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Author(s): Jane A. Siegel Ph.D. ; Linda M. Williams Ph.D.

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FINAL REPORT
RISK FACTORS FOR VIOLENT VICTIMIZATION
OF WOMEN: A PROSPECTIVE STUDY

Jane A. Siegel, Ph.D.
Rutgers University
Camden, NJ

Linda M. Williams, Ph.D.
The Stone Center, Wellesley College
Wellesley, MA

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Table of Contents

Abstract v

Chapter 1
Introduction 1

Chapter 2
Method 17

Chapter 3
Sexual Victimization 42

Chapter 4
Domestic Violence Victimization 52

Chapter 5
Correlates of Adolescent Sexual Victimization 67

Chapter 6
Discussion 77

References 85

Biographical Information 93

List of Tables

2-1 Sample Characteristics - Wave 3	36
2-2 Wave 3 Interview Status of "Official" Victims, by Demographic Characteristics of Wave 2 Interviewees	37
2-3 Wave 3 Interview Status of "Official" Victims, by Victimization Status Reported by Wave 2 Interviewees	38
2-4 Characteristics of "Official" Victims and Women in Comparison Group Interviewed in Wave 3	39
3-1 Adolescent and Adult Victimization by Child (< 13 y. o.) Sexual Abuse Status	46
3-2 Adult Sexual Victimization Status, by Exposure to Family Violence	47
3-3 Sexual History/Behaviors of Adult Sexual Assault Victims and Non-victims	48
3-4 Adult Sexual Victimization Status, by Alcohol Use	49
3-5 Logistic Regression of Adult Sexual Victimization - Nested Models	50
4-1 Prevalence of violent behavior toward partner and victimization by partner	58
4-2 Adult Domestic Violence Victimization by Child (<13 y. o.) Sexual Abuse Status	59
4-3 Adult Sexual Victimization and Domestic Violence Victimization, by Childhood (0 - 17 Y. o.) Sexual Abuse Status	60
4-4 Adult Domestic Violence Victimization Status, by Exposure to Family Violence	61
4-5 Sexual History/Behaviors of Victims of Severe Domestic Violence Victims and Non-victims	62
4-6 Severe Domestic Violence Victimization Status, by Alcohol Use	63
4-7 Severe Domestic Violence Victimization Status, by Respondents' Aggressive Behavior ..	64
4-8 Logistic Regression of Severe Domestic Violence Victimization - Nested Models	65
5-1 ANOVAS of Selected Family Background Characteristics	71

5-2 Percent Experiencing Family Violence as Children	72
5-3 Percent Reporting Mother Had Problem During Subject's Childhood	73
5-4 ANOVAS of Age of Onset of Select Behaviors	74
5-5 Delinquent Behaviors, by Child Sexual Abuse Status	75
5-6 Logistic Regression of Sexual Victimization in Adolescence	76

List of Figures

Fig. 1 Interview Status 40

Abstract

This secondary data analysis was intended to investigate whether a woman's history of child sexual abuse was a predictor of later violent victimization and if other childhood or situational factors also increased the risk of such victimization. The data were drawn from a prospective study of 206 urban, predominantly low-income African-American women who were victims of CSA before they turned 13 in the early 1970s and were followed for a year after their victimization as part of a National Institute of Mental Health study of the short-term consequences of sexual assault. Follow-up interviews were conducted in 1990 with 136 of the women and in 1996-97 with 87 of the CSA survivors and 87 women from a comparison group matched to the victims on age, race and residence in the same city.

The analyses showed that the relationship between CSA and the risk for future victimization is perhaps more complex than previously thought. Results showed that CSA before the age of 13 was not by itself a risk factor for adult sexual or domestic violence victimization but that girls who were victimized both before turning 13 and then again as adolescents between the ages of 13 and 17 were at much greater risk of both types of victimization as adults than any other women. Additional risk factors for adult sexual victimization included measures of a woman's sexual behavior and histories of alcohol problems. The odds of becoming a victim of serious domestic violence, including serious assault that caused injuries, were increased significantly if a woman reported using physical force against her partner and having engaged in physical fights.

The paper also details results of exploratory analyses intended to identify factors that might have put some CSA victims at risk of adolescent sexual victimization. Results indicate that girls who ran away from home and whose family backgrounds included mothers who were arrested were at significantly increased risk of adolescent victimization relative to other victims of CSA. Other factors that have been hypothesized to be risk factors for victimization, such as precocious adolescent behaviors and characteristics of the CSA experience, (e.g. abuse by a family member, penetration or use of force during the victimization) were not associated with increased risk among the women of this sample.

Chapter 1

Introduction

Investigations into the causes of violence against women have generally pursued one of two different tracks, one focusing on the behavior of perpetrators of violence and the other on risk factors among victims of violence. The National Research Council's (NRC) report on violence against women noted that far less is known about the latter than the former (Crowell & Burgess, 1996), which suggests that this is the area where gaps in our knowledge of the dynamics surrounding this form of violence are largest. The difference in the extent of research into these two areas may be attributable in part to a reluctance to engage in investigations that might appear to be "blaming the victim" for her victimization. However, while the responsibility for violence perpetrated against women properly rests with the assailant, the prevalence of this aggressive behavior and the consequences that ensue dictate that all aspects of the dynamics of violence against women should be investigated and, as Koss and Dinero (1989) have suggested, that the question of whether certain risk factors exist which heighten vulnerability to victimization should be subjected to empirical scrutiny, particularly if such investigations can more effectively target prevention and intervention efforts.

Prior Research

Sexual Victimization

Risk markers that might result in increased vulnerability among women to sexual victimization have been explored in several studies, and a history of child sexual abuse has been a particular focus of interest in many. In their review of the research on risk factors for victimization, the NRC panel characterized a history of child sexual abuse, along with youthfulness and being female, as

the only "certain" risk factors for rape (Crowell & Burgess, 1996). Studies that have been comprised of college students (Fromuth, 1986; Gidycz, Coble, Latham, & Layman, 1993; Gidycz, Hanson, & Layman, 1995; Koss & Dinero, 1989; Mayall & Gold, 1995; Urquiza & Goodlin-Jones, 1994) or students about to begin college (Vogel & Himelein, 1995), clinical samples (Herman, 1981), military recruits (Merrill, et al., 1999), female prisoners (Browne, Miller & Maguin, 1999) and community samples in the United States (Russell, 1986; Wyatt, Guthrie, & Notgrass, 1992; Wyatt & Riederle, 1994) and abroad (Krahé, Scheinberger-Olwig, Waizenhöfer, & Kolpin, 1999) find that women who have been sexually victimized as adults are more likely to report that they were sexually abused as children than those who have no adult history of sexual victimization and that reported child sexual abuse survivors are at increased risk of adult victimization. For example, Koss and Dinero (1989) found that 66% of rape victims in a national sample of college women reported that they had been sexually abused as children, compared to only 20% of women who had not been raped as adults. Russell (1986), in her survey of a community sample of 930 women, discovered that 65% of the incest victims and 61% of the victims of extrafamilial child abuse had experienced rape or attempted rape as adults, compared to only 35% of those with no child sexual abuse experience. More recently, Tjaden and Thoennes (1998) reported findings from the National Violence Against Women Survey, which surveyed 8,000 women, and noted that 18% of respondents who said they had been sexually abused before the age of 18 had also been sexually victimized as adults, compared to 9% of the women who did not report any childhood abuse.

Investigations have also found that teenage females sexually victimized during adolescence are at increased risk of adult sexual victimization (Gidycz et al., 1993; Gidycz et al., 1995; Himelein,

1995; Vogel & Himelein, 1995; Humphrey & White, 2000) and that girls sexually abused as children are also at risk of revictimization during adolescence (Collins, 1998; Gidycz, Coble, Latham, & Layman, 1993; Himelein, 1995; Sanders & Moore, 1999). For example, a longitudinal study of a birth cohort in New Zealand, which followed girls until their eighteenth birthday, found that those who reported a childhood sexual abuse experience were at increased risk of revictimization even after controlling for several other background variables that might have accounted for the relationship (Fergusson, Horwood, & Lynskey, 1997).

In summary, the research on revictimization provides significant support for the proposition that childhood abuse can result in an increased vulnerability to sexual assault in adulthood. In their review of the relationship between child abuse and revictimization, Messman and Long (1996) noted that the results of these studies “suggest that between 16% and 72% of women who experienced sexual abuse as children are likely to be revictimized later in life” (p. 414). Further evidence of the strength of the relationship between adult and child sexual victimization comes from a meta-analysis of 38 investigations of the long-term sequelae of childhood sexual abuse in women (Neumann, Houskamp, Pollock & Briere, 1996). Neumann and her colleagues examined fifteen behavioral and psychological outcomes and found that sexual revictimization had the strongest effect size for all of the outcomes examined across studies.

Although many of the aforementioned findings provide evidence supportive of the notion that child sexual abuse is a risk factor for subsequent victimization, the research that has been conducted on the linkages between the two has several limitations. First, the survey samples utilized in most research are drawn from college or clinical populations. College samples tend to be composed of young women and thus are not well-suited for investigations related to risks for

later adult revictimization, while clinical samples may overestimate the relationship between child and adult victimization. Minorities are under represented in both types of samples, which is a significant omission since some research using national probability samples finds women in some minority groups, particularly African-Americans, to have higher rates of violent victimization than other women (West, 1998), although others have not (Tjaden & Thoennes, 1998). Second, several studies lack control groups, which limits the extent to which the independent contribution of child sexual abuse to the outcomes examined can be assessed.

A further limitation is related to the fact most of the research reviewed here has been based on surveys utilizing retrospective reports of abuse elicited from adults. Retrospective studies rely on adult recall of victimization in childhood, but such recall is subject to error and forgetting (Williams, 1994). In addition, as Harney and Muehlenhard (1991) point out, it is also possible that child sexual abuse does not increase the risk of adult victimization. Rather, adults who have been raped simply may be more likely than other women to recall and report incidents of childhood sexual abuse. Furthermore, studies that rely on retrospective reports of child sexual abuse cannot adequately examine the question of the prevalence of subsequent victimization among child abuse victims and thus limit the extent to which such abuse can be identified as an antecedent to adult victimization. It may well be that most survivors of child sexual abuse do not become victims of adult violence even if their childhood experiences leave them more vulnerable to such victimization than others. If that is the case, then additional research is needed to identify factors that place some child victims at increased risk of later violence relative to other survivors so that victim service providers can target interventions for those most at risk.

Other factors that might heighten vulnerability to victimization which have been examined in

the literature include measures of sexual activity such as the number of partners a woman has or early onset of sexual activity, alcohol use, and difficulties in interpersonal relationships. For instance, in order to investigate the predictive efficacy of competing theoretical explanations of vulnerability to rape, Koss and Dinero (1989) examined three groups of variables measuring traumatic experiences, social-psychological characteristics and situational factors and their relationship to sexual victimization, utilizing a survey of a national sample of college women. Almost all of the discriminating power of the resultant model came from four variables: child sexual abuse, liberal sexual attitudes, alcohol use and higher than average levels of sexual activity. They found that the chances of being raped were twice as high for those who fit the risk profile as those who did not. Koss and Dinero (1989) theorize that what links these four predictors is the process of traumatic sexualization, a concept developed by Finkelhor and Browne (1985).

Traumatic sexualization is one of four components of what Finkelhor and Browne (1985) have labeled "traumagenic dynamics" resulting from the experience of sexual victimization. According to this conceptualization, the sexuality of a child "is shaped in a developmentally inappropriate and interpersonally dysfunctional fashion as a result of sexual abuse" (Finkelhor & Browne, 1985, p. 531). If traumatic sexualization in fact does occur, then some have theorized that it could manifest itself in behaviors such as promiscuity or prostitution, which in turn could expose women to a greater number of situations in which victimization might occur.

Relevant research is generally supportive of Finkelhor and Browne's (1985) hypothesis. First, several studies have reported that child abuse survivors are indeed at risk of either promiscuous behavior (Herman, 1981) or prostitution (James & Meyerding, 1977; Paperny & Deisher, 1983; Silbert & Pines, 1981; Simons & Whitbeck, 1991), although Widom and Kuhns (1996) found that

the victims of child sexual abuse in their prospective study of maltreated children were at increased risk only of prostitution, not promiscuity, relative to a matched control group. Second, having a higher than average number of sexual partners has been found to increase the risk of sexual victimization (Gidycz et al., 1995; Himelein, Vogel, & Wachowiak, 1994; Mayall & Gold, 1995) and prostitution leaves women vulnerable to both sexual and physical violence (Russell, 1986). Earlier analyses utilizing data from the first and second waves of the data set used in the present investigation and that focused only on the African-American women in the sample found that 30% of women with documented histories of child sexual abuse were revictimized as adults and that the revictimized women reported more involvement in prostitution than those who were not revictimized (West, Williams, & Siegel, 2000).

In their longitudinal study of a birth cohort in New Zealand, Fergusson and his colleagues (Fergusson et al., 1997) conducted a thorough investigation into the question of whether the sexual behavior of abuse survivors explains their increased risk of victimization once other possible confounding factors were taken into account. Specifically, they controlled for several factors related to the family that they theorized might explain an increased risk of both child sexual abuse and problematic sexual behavior that in turn raises the risk of victimization. The family characteristics that they investigated included having one change of parent before the age of 15; living with a step-parent before the age of 15; levels of parental conflict; use of overly severe physical punishment; weak parental attachment; and four measures of parental difficulties (drug use; alcohol problems; psychiatric illness; and criminal offending). The girls in their sample who reported child sexual abuse in fact more often came from families characterized by these features, which is consistent with other findings about the characteristics of families of abuse

victims (National Research Council, 1993).

