate partner violence acts. Preliminary results suggest that these variables reflect different and important phenomena, which can contribute to a more complete understanding of the long-term consequences of intimate partner violence. A third implication is the importance of including information about how an "index" violence incident (e.g., in this study, the one that brought them into the court or shelter) fits within an overall pattern of intimate partner violence. Failing to recognize this point may result in the failure to understand fully battered victims' behavior or decisionmaking. Finally, these findings support the value of including broadly defined outcomes, such as safety, well-being, and employment, to better understand intimate partner violence aftereffects.

Implications for Practitioners

One of the most important implications for practitioners is similar to that for researchers, but for different reasons. Advocates have recognized for some time that for many battered women, the intimate partner violence that brings them into contact with the legal system or shelter is not the most serious incident. However, other institutional systems (e.g., courts) are more inclined to address the "index" incident without sufficient regard for prior, and sometimes far more serious, incidents that may signal an increased danger. Without this knowledge, a heightened risk may go undetected. A related implication of these results for designing legal and nonlegal interventions

is the importance of recognizing stalking as the type of intimate partner violence most likely to recur.

Another implication of these findings is the recognition that the mental health impact of intimate partner violence may worsen over time, at least in the short term. Although a battered woman may not report serious depression or posttraumatic effects when she enters the legal system or shelter, she may experience greater distress later.

Preliminary findings illustrate the range of abusive behaviors that batterers engage in, including physical violence, sexual abuse, stalking, and psychological abuse. These data highlight the importance of maintaining broad definitions of domestic violence in creating and interpreting existing legal remedies as well as services for victims of domestic violence. Further, some of the demographic characteristics of the 406 women sampled have implications for courts and other systems responding to the problem of domestic violence. Some are important simply because they help to dispel stereotypes of victims (e.g., the large percentage of women who are employed, the wide range of age as well as income levels). Others are important because they help courts and legislatures to focus on areas of particular need in developing and enforcing remedies. For example, 92 percent of the women in the sample had at least one child and almost half had a child in common with the abuser. Some judges, particularly in civil protection order proceedings, are still reluctant to address issues involving children in court hearings. These data suggest that remedies relating to the care, support, and protection of children are central to many civil protection order proceedings.

It is also noteworthy that nearly three-quarters of the participants were living with their abusers at the time of the violent incident that brought them to the attention of the court or shelter intervention, but more importantly, many were planning either to continue in relationships or to have contact with their abusers in the future. Again, these data suggest that courts need to fashion remedies that extend beyond no-contact orders and are designed to promote continued, but safe, contact between the victim and abuser. Such orders include supervised visitation orders, earnings withholding orders for emergency family maintenance, and orders to enforce participation in batterer treatment programs.

Notes

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2. High risk was defined as a rating of 4 or 5 on a 5-point Likert-type scale.

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