Although their study followed young women only until the age of 18 and reports of child sexual abuse were based on retrospective data collected at that age, Fergusson et al. (1997) found that girls reporting severe child sexual abuse (i.e. that involving sexual intercourse or attempted intercourse) had significantly greater odds of being involved in higher than average sexual activity (having multiple partners), sexual risk taking behaviors (unprotected intercourse; early onset of sexual activity) and rape/attempted rape victimization. However, the odds of their involvement in greater than average sexual activity and risk taking sexual behaviors were explained by the early age at which they became involved in sexual activity, although the odds of being a victim of rape were not. Furthermore, they concluded that exposure to child sexual abuse was a risk factor for rape even independently of family factors. Their analysis is particularly helpful in elucidating the pathway between child abuse and the traumatic sexualization effects postulated by Finkelhor and Browne (1985), particularly because they acknowledge that many victims of child abuse are raised in families characterized by a number of qualities that could contribute to increased risk of several problematic behaviors in the children of such families, independent of the child sexual abuse. Other evidence of the impact of negative family environment comes from researchers who have found that the risk of sexual victimization in adulthood is also related to childhood maltreatment, regardless of the specific form it takes (Sanders & Moore, 1999), and to childhood physical abuse (Merrill, et al., 1999), although in both cases child sexual abuse was still a statistically significant factor in the relationship between childhood experiences and subsequent victimization.

Among other risk factors that have been investigated, some researchers have concluded that alcohol is associated with both physical and sexual violence against women (Crowell & Burgess,

1996; Koss & Dinero, 1989). Mayall and Gold (1995), however, found that this relationship was indirect and was mediated by the amount of sexual activity a woman experienced and Gidycz and her colleagues (Gidycz et al., 1995) reported that alcohol use was related to adolescent victimization, but not to subsequent victimization. Himelein (1995) found that alcohol use was unrelated to victimization in college once prior sexual victimization and attitudes toward sex were accounted for in a multivariate model. Vogel and Himelein (1995), however, found in a discriminant function analysis that drug/alcohol use was one factor that was statistically related to victimization, although it is unknown how much of this effect was attributable to drug use and how much to alcohol. Findings of a positive association between a woman's alcohol consumption and risk of sexual assault have been reported in two other studies of college women. In the first, the researchers found that alcohol consumption during consensual sex was a significant discriminatory factor for date rape, probably because of its contribution to misperceptions about sexual cues (Abbey, Ross, McDuffie, & McAuslan, 1996). The second involved a national sample of college women who had been victims of sexual assault in which multivariate regression analysis showed that a victim's propensity to abuse alcohol was significantly associated with more severe sexual assault, as was alcohol consumption by both the victim and assailant prior to the assault (Ullman, Karabatsos, & Koss, 1999). These mixed findings on the relationship between alcohol and the risk of sexual victimization suggest that further investigation is warranted.

Domestic Violence Victimization

In 1986, Hotaling and Sugarman reviewed 52 case-control studies designed to study potential risk markers of husband to wife violence. Collectively, these studies had investigated 97 potential factors, including 42 that were based on the characteristics of women. Only one of these 42 was

found to be a risk marker in a sufficient number of studies to merit classification as a consistent risk marker: witnessing violence between parents. A second factor came close to being classified as a consistent risk marker, but failed to do so: experiencing childhood or adolescent violence by a parent. By contrast, eight characteristics associated with husbands were deemed risk markers.

In a second review that included an examination of risk markers for violence in dating relationships, the same authors (Sugarman & Hotaling, 1989) also found relatively weak evidence of consistent markers among victims. For example, a majority of the studies they reviewed found no difference between women who were victims of dating violence and those who were not with respect to their exposure to violence between their parents, a finding that was at odds with what they had found in their earlier review of the literature on husband to wife violence. They also found an equal split in the number of studies reporting that those who were victims of violence in their childhood families were more likely to become victims of dating violence and those reporting no effect for this background factor. Most of the studies that found no effect for childhood violence used multivariate statistical techniques, whereas those that found an effect did not. The only common risk markers that this review found between the literature on marital violence and the literature on dating violence were unrelated to victim characteristics: only higher levels of male sexual aggression, higher stress levels and lower income were classified as risk markers in both sets of studies.

Based on their first review and the fact that so little consistency was found across studies, Hotaling and Sugarman (1986) concluded that the search for risk markers in victims "appears futile" (p. 120). Nevertheless, many researchers have continued to examine the issue of whether characteristics of victims of partner violence differ from those who are not victimized. Family

violence, in the form of witnessing parental violence and experiencing violence inflicted by a parent during childhood, continues to be a focus of more recent studies, often based on a social learning perspective that posits that individuals model their own behavior on that which they observed in their family of origin. Marshall and Rose (1987), for example, surveyed 308 undergraduate college students about their history of victimization by an intimate partner as well as their childhood experiences of witnessing parental violence or being subjected to violence by a parent. Findings for the women in their sample varied by their current dating status, but they did find consistent evidence among all groups that parental violence toward them was not predictive of dating victimization and that father-mother violence was predictive only of past violence for those women who were currently in a dating relationship. A secondary analysis of data from the National Family Violence study, which involved 960 men and 1,183 women, likewise found that neither witnessing parental violence nor being a victim of parental violence discriminated between women who were victims of adult domestic violence from those who were not (Hotaling & Sugarman, 1990).

Despite these findings from cross-sectional surveys, a recent analysis of data from the longitudinal Dunedin birth cohort study in New Zealand (Magdol, Moffitt, Caspi, & Silva, 1998) had somewhat different findings. The researchers examined 24 individual and family factors measured at different points in their subjects' lives in an attempt to identify developmental factors that might predict abuse or victimization. The variables examined included family conflict and harsh discipline, both of which were among the strongest correlates of female victimization at age 21 at the zero-order level. Neither family conflict nor harsh discipline was operationalized to include only physical violence, however, so the results of this study with respect to the role of

family violence are not directly comparable to others.

In addition to examining the issue of the role of physical violence as a possible factor in domestic violence victimization, a limited number of studies on the relationship between a history of child sexual abuse and non-sexual violence against women are available. Their findings have been less consistent than the studies that have examined links between child sexual abuse and sexual revictimization. Although Russell (1986) found evidence among her community sample that incest victims were significantly more likely than non-victims to have been married to physically abusive men, some studies conducted with samples drawn from programs or shelters for battered women or from treatment programs for women experiencing marital problems (e.g., Astin, Ogland-Hand, Coleman, & Foy, 1995; Cascardi, O'Leary, Lawrence, & Schlee, 1995) have failed to find a relationship between an early experience of sexual abuse and being battered as an adult. Other studies of clinical populations, however, such as those conducted by Briere and Runtz (1987) and Walker (1984) have found that adult female victims of physical assaults are more likely to report having experienced child sexual abuse than women with no reported adult physical victimization.

Few studies have addressed the question of whether the number of sex partners a woman becomes involved with increases the risk of victimization by a partner. Neufeld and his colleagues (Neufeld, McNamara, & Ertl, 1999), however, did examine this relationship, along with a woman's self-perception of power and control in her dating relationships. The total number of sex partners a woman reported having was the only statistically significant variable in a multivariate analysis in which the incidence of physical abuse was the outcome.

Alcohol has consistently been linked with violence, but most of the literature on the

relationship between alcohol and domestic violence has focused on the use of alcohol by the male partner. Hotaling and Sugarman's (1986) review of risk markers found that women's use of alcohol was a consistent non-risk marker for victimization. In a review of more recent research, however, Jasinski and Kaufman-Kantor (1998) noted that studies of clinical samples do find that alcoholic women report high rates of victimization in multiple relationships with men.

A final factor that could potentially affect the risk of violence against women is a woman's own use of physical aggression. An analysis of data from the Iowa Single Parent Project concluded that the pathway to intimate violence for women who had been physically abused in childhood and experienced violence perpetrated by their husbands was mediated by their own aggressive orientation (Simons, Johnson, Beaman, & Conger, 1993). In their analyses of the Dunedin birth cohort data, Magdol et al. (1998) examined 24 potential risk factors for victimization and assault of intimate partners. These were reduced to four domains of which a woman's "problem behavior" was the only one significantly associated with physical victimization. "Problem behavior" included juvenile police contact as well as "conduct disorders," such as aggressive delinquency and substance abuse while a teen. The strength of this relationship was impressive because of the temporal ordering that the researchers were able to take advantage of in their longitudinal data set. Prior analyses of data from wave 2 of the data set utilized in the current study showed that violence perpetrated by the women was a risk factor for violent victimization at the hands of their partners (Siegel, 2000).

If in fact those who are themselves aggressive are at increased risk of physical assault, then other factors such as childhood physical maltreatment by a parent and/or witnessing violence may have a direct or indirect effect as well, since they have been consistently linked with subsequent

aggressive behavior (for a review, see Malinosky-Rummell & Hansen, 1993). While much of the research about the relationship between childhood maltreatment and aggression has focused on violent behavior outside the context of intimate relationships (Hartstone & Hansen, 1984; Lewis, Mallouh & Webb, 1989; Vissing, Straus, Gelles, & Harrop, 1991; Widom, 1989), there is also evidence linking harsh childhood physical discipline to aggression by women in dating relationships (Bernard & Bernard, 1983; Bookwala, Frieze, Smith, & Ryan, 1992; Kalmuss, 1984). In addition, Foo and Margolin (1995), in a study of undergraduate college students, found that prior sexual victimization was a predictor of dating aggression for both males and females.

To summarize, the research available to date suggests that vulnerability to sexual victimization in adulthood may well be significantly associated with a history of child sexual abuse.

Investigations into a possible link between sexual victimization in childhood and becoming a victim of domestic violence have been more limited and less conclusively demonstrate a relationship between the two. Nevertheless, many of the outcomes associated with child sexual abuse may well be related to antecedents of a vulnerability to subsequent victimization, although the mediating variables that would explain such a relationship are not well understood and clearly merit further investigation as a means of furthering our understanding of the dynamics of violence against women. Some investigators (Fox & Gilbert, 1994; Hotaling and Sugarman, 1986) have concluded that research on the antecedents of such violence should be focused solely on the characteristics of the perpetrators of domestic violence. While the need to understand the reasons why men commit violence against women is undeniably essential, such a unilateral focus may hinder recognition of a long-term consequence of violence against female children (i.e. vulnerability to victimization) that needs the attention of victim service providers and others

within the criminal justice system for development of effective approaches to prevention and intervention. Identification of potential vulnerabilities to victimization need not take the form of blaming the victim, but rather can be the first step in arming women with knowledge that may lead to preventive strategies.

Much of the theorizing about the etiology of revictimization of child abuse survivors has focused on the role of learned behavior and assumes that women learn to be submissive or helpless as a result of their early childhood experiences (Walker, 1984) or that women's self-esteem is adversely affected by those experiences, which in turn places them at risk of involvement with abusive men. More recently, Gold, Sinclair & Balge (1999) have theorized that five factors might place survivors of child sexual abuse at increased risk of sexual revictimization. Four of them concern the psychological impact of the abuse, but the fifth involves a girl's delinquency and involvement with drugs and alcohol, both of which can lead to high risk sexual behavior such as earlier intercourse and having multiple sexual partners, which in turn leads to a higher risk of victimization. As noted above, findings from Magdol, et al. (1998) about the importance of women's aggressive delinquency and substance abuse provide support for the notion that those who exhibit early behavioral problems are at later risk of victimization.

Based on prior findings cited above, we theorize that what may link child abuse survivors to an increased risk of later victimization are situational determinants that may thrust the women into environments of danger where the risk of revictimization is high. As noted, prior research has shown that such determinants include alcohol abuse and having numerous sexual partners in adolescence and adulthood (Koss and Dinero, 1989). We also theorize that women who exhibit an aggressive orientation will be at increased risk of violent victimization. In addition, as

Fergusson et al. (1997) pointed out, a child abuse victim's family situation may play a significant role in determining the child's subsequent development of the aforementioned risk factors as well as of the risk of victimization. Therefore, in order to properly assess the independent contribution of sexual abuse as a risk factor, it is prudent to control for potentially confounding family factors, such as an unstable family structure that could preclude a nurturing environment that might mitigate the impact of child abuse, and other experiences of violence during childhood, such as harsh physical punishment and witnessing violence.

The current study utilizes data drawn from interviews conducted with women with contemporaneously documented histories of child sexual abuse and with a matched comparison group of women with no documented abuse; the interviews were part of the second and third waves of a prospective study that began in 1973. The study addressed the question of whether women who were sexually abused as children are at increased risk of either sexual abuse later in life or of domestic violence victimization and also investigated the role of other potential risk factors, including family background, sexual behavior, alcohol problems and a woman's own aggressive behavior. The following hypotheses were tested:

1. Victims of child sexual abuse are at increased risk of adolescent or adult sexual victimization compared to non-victims.
2. Victims of child sexual abuse are at increased risk of physically violent non-sexual victimization compared to non-victims.
3. The risk of sexual revictimization and physical victimization among abuse survivors will be moderated by the following factors: a) risks will be higher for women who report that they themselves engaged in violent behavior, such as physical fighting; b) risk of violent

victimization will be higher for women who engaged in heavy drinking; and c) having had multiple sexual partners and other evidence of problematic sexual behavior will increase the risk of victimization.

4. Women who report at wave 2 that they have drinking problems will be at increased risk of domestic violence victimization at wave 3 compared to the other victims of child abuse.
5. Relative to the other child sexual abuse victims, women who report physical fighting at wave 2 will be at greater risk of violent victimization at wave 3.

The first three hypotheses were tested using data from interviews conducted with 174 women during wave 3 of the study, while the other two were tested with data drawn from interviews of 80 women interviewed during both waves 2 and 3. In all cases, the effect of potential risk factors was evaluated controlling for familial background factors.

Chapter 2

Method

Sample

Wave 1 (W1)

During the first wave of data collection, which took place from 1973 to 1975, 206 girls ranging in age from 10 months to 12 years who were victims of reported cases of sexual abuse were examined as part of a larger NIMH funded study of the consequences of sexual assault. All of the girls resided in a major northeastern city whose policies at that time mandated that all victims of sexual assault, regardless of where they were treated initially, be brought to one particular municipal hospital emergency room for treatment and collection of forensic evidence. The NIMH study involved a sample of 790 adult, adolescent and child victims who were seen at the hospital following a report of sexual assault. The sample of 790 girls and women was a convenience subsample of the 1,401 female victims of sexual assault reported to the hospital during the study period and was based on those who could be located with valid addresses and who agreed to participate. There were no demographic differences between interviewed and non-interviewed women at this stage of the study except that interviewed girls and women were more likely to be African American (McCahill, Meyer, & Fischman, 1979). The 206 women who are the subjects of the current study are referred to as "official" victims.

Wave 2 (W2)

In 1990 and 1991, follow-up interviews were conducted to investigate the adult consequences of child sexual abuse and the validity of children's disclosures of sexual abuse incidents. The interview included questions about a woman's family of origin and her childhood relationships

with her parents; other potentially traumatic childhood and adult experiences; her current family, economic, social and living situation; her childhood and adult victimization experiences; drug and alcohol use; and self-reported delinquency and crime. It also included measures of self-esteem, depression and post-traumatic stress. For women who reported that they had been abused as children, a series of questions was posed to elicit details of the childhood experience, the woman's memory of how she reacted to it at the time and her adult feelings about the experience. (For a more detailed description of the interview protocol, see Williams, Siegel, Hyman, and Jackson-Graves, 1993.)

Of the original sample of 206 victims, 136 women (66%) then aged 18 to 31 were located and interviewed. Women who were located were not told that they were selected because they had been sexually abused, because the researchers realized in advance that some women might not recall the incident. The interviews were conducted by two trained female interviewers, one African-American and one White, and took about three hours to complete. The interviewers did not know the specifics of any of the incidents from the 1970s; they were aware only of the fact that the women had been victims of a reported case of child sexual abuse. Women were paid \$25 for their participation.

Prior analyses showed that the demographic characteristics of the women interviewed at W2 did not differ significantly from those not interviewed (see Williams, et al., 1993). Although a larger percentage of women interviewed at W2 were abused by a family member than those not interviewed (36.0% vs. 20.3%, $\chi^2(1, N = 206) = 5.582, p = .02$), they did not differ significantly from those not interviewed with respect to other aspects of the sexual abuse they experienced (e.g. whether the abuse involved penetration or force or was perpetrated by a stranger).

During this wave, a comparison group was identified in order to examine whether child sexual abuse was associated with delinquency or adult criminality, based on official criminal records. To select a comparable group of women, a search of the pediatric emergency room records of the hospital where the abuse victims were seen was conducted in order to identify girls who were treated during the same time period for reasons not related to abuse. As a consequence of the city's policy mandating that all sexual assault victims be taken to that particular hospital, the file of any girl who had been seen for that reason would have reflected that fact. Files were screened and any girl whose record showed that she had possibly been the victim of sexual abuse was eliminated. Eligible girls were matched to the 206 victims on the basis of race, age (within one year) and date of hospital visit (within one year). Using this procedure, matches were identified for 205 victims, resulting in a total sample of 411 girls for purposes of analyses of their official criminal records. None of the women in the comparison group were interviewed during wave 2, which by design was intended simply to do a follow-up study of the official victims.

The wave 2 interviews with the adult survivors revealed that while some were functioning well as adults (Hyman & Williams, 2001), others were exhibiting psychological symptoms such as depression and a number of problematic behaviors, including drug abuse, alcoholism and aggressive behavior. Many were living in economically marginal circumstances, had failed to complete high school and had experienced repeat sexual victimization and domestic violence (Williams, et al., 1993). The absence of data from a comparable group of women made it impossible to determine the extent to which the child sexual abuse they had experienced made an independent contribution to the risk of these outcomes. In addition, 36% of the women did not report the abuse that had been documented in the 1970s, although approximately two-thirds of

those non-reporters did report other instances of childhood sexual victimization. The other third, however, who represent 12% of the entire sample of interviewees, said they had never been sexually abused as children (Williams, 1994). As with the other observed outcomes, determining whether these rates of non-reporting were specific to sexual abuse or would be similar among adults who had experienced other types of childhood trauma could not be ascertained without data from a comparable group of women. To investigate some of the issues raised during wave 2, additional funding was obtained for another wave of interviews, this time with the victims and a comparison group. The matches who had been identified for purposes of the official criminal record check were a logical choice for a comparison group since they were known to have been living in the same city as the victims when young, were matched on age and race and appeared to come from similar socioeconomic backgrounds. Thus in 1996 and 1997, a second wave of follow-up interviews was conducted.

Wave 3 (W3)

At the outset of this wave, we concluded that the probability of locating a sufficient number of women from the comparison group for interviews would be enhanced if a second match could be identified for the victims. The hospital records were therefore searched again and, utilizing the same criteria that were used for the existing matched group of 205 women, we succeeded in identifying an additional match for 41% (N = 85) of the victims. Thus, the total sample consisted of 496 women, of whom 206 were known victims of reported child sexual abuse.

Utilizing a variety of official public records and telephone searches during this wave, we located and contacted (either in writing or in person) 249 of the 496 women who constitute the total sample. Finding the women was extremely challenging, in part because of limited resources

and in part because the last known address for more than half the sample was twenty years or more old. An additional difficulty in locating adult women on the basis of information from their childhood (which did not include social security numbers) arises from the fact that some have married and thus no longer use their maiden name. Of the 249 women contacted, the researchers were able to speak directly with 238. Of those 238 women, 174 (73%) were interviewed (35% of the total sample); half the interviewees were "official" sexual abuse victims and half came from the matched comparison group. Twenty-one women (eleven abuse victims, ten matches) refused to participate in the interview and an additional 43 either scheduled but never came in for an interview or else indicated that they were willing to come in but never scheduled a firm date. Chi-square analysis indicated that a significantly greater percentage of the women in the victim group than the comparison group (42% vs. 30%) were either interviewed or located even if not interviewed (39% vs. 19%). The higher likelihood of locating and interviewing the abuse victims is no doubt - at least in part - a result of the fact that far more current addresses were available for the two-thirds of the victim sample who were interviewed five years before Wave 3 and thus were more easily located. Of the 174 women interviewed during W3, 80 (all of them known victims of child sexual abuse) had also been interviewed during W2. Thirty-nine of the 87 interviewees drawn from the comparison group were actual matches for the official victims interviewed. Figure 1 provides a graphic representation of the composition of the sample and the status of the subjects in each group.

The interviews with the women were conducted by four different interviewers, all of whom were White females. Interviews lasted approximately three hours and included questions about a woman's memories of childhood events, her family background, current social and economic

situation, alcohol and drug use, self-reported aggressive and criminal behavior and domestic violence victimization and perpetration. Measures of psychological symptomatology (post-traumatic stress, dissociation, depression and suicidality) were also included. A series of questions was used to elicit reports of sexual abuse both before and after a woman turned 18. Detailed questions were posed about a specific childhood or adolescent incident of abuse for those who reported such victimization. Interviewees were paid \$35 for their participation.

Table 2-1 shows the demographic characteristics of the victim and comparison groups as constituted following the additional matching process undertaken at the outset of wave 3. The sample consisted predominantly of African-American women (86%); the average age at the time they were seen in the hospital was 8.4 years old. Finding additional matches for the white victims was more difficult than for the African-Americans; as a result, the percentage of African-Americans in the comparison group (88%) is slightly larger than in the victim group (84%). However, this difference was not statistically significant, nor was there any significant age difference between the two groups. No indicator of socioeconomic status appeared systematically in the files, so the women were not matched on that basis. A post-hoc analysis of median family income based on census tract data for the address at which the girls resided when seen at the hospital revealed no significant difference between the groups, although the victims lived in neighborhoods with a somewhat higher average median family income. The wave 3 interviews also provided some evidence that the girls grew up in similar economic circumstances. When asked if their family had ever owned their own home when they were growing up, approximately two-thirds of both official victims (64.4%) and comparison women (67.8%) responded affirmatively, $\chi^2(2) = .236, p = .889$. Despite those levels of home ownership, 60.9% of the

victims and 64.4% of the comparison women also said that their family had received welfare or food stamps when they were growing up, $\chi^2 (2) = 2.098, p = .350$.

Tables 2-2 and 2-3 compare the demographic characteristics and victimization status of women interviewed at both W2 and W3 with those interviewed only at W2. Demographic characteristics of the two groups were not significantly associated with interview status, although there was a tendency for fewer than expected divorced, separated or widowed women to be interviewed during both waves. The average age of those interviewed during both waves ($M = 25.5$ y. o. at W2) also did not differ significantly from those interviewed only at W2 ($M = 25.6$ y. o.), $t (120) = .225, p = .823$.

With respect to victimization status, those interviewed during both waves were no more likely than those interviewed only at W2 to report having been a victim of a sexual assault either as an adolescent or adult or to have perpetrated domestic violence (see Table 2-3). There was, however, a statistically significant association between domestic violence victimization and re-interview status, with 68.9% of those who reported domestic violence at W2 re-interviewed, compared to only 50% of those who reported no domestic violence, $\chi^2 (1) = 4.875, p = .029$. When contacted to request their participation in W3, many of the women who consented said they were interested in doing so because they believed that the study would help other women. Those who had experienced domestic violence may have been more strongly motivated to participate because they believed that it was important to share their experiences. There were no significant differences in child sexual abuse characteristics between those interviewed at W2 and W3 and those interviewed solely at W2 (see Williams, Siegel, Banyard, & Mahoney, 1999).

Table 2-4 shows comparisons between the W3 interviewees in the two groups on various

demographic characteristics. Although the women were comparable in most regards, those in the comparison group were significantly more likely to have graduated from high school (70.6% vs. 55.8%) and less likely to report that they had ever been charged with a crime (21.8% vs. 46.0%).

Table 2-4 also shows prevalence rates for self-reported child sexual victimization. It should be noted that the matching procedure ensured only that cases of reported child sexual abuse were excluded from the comparison group. Given the prevalence estimates of unreported child sexual abuse of females in the general population, we knew that some of the women in the comparison group would have suffered such abuse. In fact, as seen in Table 2-4, approximately one of three (31.0%) women in the comparison group reported some type of sexual victimization before the age of 13 and nearly half (47.1%) of the comparison group reported such victimization before the age of 18. Sexual victimization was defined as incidents involving genital contact (including fondling), force or sexual contact with someone who was five or more years older than the respondent when she was under 13. Incidents between the ages of 13 and 17 that involved sexual contact and force, or that involved genital contact with someone five or more years older than the respondent that she considered non-consensual were also defined as sexual abuse. Using information on the abuse experience drawn from the hospital records and self-reports, the characteristics of the abuse experienced by the official victims and the matches who reported victimization before the age of 13 were compared. As shown in Table 2-4, there were no significant differences in the percentages victimized by a relative or a stranger or in those who experienced incidents involving force or penetration. However, a higher percentage of the official victims experienced victimization by strangers and incidents that involved penetration or force, which may explain why their abuse was reported in the 1970s while those in the comparison

group were victimized without a report having been made.

The fact that nearly a third of the women in the comparison group were victimized before the age of 13 presented a methodological challenge since those women could not be considered true matches. The approach taken to deal with this is described below under the section entitled “Analytic Approach.”

Measures

This section provides a description of the measures used for analyses performed for: a) the entire W3 sample (N = 174) and b) that portion of the W3 interviewees interviewed at W2 as well (N = 80). The latter analysis used a combination of variables from W2 and W3. While the purpose of this study was to examine adult sexual and domestic violence victimization, additional analyses were performed in which adolescent sexual victimization was the focus. Wave 3 data were utilized for that investigation, but some of the measures used in those analyses differed from those used for studying the adult outcomes. Adolescent-specific variables are identified as such in the descriptions below.

The first part of this section describes the measures from the W3 data set, including those used in the analyses of adolescent victimization. The second part describes the measures derived from the two data sets for analyses of the sub-sample of dual W2 and W3 interviewees.

Unless otherwise noted, all dichotomous variables described below were coded 0 = No, 1 = Yes. Demographic variables used in both waves included a woman’s age and the highest grade in school she had completed.

Wave 3 measures

Sexual abuse. Dichotomous variables measured whether a person was a victim of sexual

abuse: a) before she turned 13; b) as an adolescent (between the ages of 13 and 17) and c) as an adult (18 and above). A fourth variable was created to measure childhood victimization status from birth through the age of 17 (0 = No victimization, 1 = CSA only < 13, 2 = SA only as adolescent (13-17), and 4 = CSA both before 13 and as adolescent).

All of the women with documented histories of child sexual abuse from the first wave of the study were classified as abused before the age of 13. Victimization status for the women in the comparison group, as well as for the known child victims at later stages in life, was determined based on responses to a series of questions designed to elicit reports of sexual abuse. These questions were the same as those used successfully during the second wave of the study and are described in full elsewhere (see Williams, Siegel and Pomeroy, 2000).

Separate dichotomous variables measured whether any childhood sexual abuse a woman had experienced before the age of 13 involved: a) a relative as a perpetrator; b) penetration; c) physical force; or d) a stranger as a perpetrator. The youngest age at which she was abused was also recorded. All variables were coded based on self-reports and hospital records for women who did not report the documented 1973 incident.

Domestic violence. A modified version of the Conflict Tactics Scale was used to determine whether a woman: a) had ever been a victim of severe violence or b) had ever perpetrated severe violence (0 = None, 1 = Minor violence only, 1 = Severe violence). Minor violence included throwing something that could hurt and pushing or shoving. Severe violence included the following forms of violence: beating up, kicking, punching, or hitting with something that could hurt; choking; burning or scalding on purpose; having serious injuries (broken bones, passing out, serious cuts or wounds) or needing to see a doctor as a result of a fight with a partner. When

domestic violence victimization was used as a dependent variable in multivariate analyses, it was recoded as a dichotomy (0 = None or minor violence only, 1 = Severe violence).

Family background. Family stability was measured through two variables: the total number of different living situations the woman reported having between birth and the age of 17 and the total number of different caregivers she had during that period. Witnessing parental violence was a dichotomous variable based on responses to a question asking if a respondent had ever seen her “mother or father (or any of the adults who were caring for you) use a weapon, hit or throw things at one another.”

Four additional dichotomous variables used in the analyses of adolescent victimization measured whether a woman reported that her mother ever had any of the following problems while the respondent was growing up: drinking problems, drug problems, emotional or mental problems; arrests. Although the same questions were asked with respect to a woman’s father, there was a considerable amount of missing data because in many cases the women had only limited contact with their father during their childhood. Since this is turn would have caused a loss of at least 20% of the sample for multivariate analyses, the paternal variables were not used.

Two separate dichotomies measured whether a woman reported any harsh physical discipline or abuse by either: a) her mother or her other mother figure or b) her father or other father figure. A woman was coded as having experienced such abuse if she reported that a parent or other parent figure had ever done any of the following to her: hit with an object; beaten up, hit with a fist or kicked hard; choked; burned or scalded on purpose; threatened her with a knife or gun; or used a knife or fired a gun at her. To better reflect the severity of the punishment inflicted, a dichotomous variable also recorded whether she had suffered physical injury as a result

of any punishment.

For analyses of adolescent victimization, a scale of neglect was created from five questions, asking whether her parents ever: a) had to leave her home alone, even when they thought an adult should be there; b) were so caught up with their own problems that they were unable to show or tell her that they loved her; c) were unable to make sure she got the food she needed; d) were not able to make sure she got to a doctor or hospital when she needed to; and e) were so drunk or high they had a problem taking care of her. Each question was coded 0 for "no" and 1 for "yes." The scale was created by summing responses to these five questions, with scores ranging from 0 to 5. The standardized item alpha for this scale was .61.

Sexual history and behavior. Measures of a woman's history of sexual behavior included her age at the time she first had consensual sex and the total number of males with whom she reported having consensual sex. A measure of possible problematic sexual behavior and beliefs consisted of a scale constructed from items on Jehu's (1988) Belief Inventory in which women were asked whether the following statements were true or false for them all or most of the time: "you get into trouble because of your sexual behavior;" "you control others through the use of sex;" "you use sex to get something you want or need;" "in your opinion, no man would care for you without a sexual relationship;" "in your opinion, only bad, worthless guys would be interested in you" and "you find yourself in awkward sexual situations." Responses were summed to create a scale with values ranging from 0 to 6 ($M = 1.16$, s.d. 1.65). Higher scores on the scale indicate more problematic behavior and sexual self-image. Cronbach's alpha for this scale was .79.

Additional measures used in analyses of adolescent victimization included the age at which she first became pregnant and whether she had engaged in prostitution ("exchanged sex for money

or drugs”) before the age of 18.

Alcohol. Dichotomous variables measured whether a woman reported ever having had alcohol problems or alcohol dependency, based on responses to questions from the Michigan Alcohol Screening Test (MAST) (Selzer, 1971). A woman was coded as having had alcohol problems if she responded affirmatively to questions asking whether she ever: tried to cut down on drinking; was annoyed because people complained about her drinking; felt guilty about drinking; missed work or school or was unable to take care of responsibilities because of her drinking; ever went to anyone for help or was in a hospital because of her drinking; or was ever arrested or warned by the police for driving while intoxicated. She was coded as having been dependent on alcohol if she said she had ever: needed a drink in the morning as an eye opener; been unable to stop drinking after one or two drinks; or had blackouts, tremors, DTs, a seizure or a fit due to drinking. In addition, women were asked how often they drank before engaging in sexual relations. Those who responded “most of the time” were coded 1 on a dichotomous variable in which all others (i.e. those who drank never, rarely or only sometimes before having sex) were coded 0. The age at which she first drank was also utilized in analyses of adolescent victimization.

Aggressive behavior. Two variables measured aggression both within and outside of domestic contexts. The interview included a series of questions to elicit reports about whether a woman did ever “hit, punch, kick or use a weapon against another person” before or after turning 18 and, if so, how often (one time; 2-10 times; more than 10 times). Those who reported fighting were also asked if they had ever used a weapon and, if so, how often. Additional questions asked if they had ever injured anyone in a fight and, if so, how extensive the injuries were [death; very

serious (spinal cord, internal organ, serious head injury); serious (broken bones, puncture wounds, serious cuts requiring stitches); or minor (bruises, black eyes, minor cuts)]. A composite four-category variable was created to measure serious assaultive behavior, coded as follows: 0 = No adult violence; 1 = Minor adult violence (engaged in fighting regardless of frequency, but with only minor injuries inflicted and weapons used only once at most); 2 = Serious adult violence (engaged in fighting or used weapons in a fight one to ten times, and serious or very serious injuries were inflicted); 3 = Very serious violence (engaged in fighting or used weapons more than ten times, and fighting led to serious or very serious injuries or caused death). The second variable measured her use of aggression against her partner and was derived and coded as noted previously for her partner's use of violence against her.

Adolescent behaviors. Three variables, in addition to those noted above, were included for analyses of adolescent victimization: the age she first used drugs, the age she first had a boyfriend; and whether she ran away before she turned 18.

Wave 2 measures

The measures described below were used for analyses of domestic violence victimization between waves 2 and 3 involving only those interviewed at both waves.

Domestic violence. During wave 2, women were asked whether "in any of your romantic relationships has it happened that your partner hit, slapped, punched, cut or did something like that to you?". They were also asked if they had ever done this to their partner. Responses to each question were coded as dichotomous variables.

At both waves, the questions about intimate violence asked about ever being victimized. As a result, it was not possible to determine whether women who had reported victimization at

W2 had been revictimized in the interval between W2 and W3 (i.e. reporting new victimization at W3 not already reported at W2). A variable was created, however, to measure whether a woman who said she had never been victimized at W2 reported victimization at W3. Such women were coded 1 on this variable, while others were coded 0. It is important to note that those coded 0 on this variable include women who reported victimization at W2 as well as those who reported never having been victimized. This scheme was adopted in order to insure that the dependent variable in analyses examining potential W2 risk factors for victimization in fact measured victimizations that occurred after W2.

Alcohol use - Three measures from wave 2 were used to assess current alcohol problems that a women reported at that time. The same questions derived from the Michigan Alcohol Screening Test (MAST) (Selzer, 1971) that were described above for wave 3 were asked at wave 2. Variables measuring alcohol dependency and alcohol problems that occurred within twelve months preceding the wave 2 interview were created using the same source questions as described above.

Family background. Family stability at wave 2 was measured as described above for wave 3 (i.e. total number of caregivers and living situations before age 18). With respect to witnessing parental violence, a question similar to the one asked during the W3 interview was posed at W2 ("When you were a teenager, did you ever witness this couple hit or throw things at one another?"), but only to those women who reported that they lived with a couple who were parents to them when they were teenagers (N = 81). A dichotomous variable was created from answers to this question.

The wave 2 data set included a variable that measured the frequency with which physically

violent acts (hitting, kicking, punching, tying her up or doing “something even worse,” as defined by the respondent) were inflicted by either of her parents or parental figures during the year they happened most often (0 = Never; 1 = 1-11 times; 2 = 12-52 times; 3 = >52 times).

The wave 2 data set also included a variable measuring the degree of maternal affection and support a woman felt she received as a child. This scale was derived from four items in the W2 interview that asked the woman to rank each of the following on a scale from one to five: how close she felt to her mother as a teen; the amount of physical affection she felt her mother gave her; the degree of interest her mother showed in her feelings as a teen; and the frequency with which she would turn to her mother with her problems as a teen. Scores were summed, with a possible range of 4-20. Scores were then collapsed into five categories: 0 = mother absent (N =2); 1 = little to none (N =15); 2 = low (N = 25); 3 = moderate (N = 15); 4 = high (N =22).

Fighting behavior - At wave 2, women were asked if they had engaged in any physical fights either as a teen or an adult. A dichotomous variable measured whether a woman had ever fought. Persistent fighting behavior was measured by a four-category variable (0 = no fighting; 1 = teen fighting only; 2 = adult fighting only; 3 = persistent fighter - i.e. teen and adult fighting). Women were also asked if they had ever “hit, slapped, punched, cut, or did something like that” to her partner; responses were coded as a dichotomous variable.

Analytical approach

As noted earlier, approximately 30% of the matched comparison subjects self-reported victimization before the age of 13, which meant that they could not be considered true non-abused comparison subjects. One way to address this issue would be to eliminate them from the sample altogether, while another would be to group them with the known victims to create a group with

both officially documented and self-reported cases of abuse. In considering the latter solution, a series of comparisons were made to determine whether the victimized women in the matched group were similar enough to the official victims to be considered part of a homogeneous group. Comparisons were made between the two groups and between them and the comparison subjects who reported no child sexual abuse on several characteristics, based on responses during wave 3 interviews:

- demographic characteristics (marital status, education, age at interview, race);
- family background characteristics (total number of care givers and different living situations while growing up; maternal or paternal problems, such as alcohol or drug abuse or mental or emotional problems; parental arrest; parental neglect; physical abuse; of trauma witnessing parental domestic violence);
- use of drugs and alcohol ;
- symptoms of traumatic stress in adulthood, based on scores on the Trauma Symptom Inventory (Briere, 1995);
- sexual behaviors (number of sex partners, engaged in prostitution, age first had sex); and
- juvenile and adult arrest histories (ever arrested; ever arrested for violent offense; ever arrested for drug offense).

With the exception of one area, the two victim groups (i.e. self-reported and official) did not differ significantly on any of these factors,¹ which lent support to the notion that they constituted a homogeneous group. The one area in which the two differed was their arrest histories. As adults, official victims were more likely to have been arrested for any offense and for drug offenses than the self-reported victims. By contrast, there were several areas in which the

non-victims differed significantly from the official victims. Thus, for purposes of the analyses reported in this study, the self-reported victims in the comparison sample were grouped with the "official" victim group and collectively are referred to as "all CSA victims." The relationship between the dependent variables and child sexual abuse were also examined after excluding the self-reported victims from the sample, but eliminating them did not materially alter the results of the analyses reported here.

An additional analytical issue related to the sample arose from the fact that some (44.8%), but by no means all, of the women from the comparison who were interviewed were the actual match for a woman who was also interviewed. Restricting analyses only to those whose match was also interviewed would result in the loss of more than half the sample and would reduce the sample size to 39 pairs of women, thereby reducing statistical power considerably and increasing the risk of Type II errors. The number of pairs drops to only 26 if pairs in which the match self-reported sexual abuse before the age of 13 are excluded, further exacerbating this problem. Nevertheless, McNemar tests for paired data were carried out to examine the relationship between child sexual abuse and the dependent variables using only the paired data. McNemar tests are appropriate for testing association within a 2x2 table when the subjects are from a matched sample (Fleiss, 1981; Kleinbaum, 1994). The analysis compares outcomes for pairs of individuals to determine whether both have similar outcomes. If the outcome is not associated with the characteristic on which the two people differ (i. e. childhood sexual abuse), then theoretically both members of the pair should display similar outcomes. Thus, the outcomes of interest are those in which the two members of the pair have dissimilar outcomes. The results of these analyses are noted in the following chapters, but caution should be used in relying on those

outcomes since the number of pairs is so small and the risk of Type II errors high.

For analyses utilizing the entire sample, chi-square analysis was utilized to determine whether categorical variables were significantly related to each other at the bivariate level, while t-tests and ANOVA were used to determine whether there were significant differences between group means for other variables. Multivariate analyses were carried out by logistic regression.

Table 2-1

Sample Characteristics - Wave 3

Characteristic	Total Sample (N=496)	"Official" Victims (N=206)	Matches (N=290)
Race			
African-American	85.9%	83.5%	87.6%
White/Hispanic	14.1%	16.5%	12.4%
Mean age at hospital	8.4 y. o.	8.4 y. o.	8.3 y. o.
Average median family income at Wave 1, by census tract	7,461	7,620 (N=206)	7,302 (N=205)

Table 2-2

Wave 3 Interview Status of "Official" Victims, by Demographic Characteristics of Wave 2 Interviewees (%)

	Race (W2)		Marital status ^a (W2)			Employ. status (W2)	
	Afr-Amer (N = 117)	White (N = 19)	1 (N = 46)	2 (N = 15)	3 (N = 75)	Currently working (N = 44)	Not curr. working (N = 90)
Interviewed at W3	61.5% (72)	42.1% (8)	56.5% (26)	33.3% (5)	65.3% (49)	50.0% (22)	63.3% (57)
Not interviewed at W3	38.5 (45)	57.9 (11)	43.5 (20)	66.7 (10)	34.7 (26)	50.0 (22)	36.7 (33)
Totals	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
χ^2	2.549		5.437			2.171	
p	0.110		0.066			0.141	

^a 1 = Married/Living in common law marriage 2 = Divorced/separated/widowed 3 = Single (never married)

Table 2-3

Wave 3 Interview Status of "Official" Victims, by Victimization Status Reported by Wave 2 Interviewees (%)

	Any adolesc. sex. victimiz. - (W2)		Any adult sex. victimiz. - (W2)		Ever dom. viol. victim - (W2)		Ever perpetrate dom. viol. - (W2)	
	No (N = 64)	Yes (N = 69)	No (N = 91)	Yes (N = 40)	No (N = 58)	Yes (N = 74)	No (N = 51)	Yes (N = 78)
Interviewed at W3	60.9% (39)	56.5% (39)	56.0% (51)	62.5% (25)	50.0% (29)	68.9% (51)	51.0% (26)	66.7% (52)
Not interviewed at W3	39.1 (25)	43.5 (30)	44.0 (40)	37.5 (15)	50.0 (29)	31.1 (23)	49.0 (25)	33.3 (26)
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
χ^2	0.267		0.475		4.875		3.174	
p	0.605		0.490		0.027		0.075	

Table 2-4

Characteristics of "Official" Victims and Women in Comparison Group Interviewed in Wave 3

Characteristic % unless otherwise noted	Victims (N=87)	Comparison (N=87)	p ^a
Age at Wave 1 (mean)	8.2 y. o.	8.6 y. o.	NS
Current Age (mean)	31.3 y. o.	31.8 y. o.	
Race = African-American	93.1%	93.1%	NS
Family's Median Income as Child (mean, by census tract)	\$7,491	\$7,265	NS
Min. educ. = HS graduate or GED	55.8%	70.6%	.045
Currently working	40.5	52.9	.104
Receives state aid	60.9	64.4	NS
Is single/never married	55.2	62.1	NS
Pregnant before 19	67.9	63.0	NS
Ever charged with a crime	46.0	21.8	.001
Reports sex. victim. prior to age 18	87.4	47.1	.000
Reports sex. victim. prior to age 13	65.5	31.0	.000
OF THOSE WHO WERE SEXUALLY VICTIMIZED < 13 Y. O.:	(N=87)	(N=27)	
Ever perpetrated by relative	52.9%	63.0%	NS
Ever perpetrated by a stranger	21.8	14.8	NS
Any incidents involve penetration	70.1	55.6	NS
Any incidents involve physical force	66.7	48.1	.083

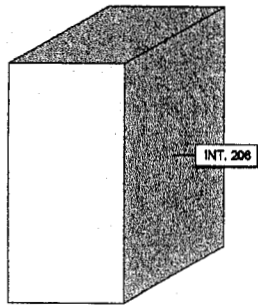
^a Statistical significance based on chi-square tests of association for categorical variables and t-tests for variables where means are reported.

WAVE 1

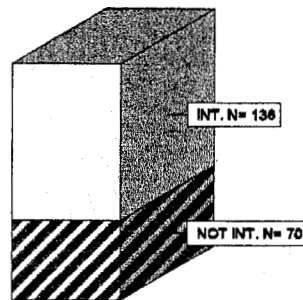
WAVE 2

WAVE 3

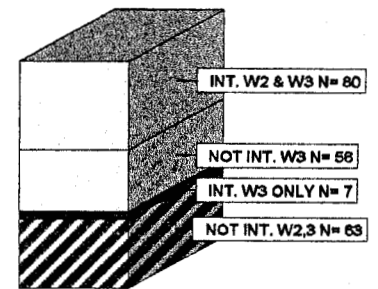
VICTIMS (N = 206)



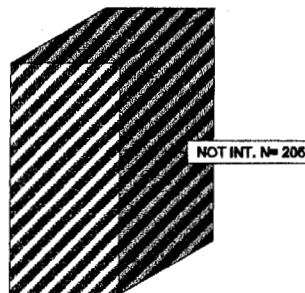
VICTIMS (N = 206)



VICTIMS (N = 206)



MATCHES (N = 205)



ORIG. MATCH GROUP (N = 205)
+ ADD'L. W3 MATCHES (N = 85)

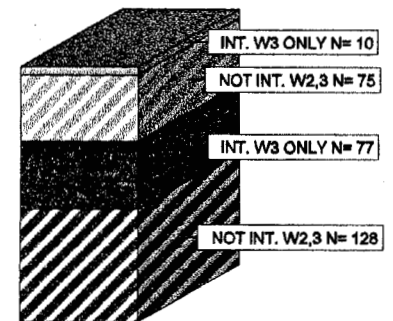


FIGURE 1
INTERVIEW STATUS

ENDNOTES

1. Results of these analyses are available from the first author.

Chapter 3

Sexual Victimization

This chapter presents results for analyses of adult sexual victimization using the entire sample of 174 interviewees. Forty-six women (26.4%) reported that they had been sexually victimized during adolescence when they were between the ages of 13 and 17, and 75 (43.1%) reported that they had been sexually victimized as adults after turning 18. Table 3-1 shows the bivariate relationships between child sexual abuse before the age of 13 and both adolescent and adult sexual abuse. There were no statistically significant relationships between either of the outcomes and child sexual abuse, whether measured on the basis of official reports (Table 3-1, Part I) or when self-reported victimization is included (Table 3-1, Part II), although the association between adult victimization and self-reported child sexual abuse approached statistical significance. These bivariate relationships were not as predicted by our first hypothesis. The same results were found when the analyses were restricted to the 26 matched pairs in which the match reported no sexual abuse before the age of 13. In terms of dissimilar outcomes, there were five pairs where the official victim reported abuse as an adolescent and her match did not, compared to six pairs where the match reported adolescent abuse but the official victim did not ($p = 1.000$, based on a binomial distribution test). Eight official victims reported adult victimization but her match did not, compared to three matches who reported being victimized as an adult when the official victim did not ($p = .227$, based on a binomial distribution test).

The definition of child sexual abuse was subsequently broadened to encompass all of a person's childhood years (birth through 17) and women were classified into four categories: non-victims ($N = 46$); abuse only under the age of 13 ($N = 82$); adolescent abuse only (ages 13-17) (N

= 14); and abuse both before the age of 13 and as adolescent (N = 32). The relationship between adult sexual victimization and this definition of child abuse was then examined and chi-square analysis showed a statistically significant association between child abuse status and adult victimization (Table 3-1, Part III). Non-victims had the lowest rates of adult victimization, followed by those abused only before the age of 13 and those abused only during adolescence. Those who were abused both before the age of 13 and as teens had the highest rates. An analysis of the adjusted standardized residuals indicated that the significant association between abuse status and adult victimization was attributable to a higher than expected number of cases in that latter category and a lower than expected number of cases in the non-victim category.

The next step in the analysis examined the bivariate relationships between adult sexual victimization and the correlates hypothesized to be associated with it. Adult victims and non-victims did not differ with respect to either their age (32.1 y. o. vs. 31.1 y. o. respectively, $t(172) = -1.874$, $p = .063$) or their years of education (11.4 vs. 11.8, $t(172) = 1.631$, $p = .197$). The childhood family structure of the two groups, however, did differ significantly. Adult victims reported having had on average 4.5 different living situations as a child, compared to 3.0 for non-victims, $t(114.3) = -3.433$, $p = .001$. They likewise reported having been cared for by a significantly greater number of caregivers on average (4.3) than the non-victims (3.1), $t(118.2) = -3.555$, $p = .001$. Table 3-2 shows the bivariate relationships between adult victimization and additional family background variables. A significantly larger percentage of women who had experienced or viewed childhood violence either by witnessing violence between their parents or parental figures or by being subjected to harsh physical discipline by their mother or mother figure became victims of adult sexual victimization. Odds ratios for these two variables were 2.02 and

2.56 respectively. There was no statistically significant association between paternal use of violence against a respondent and her adult victimization status.

Two of the three indicators of sexual behavior were significantly associated with adult sexual abuse victimization (see Table 3-3). Adult abuse victims had on average nearly three times as many sexual partners as those who were not abused. The higher average scores of the abuse victims on the sexual problem scale indicated more problems than those who were not abused. However, the age at which adult sexual abuse victims first engaged in consensual sex did not differ significantly from that of the rest of the sample.

Bivariate relationships between adult victimization and alcohol use are displayed in Table 3-4. All three measures of alcohol problems were significantly associated with sexual victimization, with larger percentages of adult victims reporting that they drank before having sex most of the time and reporting behaviors that indicated having had alcohol problems or an alcohol dependency at some time. Odds ratios for the three measures show that the risk of sexual victimization is more than three times greater for those who have had alcohol problems than for those who have not.

Table 3-5 shows the results of a series of three nested multivariate logistic regression equations that utilized the variables that were statistically significant at the bivariate level. Childhood living situations and the number of childhood care givers were highly correlated with each other and, as a result, only the former was used in the models. Having alcohol problems and being alcohol dependent were also strongly associated with each other, so only the former variable was utilized in the equations.

In the first model, child sexual abuse status alone was entered. The odds of adult

victimization were significantly greater for a woman who had been abused both in childhood and as an adolescent relative to those who experienced no sexual abuse at all before the age of 18. The value of Nagelkerke R^2 , a measure analogous to R^2 in linear regression, was .17. In the next model, variables measuring other childhood factors (number of living situations, witnessing parental violence and physical abuse by mother) were entered. None of those predictors significantly increased the odds of victimization, nor did they improve the goodness of fit of the model containing child sexual abuse status alone. In the final model, variables reflecting a woman's drinking (ever any alcohol problems; drinks before sex most of the time) and sexual history (number of sex partners; sex problem scale) were entered, which significantly improved the model goodness of fit. Two of those four variables significantly increased the odds of adult victimization: a history of problem drinking and having multiple sexual partners. The double victimization status (child and adolescent victimization) also continued to significantly increase the odds of victimization: the odds of adult victimization for those women were 4.710 relative to women who had not experienced any child sexual abuse. The model had a Nagelkerke R^2 value of .368 and it correctly classified 76.1% of the women's adult victimization status, with a greater percentage of non-victims (87.78%) than victims (60.0%) classified correctly.

Table 3-1

Adolescent and Adult Victimization by Child (< 13 Y. o.) Sexual Abuse Status (%)

Outcome	I		II		III			
	Official victims (87)	Matches (87)	All CSA victims (114)	Matches not abused (60)	No CSA (46)	CSA only <13 (82)	CSA as adolesc. only (14)	CSA < 13 + adoles. (32)
Adolescent sexual abuse	28.7%	24.1%	28.1%	23.3%	-	-	-	-
Adult sexual abuse	48.3	37.9	48.2	33.3 [‡]	28.3	37.8	50.0	75.0

Chi-square statistics:

I (adolescent)	$\chi^2 = .473, p = .492$
I (adult)	$\chi^2 = 1.898, p = .168$
II (adolescent)	$\chi^2 = .454, p = .501$
II (adult)	$\chi^2 = 3.564, p = .059$
III	$\chi^2 = 18.618, p < .001$

Table 3-2

Adult Sexual Victimization Status, by Exposure to Family Violence

	Witnessed parental viol.		Physical violence - Mother-to-child		Physical violence - Father-to-child	
	Yes (N = 78)	No (N = 96)	Yes (N = 136)	No (N = 38)	Yes (N = 63)	No (N = 111)
Adult sexual victimiz.	52.6%	35.4%	47.8%	26.3%	50.8%	38.7%
	(41)	(34)	(65)	(10)	(32)	(43)
Non-victim	47.4%	64.6%	52.2%	73.7%	49.2%	61.3%
	(37)	(62)	(71)	(28)	(31)	(68)
Totals	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
χ^2	5.160		5.587		2.381	
p	.023		.018		.123	
Odds ratio	2.02		2.56		1.63	
95% C. I. for odds ratio	1.10 - 3.72		1.16 - 5.69		.87 - 3.05	

Table 3-3

Sexual History/Behaviors of Adult Sexual Assault Victims and Non-victims

Characteristic	N	Adult Sexual Victim.		t	d.f.	p
		Yes (N = 73)	No (N = 99)			
Age first consensual sex (\bar{x})	171	15.2 y. o.	15.7 y. o.	1.374	168	.171
Total # male sex partners (\bar{x})	172	24.4	8.3	-4.254	89.2	.000
Sexual problems (\bar{x})	172	1.78	.70	4.257	120.3	.000

Table 3-4

Adult Sexual Victimization Status, by Alcohol Use

	Drank before sex most of time		Ever had alcohol problems		Ever had alcohol dependency	
	Yes (N = 25)	No (N = 134)	Yes (N = 59)	No (N = 115)	Yes (N = 54)	No (N = 120)
Adult sexual victimiz.	68.0%	38.8%	61.0%	33.9%	64.8%	33.3%
	(17)	(52)	(36)	(39)	(35)	(40)
Non-victim	32.0%	61.2%	39.0%	66.1%	35.2%	66.7%
	(8)	(82)	(23)	(76)	(19)	(80)
Totals	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
χ^2	7.310		11.681		15.050	
p	.007		.001		.000	
Odds ratio	3.35		3.05		3.68	
95% C. I. for odds ratio	1.35 - 8.32		1.59 - 5.84		1.88 - 7.24	

Table 3-5

Logistic Regression of Adult Sexual Victimization - Nested Models (N = 155)

Variable	B	S. E.	Rel. Odds	B	S. E.	Rel. Odds	B	S. E.	Rel. Odds
Child sex abuse status ^a									
Abuse < 13 only	.614	.435	1.847	.381	.453	1.464	.234	.495	1.263
Abuse 13-17 only	1.131	.682	3.100	1.053	.708	2.866	.749	.766	2.114
Abuse < 13 + 13-17	2.384***	.589	10.850	1.952**	.626	7.041	1.550*	.688	4.710
# living sibs. as child				.145	.080	1.156	.058	.089	1.060
Witnessed parental viol				.136	.376	1.145	-.032	.415	.968
Phys. abuse by mother				.125	.452	1.132	-.573	.498	.564
Ever alcohol problems							.932*	.424	2.540
Alcohol before sex							.560	.564	1.751
Number male sex part.							.033**	.012	1.033
Sex problems/beliefs							.223	.143	1.250
Constant	-.099	.215		-.779	.488		-1.067	.517	

Table continues

-2 Log Likelihood	189.900	185.079	161.346
Nagelkerke R	.170	.206	.368
Block chi-square	20.926***	4.821	23.733***

^a Reference category is "no child sexual abuse"

- * p < .05
- ** p < .01
- *** p < .001

Chapter 4

Domestic Violence Victimization

The first section of this chapter presents results of analyses using the entire sample of 174 women interviewed at wave 3 and the second the results of analyses for the 80 women interviewed during both waves.

Wave 3 Analyses

Table 4-1 shows the percentages of women who experienced and inflicted each type of violent behavior included in the interview. The most common act the women reported inflicting or experiencing was pushing, shoving, grabbing or slapping. While nearly equal percentages of women reported inflicting violence (67.6%) as being the victim of violence by her partner (69.4%), women experienced severe violence more commonly than their partner did (51.4% vs. 41.6%). Injuries were also more common among the women than their partners: the percentages of women who reported broken bones, passing out, receiving serious cuts or wounds or needing to see a doctor because of a fight with her partner were more than two times greater than those who said their partner was similarly injured.

Hypothesis 2 stated that victims of child sexual abuse would be at greater risk of domestic violence victimization than non-victims. Similar to the findings with respect to adult sexual victimization, the dichotomous measures of child sexual abuse revealed no statistically significant association with domestic violence victimization, regardless of whether the sexual abuse was based on "official" victim status or self-reported victim status (see Table 4-2). The definition of child sexual abuse was then expanded by using the four-category measure that included victimization that occurred between the ages of 13 and 17. Results of the bivariate analysis of

that measure with domestic violence victimization are shown in Table 4-3. The pattern of victimization in this case was very similar to the one found with adult sexual victimization, although the relationship between child abuse status and domestic violence was of an even greater magnitude: 97% of the women who were victims of abuse both before turning 13 and as an adolescent experienced some type of domestic violence victimization, including 84% who were subjected to severe domestic violence. Only one woman in this category reported that she had not been victimized by her partner.

A matched pair analysis using only the pairs in which the match was not abused as a child revealed no significant differences in outcomes between victims and their matches. There were 11 instances where a woman reported having been a victim of domestic violence but her match did not, compared to seven cases where the opposite was true ($p = .481$, based on a binomial distribution test). When the outcome was severe domestic violence victimization, eight women reported such victimization when her match did not and five women reported no such victimization when her match did ($p = .581$, based on a binomial distribution test).

Women who experienced severe domestic violence victimization were similar in age to those who did not (31.9 y. o. vs. 31.2 y. o., $t(171) = -1.485$, $p = .139$), but had on average completed fewer years of school than non-victims (11.3 vs. 11.9, $t(171) = 2.295$, $p = .023$).

The victims of severe domestic violence showed differences in their family background when compared to non-victims in ways that were quite similar to the women who experienced adult sexual victimization, which is not surprising since 68.9% ($N = 51$) of the victims of severe physical violence had also experienced adult sexual victimization, compared to only 31.1% of those who experienced either no partner violence or only minor acts of aggression, $\chi^2(1, N =$

173) = 15.807, $p = .000$. Victims of severe partner violence reported an average of 4.2 living situations, compared to only 3.1 for the rest of the women, $t(170) = -2.690$, $p = .008$, with an average of four different caregivers compared to 3.3 for the other women, $t(166.2) = -2.132$, $p = .034$. Results of chi-square tests of association between measures of family violence and adult domestic violence are shown in Table 4-4. Although there was a significant association between witnessing parental violence in the expected direction, partner violence status was not significantly associated with having experienced physical violence inflicted by any parent.

Analyses also revealed differences in the sexual behavior and beliefs of those who were victims of severe domestic violence and those who were not (see Table 4-5). The former began having consensual sex at an earlier age than the latter and had on average a significantly greater lifetime number of male sexual partners. Their scores on the scale of problematic sexual behavior and beliefs were also significantly higher than the women who did not experience severe partner violence.

Two of the three measures of alcohol abuse were associated with severe domestic violence victimization, as shown in Table 4-6. A significantly larger percentage of women with alcohol problems or alcohol dependency than those without experienced severe violence inflicted by their partner. Although the percentage of those who drank before sex most of the time who were victims of severe partner violence was greater than the percentage of those who did not drink before sex, the association between the two variables was not statistically significant.

Finally, the two measures of a woman's own aggressive behavior were both significantly associated with severe domestic violence victimization (see Table 4-7). The relationship was most pronounced when a woman's own use of force against her partner was examined: more than

eight of ten women (81.9%) who perpetrated severe domestic violence were similarly victimized by their partner, compared to fewer than two in ten (18.1%) who did not themselves engage in such behavior (see Table 4-7). Those who engaged in serious or very serious violence themselves - not necessarily in the context of their intimate relationships - were also significantly more likely to be victims of severe violence inflicted by a partner.

Results of a series of nested multivariate logistic regression equations in which severe domestic violence victimization was the dependent variable are shown in Table 4-8. Child sexual abuse status was entered into the first equation along with a woman's level of education. The odds of victimization for those victimized as children and adolescents were 4.588 what they were for women who had never been victimized. The next model included the two family variables that were statistically significant at the bivariate level (total number of living situations; witnessing parental violence), neither of which significantly increased the risk of victimization. In the final equation, all of the variables measuring a woman's behavior that were significant at the bivariate level were added to the equation. The "double victims" were still at significantly higher risk than non-sexually abused women but the most important factor in the prediction of severe domestic violence victimization was a woman's own use of aggressive behavior, both in general and when specifically directed at her partner. The odds of severe victimization for a woman who herself inflicted severe force against her partner were 5.638 relative to those who used no violence or only minor violence against a partner. The relative odds of victimization for those who engaged in serious or very serious interpersonal violence were 4.585 and 4.457 respectively, relative to those who perpetrated no violence. The final model had a Nagelkerke R^2 value of .467 and was able to correctly classify 78.57% of cases, including 74.12% of the victims of severe domestic

victimization and 83.13% of the non-victims.

Wave 2 - Wave 3 Analysis

Hypotheses 4 and 5 stated that women who had drinking problems at W2 and who had engaged in fighting at W2 would be at increased risk of violent victimization by a partner at W3. The purpose of this part of the analysis thus was to identify whether those factors at W2 would predict domestic violence victimization at W3. This meant that any victimization reported at W3 must have occurred after W2 if the W2 factor were to be considered predictive. As noted in Chapter 2, however, the questions utilized at both W2 and W3 did not ask about a specific time frame but rather asked if any violence had ever occurred. Thus, the only women who could be characterized as having been victimized by a partner between W2 and W3 were those who did not report any victimization at W2. Of the 29 women who reported no victimization at W2, 15 (51.7%) reported victimization at W3. It should be noted as well that 63.8% of the 80 women interviewed at both W2 and W3 had already reported at W2 that a partner had inflicted violence on them at some point.

Bivariate relationships were analyzed by examining the relationship between victimization in the W2-W3 interval with the hypothesized risk factors and family background factors utilizing the entire group of 80 women and then utilizing only the subset of women (N = 29) who had not already experienced partner violence at T2. The latter analyses are preferable because they more clearly focus on women who had never been victimized at W2. With only two exceptions, neither strategy revealed any statistically significant relationships between domestic violence victimization and a woman's own use of aggression at W2 (including whether she ever used force against her partner), her current alcohol use at W2, and her exposure to violence in childhood (witnessing

parental violence or being beaten by a parent). A statistically significant relationship between levels of maternal affection and support and new victimization at W3 was found when the entire sample was included, but that relationship was not significant when the analysis was restricted to only the women who had not already been victimized at W2 (N = 28, Missing = 1). A similar pattern emerged when the relationship between her use of force against her partner and victimization was examined. When all 80 women were included in the analysis, there was a strong relationship between the two, although not in the expected direction: of those who reported never using force against a partner at W2 (N = 26), 42.3% reported they were victimized in the W2-W3 interval, compared to only 7.7% of the 52 women who had reported using force at W2, $\chi^2(1, N = 78) = 13.371, p = .000$. This relationship appears to be explained, however, by the fact that so many of the women who reported using force at W2 had already been victimized at W2, thus reducing their risk of victimization in the W2-W3 interval to zero by definition. When the analysis was restricted to those not victimized as of W2, the relationship ceased to be statistically significant. In this case, 55% of the 20 women who reported no use of force against their partner at W2 subsequently experienced victimization by a partner, compared to 50% of the 8 women who had used force against their partner, Fisher's exact test (one-sided), $p = .569$.

Given the absence of any statistically significant bivariate relationships, multivariate procedures were not carried out for this part of the analysis.

Table 4-1

Prevalence of violent behavior toward partner and victimization by partner (N =173)

	She did	She reports partner did
Threw something at partner	42.8%	30.6%
Pushed, shoved, grabbed, slapped partner	61.3	62.4
Beat up, kicked, punched or hit partner with something that could hurt	34.7	41.0
Choked partner	9.2	32.4
Burned or scalded	1.7	2.9
Broke bone or nose, passed out or had serious cut/wound because of fight with partner	25.4	10.1
Needed to see a doctor because of a fight with partner	29.5	14.5
Perpetrated any violence against partner	67.6	69.4
Perpetrated any severe violence against partner	41.6	51.4

Table 4-2

Adult Domestic Violence Victimization by Child (<13 y. o.) Sexual Abuse Status (%)

Outcome	Official Victims (N = 87)	Matches (N = 87)	All CSA Victims (N = 114)	Others (N = 60)
Domestic violence victimization				
None	31.0%	30.2%	28.1%	35.6%
Minor only	20.7	15.1	18.4	16.9
Severe	48.3	54.7	53.5	47.5

Table 4-3

Adult Sexual Victimization and Domestic Violence Victimization, by Childhood (0 - 17 Y. o.)
Sexual Abuse Status (%)

Outcome	Non- victims (N = 45)	CSA < 13 only (N = 82)	SA 13-17 only (N = 14)	SA <13 & 13-17 (N = 32)
Domestic violence victimization**				
None	40.0%	37.8%	21.4%	3.1% ^a
Minor only	17.8	20.7	14.3	12.5
Severe	42.2	41.5 ^a	64.3	84.4 ^b

** $p < .01$

^a Analysis of residuals indicates that the significant association between the variables is attributable to lower than expected number of cases in this cell.

^b Analysis of residuals indicates that the significant association between the variables is attributable to higher than expected number of cases in this cell.

Table 4-4

Adult Domestic Violence Victimization Status, by Exposure to Family Violence

	Witnessed parental viol.		Physical violence - Mother-to-child		Physical violence - Father-to-child	
	Yes (N = 78)	No (N = 95)	Yes (N = 135)	No (N = 38)	Yes (N = 63)	No (N = 110)
Severe domestic violence victimization	65.4% (51)	40.0% (38)	54.8% (74)	39.5% (15)	49.2% (31)	52.7% (58)
None or minor dom. viol. victimization only	34.6% (27)	60.0% (57)	45.2% (61)	60.5% (23)	50.8% (32)	47.3% (52)
Totals	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
χ^2	11.049		2.794		0.199	
p	.001		.095		.656	
Odds ratio	2.83		1.86		.87	
95% C. I. for odds ratio	1.52 - 5.27		.89 - 3.87		.47 - 1.61	

Table 4-5

Sexual History/Behaviors of Victims of Severe Domestic Violence Victims and Non-victims

Characteristic	N ^a	Severe Domestic Violence		t	d.f.	p
		Yes (N = 73)	No (N = 99)			
Age first consensual sex (\bar{x})	170	15.0 y. o.	16.1 y. o.	2.924	168	.004
Total # male sex partners (\bar{x})	172	19.1	11.1	-2.286	158.1	.024
Sexual problems (\bar{x})	172	1.63	.67	-4.017	142.5	.000

Table 4-6

Severe Domestic Violence Victimization Status, by Alcohol Use

	Ever had alcohol problems		Ever had alcohol dependency		Drank before sex most of time	
	Yes (N = 59)	No (N = 114)	Yes (N = 53)	No (N = 120)	Yes (N = 25)	No (N = 133)
Severe domestic violence victimization	62.7% (37)	45.6% (52)	64.2% (34)	45.8% (55)	68.0% (17)	49.6% (66)
None or minor dom. viol. victimization only	37.3% (22)	54.4% (62)	35.8% (19)	54.2% (65)	32.0% (8)	50.4% (67)
Totals	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
χ^2	4.550		4.938		2.850	
p	.033		.026		.091	
Odds ratio	2.01		2.12		2.16	
95% C. I. for odds ratio	1.05 - 3.82		1.09 - 4.12		.87 - 5.34	

Table 4-7

Severe Domestic Violence Victimization Status, by Respondents' Aggressive Behavior

	Perpetrate severe dom. viol.		Severity of self-reported violence as adult			
	Yes (N = 72)	No (N = 101)	No viol. (N = 64)	Minor viol. (N = 57)	Serious viol. (N = 31)	Very serious (N = 21)
Severe domestic violence victimization	81.9% (59)	29.7% (30)	34.4% ^a (22)	42.1% (24)	83.9% ^b (26)	81.0% ^b (17)
None or minor dom. viol. victimization only	18.1% (13)	70.3% (71)	65.6% (42)	57.9% (33)	16.1% (5)	19.0% (4)
Totals	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
χ^2	45.926		29.825			
p	.000		.000			
Odds ratio	10.74		N. A.			
95% C. I. for odds ratio	5.14 - 22.44					

^a Analysis of residuals indicates that the significant association between the variables is attributable to lower than expected number of cases in this cell.

^b Analysis of residuals indicates that the significant association between the variables is attributable to higher than expected number of cases in this cell.

Table 4-8

Logistic Regression of Severe Domestic Violence Victimization - Nested Models (N = 168)

Variable	B	S. E.	Rel. Odds	B	S. E.	Rel. Odds	B	S. E.	Rel. Odds
Child sex abuse status ^a									
Abuse < 13 only	-.019	.393	.981	-.221	.415	.801	.014	.497	1.014
Abuse 13-17 only	1.049	.645	2.855	.751	.666	2.118	.676	.790	1.966
Abuse < 13 + 13-17	1.922*	.588	6.838	1.523*	.616	4.588	1.449*	.722	4.260
Highest grade in school	-.165	.107	.848	-.125	1.09	.882	-.003	.142	.997
# living sibs. as child				.082	.075	1.086	.015	.089	1.016
Witnessed parental viol				.686	.353	1.986	.514	.423	1.671
Ever alcohol problems							-.044	.466	.957
Age first had sex							-.043	.096	.958
Number male sex part.							.001	.002	1.001
Sex problems/beliefs							.164	.152	1.179

Table continues

Perpetrates severe D.V.					1.730***	.446	5.638
Severity self-rptd. viol. ^b							
Minor violence					-.130	.470	.878
Serious violence					1.523*	.673	4.585
Very serious violence					1.495*	.763	4.457
Constant	2.283	1.264	1.194	1.363	.247	2.129	
-2 Log Likelihood	209.341		203.118		160.409		
Nagelkerke R ²	.174		.216		.467		
Block chi-square	23.533***		6.223*		42.709***		

^a Reference category is "no child sexual abuse"

^b Reference category is "no violence"

* p < .05

** p < .01

*** p < .001

Chapter 5

Correlates of Adolescent Sexual Victimization

A consistent finding that emerged from the analyses of adult sexual victimization and domestic violence victimization was the importance of the combination of childhood and adolescent sexual victimization. The women who had been victimized at both times had the highest victimization rates of all women for both outcomes and this combination of abuse experiences was a significant factor even in multivariate analyses. Women who had been abused only as children before the age of 13 or only as adolescents between the ages of 13 and 17, on the other hand, were not at a significantly greater risk of adult victimization than women who experienced neither. Therefore, an investigation of factors that might distinguish women in the “double victimization” (i.e. abuse before 13 and as an adolescent) seemed warranted since there are clear implications for potential intervention with victims of child abuse who might present risk markers for future victimization beginning in adolescence. Of particular interest in these analyses are the differences between the women who were abused only as children under the age of 13 and the “double victims” in order to determine whether there are background factors that set one group of child abuse victims on a pathway toward repeat victimization that begins in adolescence and continues into adulthood. The analyses reported in this chapter should be considered exploratory in nature.

The factors examined covered three domains: characteristics of the child sexual abuse experienced; familial and maternal characteristics; and youthful conduct that has been shown elsewhere to lead potentially to risk of victimization.

Bivariate analyses found that adolescent victimization was unrelated to any of the

characteristics of the sexual abuse experienced before a woman turned 13 (abuse involving force; abuse by a relative; abuse by a stranger; abuse involving penetration; and the age when first abused).

Several family background factors were found to be related to adolescent victimization for some of the child abuse victims. Table 5-1 shows results of ANOVAS for the number of different living situations a woman had from birth through the age of 17, the number of caregivers during that time period and scores on the neglect scale described in Chapter 2. All three ANOVAS yielded statistically significant results. The "double victims" had a significantly greater number of living situations and caregivers than those who were never abused and those abused only as children before the age of 13. They also had the highest scores on average on the neglect scale, but in this case post-hoc analyses revealed that their scores differed significantly only from non-victims and those in the "adolescent only" category, but not from other child victims.

The "double victims" were also found to have significantly higher prevalence rates of exposure to family violence during childhood (see Table 5-2). All but one of the women in this category (96.9%) had been the recipient of physical violence inflicted by their mother and the "double victims" were far more likely to report that the violence inflicted on them was so severe that they had been physically injured by it: their rate of injury was three times what it was for women who were abused only as children, those with the second highest injury rate. The "double victims" also had the highest rates of witnessing parental violence, with more than two-thirds (68.8%) of them reporting that they had seen their parents (or parent and his/her romantic partner) inflict violence on each other. In all three cases, a 2x2 crosstabulation comparing the victims of child abuse only before the age of 13 with the "double victims" showed a statistically

significant association between abuse status and the particular characteristic of interest. The only characteristic where the "double victims" did not have the highest rate among the four groups was physical violence inflicted by her father or father figure. In that case, women who were abused only as adolescents had the highest rates.

Two of the four maternal characteristics shown in Table 5-3 were significantly associated with abuse status and in both cases the "double victims" again had the highest prevalence rates. More than half (56.3%) reported that when they were growing up their mother had an emotional or mental problem, a rate more than twice that of women who reported no abuse. The rate for the "double victims," however, did not differ significantly from that of the women who were sexually abused only as children (43.2%). Nearly half (46.9%) of the "double victims" reported that when they were growing up their mother had been arrested, a rate nearly three times greater than that reported by those abused only before the age of 13 (16.5%). The difference between those two groups was statistically significant.

Fewer statistically significant differences between the groups appeared when comparing the four groups' adolescent behavior. As shown in Table 5-4, the mean age at which women in the four groups first began drinking or became pregnant did not differ significantly, although in both cases the "double victims" were the youngest to do so. They also began using drugs and having consensual sex earlier than the other women, although the F-tests for these two ANOVAS were just above the .05 significance level. The one event where statistically significant differences were found was the age at which a woman first had a boyfriend. As with the other events, the "double victims" were younger on average when they first did this, but post-hoc analyses showed that the only group whose age differed significantly from this group was the non-victims.

The "double victims" also had significantly higher rates than the other women of two behaviors that could have put them at risk of victimization (see Table 5-5). More than one-quarter (28.1%) of the "double victims" said they had engaged in prostitution before turning 18, a rate 2.3 times greater than that reported by the group with the next highest rate, the women who were abused as children only (12.2%). More than two-thirds (68.8%) of the "double victims" also reported having run away before turning 18. A separate analysis comparing only that group with the "child victimization only" group showed a statistically significant association between running away and victimization status.

One additional factor examined was school dropout. An analysis of variance showed a statistically significant difference in the mean number of years of school completed, $F(173, 174) = 3.251, p = .023$, with the "double victims" having completed the lowest number of years on average ($M = 11.0, s.d. = 1.2$). Post-hoc analyses, however, showed that their average number of years of schooling differed significantly only from the non-victims, who had completed on average 12.0 years of school ($s.d. = 1.8$). Victims of child abuse only before the age of 13 had completed 11.5 years ($s.d. = 1.7$) and victims of adolescent abuse only had completed 12.1 years ($s.d. = 1.6$).

The final step in this analysis was a multivariate logistic regression which was restricted to those who had experienced abuse only before the age of 13 and the "double victims" ($N = 114$). All of the variables that were statistically significant at the bivariate level were entered into an equation using backward stepwise selection, which is an appropriate procedure where there is little prior theoretically-derived empirical evidence (Menard, 1995). Four variables remained in the equation, two of which were statistically significant. The relative odds of adolescent victimization increased by 2.729 for women who ran away and by 3.873 for those whose mother

had been arrested. The estimated coefficient for the variable measuring physical violence inflicted by a mother translated to a relative odds of 7.797, but was not significant at the .05 level ($p = .058$). The model had a Nagelkerke R^2 value of .288 and correctly classified 75.5% of the cases. However, it was able to classify a greater percentage of those not victimized as adolescents (89.3%) than those who were victimized (41.9%).

Table 5-1

ANOVAS of Selected Family Background Characteristics

	Mean # living sit. Birth - 18 y. o.	Mean # caregivers Birth - 18 y. o.	Mean neglect scores (0 - 5)
No CSA (N = 46)	2.29* (1.36)	2.67* (1.25)	.62* (.91)
CSA Only < 13 (N = 82)	3.88* (2.75)	3.62* (2.15)	1.14 (1.35)
SA 13-18 Only (N = 14)	3.14 (1.92)	3.50 (1.56)	.64* (.84)
CSA < 13 + Adoles. (N = 32)	5.94 (7.35)	6.06 (7.51)	1.77 (1.48)
F	5.958	5.761	5.784
d.f.	172	173	167
p	.001	.001	.001

Note: Numbers in parentheses are standard deviations.

* Post-hoc analyses indicate statistically significant differences in means between this category and the "CSA < 13 + > 13" category.

Table 5-2

Percent Experiencing Family Violence as Children

	% parent-child violence by mother	% parent-child violence by father	% physically injured by parent viol.	% witnessed parental violence
No CSA (N = 46)	69.6% (32)	23.9% ^c (11)	5.0% (2)	28.3% ^c (13)
CSA Only < 13 (N = 82)	78.0 ^a (64)	35.4 (29)	6.9 ^a (5)	41.5 ^a (34)
SA 13-18 Only (N = 14)	64.3 (9)	64.3 ^b (9)	0.0 (0)	64.3 (9)
CSA < 13 + Adoles. (N = 32)	96.9 ^b (31)	43.8 (14)	21.9 ^b (7)	68.8 ^b (22)
χ^2	10.136	8.602	8.689	15.028
d.f.	3	3	3	3
p	.017	.035	.034	.002

^a 2x2 crosstabulation between this category and the "CSA < 13 + > 13" category reveals a statistically significant association between abuse status and this factor.

^b Analysis of residuals indicates that the significant association between the variables is attributable to higher than expected number of cases in this cell.

^c Analysis of residuals indicates that the significant association between the variables is attributable to lower than expected number of cases in this cell.

Table 5-3

Percent Reporting Mother Had Problem During Subject's Childhood

% whose mother:	Had drinking problem	Had drug problem	Had emotional/ mental prob.	Was arrested
No CSA (N = 46)	20.0% (9)	6.7% (3)	24.4% ^c (11)	6.8% ^c (3)
CSA Only < 13 (N = 82)	32.1 (25)	22.5 (18)	43.2 (35)	16.5 ^a (13)
SA 13-18 Only (N = 14)	15.4 (2)	7.1 (1)	30.8 (4)	0.0 (0)
CSA < 13 + Adoles. (N = 32)	43.8 (14)	25.0 (8)	56.3 ^b (18)	46.9 ^b (15)
χ^2	6.528	7.316	8.881	24.626
d.f.	3	3	3	3
p	.089	.062	.031	.000

^a 2x2 crosstabulation between this category and the "CSA < 13 + > 13" category reveals a statistically significant association between abuse status and this factor.

^b Analysis of residuals indicates that the significant association between the variables is attributable to higher than expected number of cases in this cell.

^c Analysis of residuals indicates that the significant association between the variables is attributable to lower than expected number of cases in this cell.

Table 5-4

ANOVAS of Age of Onset of Select Behaviors

	Age first:	Drank (N = 158)	Used drugs (N = 140)	Consensual sex (N = 170)	Had boyfriend (N = 173)	Pregnant (N = 164)
No CSA		16.8 (4.3)	15.7 (2.7)	16.2* (2.4)	15.6* (2.4)	18.9 (4.0)
CSA Only < 13		15.6 (4.0)	14.4 (2.8)	15.4 (2.5)	14.4 (2.4)	17.6 (3.1)
SA 13-18 Only		15.3 (3.3)	15.0 (1.9)	15.6 (2.1)	14.6 (2.1)	19.1 (5.6)
CSA < 13 + Adoles.		15.2 (5.7)	13.9 (2.7)	14.7 (2.2)	14.2 (1.9)	17.5 (3.4)
F		1.035	2.622	2.627	3.277	1.814
d.f.		157	139	169	172	163
p		NS	.053	.052	.022	NS

Note: Numbers in parentheses are standard deviations.

* Post-hoc analyses indicate statistically significant differences in means between this category and the "CSA < 13 + > 13" category.

Table 5-5

Delinquent Behaviors, by Child Sexual Abuse Status (%)

	Prostitution before age 18	Ran away before age 18
No CSA (N = 46)	2.2% ^c (1)	10.9% ^c (5)
CSA Only < 13 (N = 82)	12.2 ^a (10)	43.9 ^a (36)
SA 13-18 Only (N = 14)	7.1 (1)	50.0 (7)
CSA < 13 + Adoles. (N = 32)	28.1 ^b (9)	68.8 ^b (22)
χ^2	12.339	28.332
d.f.	3	3
p	.006	.000

^a 2x2 crosstabulation between this category and the "CSA < 13 + > 13" category reveals a statistically significant association between abuse status and this factor.

^b Analysis of residuals indicates that the significant association between the variables is attributable to higher than expected number of cases in this cell.

^c Analysis of residuals indicates that the significant association between the variables is attributable to lower than expected number of cases in this cell.

Table 5-6

Logistic Regression of Sexual Victimization in Adolescence (N = 106 CSA Victims)

Variable	B	S. E.	Wald	d.f.	p	R	Rel. Odds
Run away	1.004	.495	4.114	1	.043	.129	2.729
Mother arrested	1.354	.513	6.974	1	.008	.197	3.873
Severe/abusive phys. pun. by mother	2.054	1.084	3.588	1	.058	.111	7.797
Years of schooling	-.291	.173	2.841	1	.092	-.081	.747
Constant	-.421	2.210	.036	1	.849		

-2 Log Likelihood 104.155

Model chi-square 23.964, p = .000

Nagelkerke's R² .288

Chapter 6

Discussion

A major focus of this study was the question of whether child sexual abuse would be a risk factor for adult victimization. Although we had predicted that victims of child sexual abuse would be at increased risk of both physical and sexual assault as adults, the analyses revealed a somewhat more complex relationship between childhood and adult victimization. When child sexual abuse was operationalized as a simple dichotomy, those who had been sexually victimized as children did not have significantly higher rates of either form of adult victimization than those who had not. A more careful parsing of childhood victimization, however, revealed an important distinction. Among the women who were victimized as young children (i.e. before the age of 13), some were no more vulnerable to the risk of victimization than those not abused as children: their victimization rate was not significantly higher than the women who had not experienced any child sexual abuse. Others, however, were at increased risk, and that risk began in adolescence. The risk of adult victimization for those who were sexually abused both as children and teenagers was both significantly and substantively greater than that for any other group of women, including those who had been abused only as children.

While some might conclude from these findings that child sexual abuse played no role in the increased vulnerability to victimization found in this study and that it was merely the adolescent victimization that had predictive power, as was found, for example, in the recent work of Humphrey and White (2000), that interpretation would be incorrect in this instance. Women who were abused only as adolescents were not at a significantly higher risk of victimization relative to the other women in this sample. Only the combination of child sexual abuse and adolescent abuse

led to a heightened risk of victimization for the two outcomes.

That is not to say that women who experienced sexual abuse only before the age of 13, or who experienced no child sexual abuse for that matter, were immune from victimization. Rates of reported adult sexual victimization and violence perpetrated by an intimate partner were quite high. Women who reported no childhood sexual victimization had the lowest prevalence rates for both sexual and domestic violence victimization in adulthood, but 28.3% of them reported having been sexually victimized as adults and 60% reported experiencing at least minor violence perpetrated by an intimate partner. These rates are far higher than those recently reported in one of the most comprehensive surveys of violence against women, the National Violence Against Women (NVAW) Survey (Tjaden & Thoennes, 1998), which found that 17.6% of women surveyed reported having been raped or the victim of an attempted rape at some time during their life and 22.1% reported having been physically assaulted by their partner. The sexual assault rates reported in the current study are not limited to incidents involving rape or attempted rape, as the NVAW Survey was, so the rates in that case are not directly comparable. However, 91.5% of the adult sexual victimizations reported in this study involved penetration, so that if the definition of sexual victimization were restricted to those incidents involving penetration, rates for the four groups based on child abuse status would range from a low of 25.9 to a high of 68.6 for the "double victims," rates that are 1.5 to 3.9 times greater than those reported in the NVAW Survey.

One factor that may account for the differences in prevalence rates is the lack of comparability between the NVAW Survey sample and that of the current study. Our sample was composed chiefly of low-income, urban, predominantly African-American women, who are not a representative sample of the general population as the NVAW Survey sample was. Thus, the

ability to generalize from the current findings is limited. Nevertheless, the results do provide important information on a population sub-group that has heretofore been largely overlooked in the research on victimization. The NVAW Survey did not find statistically significant differences between whites and African-Americans in the rates of either sexual or physical victimization. Rates for American Indians/Alaskan Natives, however, were significantly higher than those for other racial/ethnic groups in the NVAW Survey (Tjaden & Thoennes, 1998). American Indians are disproportionately poor, similar to the women in the current study, so future research examining other low-income population groups is warranted in order to examine the effect of low income on women and to determine whether low income is a correlate or consequence of victimization.

As hypothesized, situational variables related to a woman's sexual behavior also increased the risk of adult sexual abuse. Specifically, having multiple sexual partners significantly increased the risk of such victimization, a finding that is consistent with other research (Gidycz et al., 1995; Himelein, et al., 1994; Mayall & Gold, 1995). The other indicator of sexual behavior that was significantly associated with risk of victimization at the bivariate level - the scale reflecting problematic sexual behavior and beliefs about a woman's self worth apart from her value as a sex partner - did not predict risk independently of family factors and child sexual abuse status. The influence of this measure, however, may have been suppressed by the variable measuring the combination of child and adolescent victimization, since women who were victimized as both children and adolescents had significantly higher scores on this scale than did the women who were never abused as children and those who were victimized only before the age of 13.

Alcohol abuse was also a statistically significant factor in predicting increased risk of adult

sexual victimization but not of physical assault by a woman's partner. Although the variables indicating that women who drank most of the time before they had sex and who were dependent on alcohol were significantly associated with sexual victimization at the bivariate level, only the measure of alcohol problems was a statistically significant predictor of this outcome once the effect of other significant factors were considered simultaneously in multivariate analyses. One limitation to understanding the relationship between a woman's abuse of alcohol and her victimization in this data set is the fact that the temporal proximity of the two is unknown. Thus, the most that can be concluded from this is that women who at one time have had alcohol problems are also those who were more likely to have been sexually victimized at one time as adults.

As hypothesized, women who reported engaging in aggressive behavior themselves were at increased risk of being severely abused by their partner. Although perpetrating violence against her partner was strongly associated with a woman's own domestic violence victimization, caution should be used before concluding that this is a risk factor for victimization since much of the violence the women reported perpetrating no doubt involved self-defense. For example, among those who reported using force against their partner, 38.5% reported that they were *never* the first to use force and 40.2% said that when they did use force, they did so all or most of the time in order to protect themselves from what they perceived as harm their partner might inflict. Furthermore, among those who were victims of severe domestic violence, only 26.7% reported that they initiated violence most or all of the time and more than 4 in 10 women (44%) said they never initiate violence. More than half (52%) of the victims of severe domestic violence reported that, of the times they did use force against their partner, they did so to protect themselves from

force by him all or most of the time and only 5.3% said their own use of force was never caused by a need to protect themselves. Future research needs to examine more closely the dynamics of actual physically violent episodes between partners in order to better understand the processes of initiation, motivation and escalation of violence and the role each partner plays in these processes.

A woman's use of physical violence against her partner was not the only indicator, however, that women with a more aggressive orientation were at higher risk of physical assault by a partner. The risk of such victimization was also significantly greater for women who reported that they used physical violence or weapons without specific reference to a domestic violence setting. The questions that elicited these reports preceded those about a woman's use of violence in the context of her relationships, so the women were not "primed" to reveal such violent behavior. Inasmuch as the questions did not specify the circumstances in which the fighting she described could have taken place, some of what she reported in response could be related to actions she had taken against a partner, which she then subsequently mentioned in response to the questions posed specifically about domestic violence as well. Thus, there could be some redundancy in these two measures. However, 44% of the women categorized as having engaged in serious or very serious violence based on the general questions did not report having used any of the actions against her partner that were considered elements of severe domestic violence. The other 56%, who did also report engaging in severe domestic violence, may have used severe violence also against people other than her partner, but determining that would be difficult to accomplish from the available data.

Much controversy surrounds the question of whether women are as likely as men to use violence against a partner because many surveys have found that men and women report similar

rates of inflicting violence. Several scholars have pointed out, however, that male and female violence cannot be conceptualized as equivalent even if the rates are similar because of male's greater physical strength on average, which is more likely to cause injury to women (see Jasinski & Kaufman Kantor, 1998 for an overview of this controversy). Certainly that was the case within this sample: the rate at which the women reported sustaining serious injuries, such as broken bones or serious cuts or wounds, was 2.5 times the rate at which they reported that their partner sustained such injuries. Nevertheless, many of the women portrayed themselves during their interviews not as submissive or meek, but rather as women who, at a minimum, would fight back, if not initiate violence themselves. There was no evidence, however, that such an aggressive stance resulted in more serious violence, at least when examining the relationship between injuries and the frequency with which women reported initiating violence. In other words, injury rates appear in this sample to be unrelated to a woman's own aggressive posture.

Noting that women are themselves aggressive on occasion, that such aggression is not always self-defensive and that such aggressive behavior is associated with an increased risk of partner violence does not absolve men of the responsibility for the harm they inflict, nor should it be interpreted as blaming the victim for her victimization. Rather, such behavior by young women should serve as a warning sign for parents, educators and others who might observe it. Early signs of such behavior can be an opportunity to intervene and educate women on the risks they face if they utilize aggressive behavior as a means of resolving conflict.

Given the importance of a woman's own aggressive behavior in predicting her victimization, an important next step might be to investigate the factors affecting the likelihood of such behavior. Prior analyses of W2 data involving only the "official" victims interviewed at that time

(N = 136) showed that parental beatings were an important risk factor for both teenage and adult fighting reported by the women (Siegel, 2000). In the current analyses, the “double victims” were significantly more likely than others to have reported that they were beaten by their mothers as children. Although that measure failed to retain statistical significance in the multivariate analyses intended to distinguish the “double victims” from the other child abuse victims, more investigation of the effect of this factor is warranted, since evidence of a relationship between childhood physical maltreatment and subsequent aggression has repeatedly been documented in the literature, regardless of whether the aggressive behavior measured involves violence between intimates or more generalized criminal violence (Bookwala, et al., 1992; Kalmuss, 1984; Malinosky-Rummell & Hansen, 1993; Widom, 1989).

With respect to victimization between the two waves of follow-up interviews, it is unfortunate that the study was not able to benefit fully from the longitudinal nature of the data due to the limitations resulting from the manner in which information about victimization was obtained, which limited the dependent variable used in these analyses to only new victimizations that occurred between the two waves. No doubt there are women who reported having been victimized at wave 2 who were also victimized anew during the interval between that time and the next interview, but they could not be categorized as such from the information available. As a result, only a small number of women were identified as ones whose victimization occurred after wave 2. This in turn limited statistical power, making it difficult to uncover relationships that would be found with a larger sample. Thus, the absence of any statistically significant relationships between the hypothesized risk factors at wave 2 and actual victimization that occurred after wave 2 should be interpreted with caution. Future research should have much

shorter intervals between follow-ups and should question respondents about events that occurred within a discrete time period.

Analyses of the self-reported backgrounds of the women considered “double victims” revealed evidence of some behaviors suggestive of the pathway proposed by Gold et al. (1999) and consonant with the findings of Magdol et al. (1998) that underscored the significance of the adolescent conduct of women in the risk of adult victimization. The “double victim,” high risk girls in the current study were more precocious than the other victims of child sexual abuse, having had a boyfriend earlier than others and having started drinking at an earlier age. They were also more likely to have engaged in at least two delinquent behaviors: running away and prostitution before the age of 18. The latter behavior of course could have been a consequence of their running away, because they may have had few legitimate resources on which to survive. In the multivariate analyses, running away was one of only two factors that significantly increased the odds of becoming a “double victim.”

The other significant factor that emerged from the multivariate analyses examining the risk of adolescent revictimization was whether a woman’s mother had been arrested when the woman was a child or teenager. Nearly half (47.9%) of the “double victims” reported that their mothers had been arrested, which represents an extremely high rate for women, one that was 6.8 times greater than that for the mothers of the women not abused as children. Such high arrest rates could mean as well that the women in this group were separated from their mothers at some time due to the mother’s incarceration, which may account in part for the significantly greater number of living situations and childhood caretakers the women reported having. Even absent a period of incarceration, it seems likely that women with such high arrest rates must have exhibited

behaviors that contributed to inconsistent parenting, which may account for the significantly higher scores of their daughters on the scale measuring neglect. Despite the significance at the bivariate level of the markers of family instability, neglect and violence, the effect of the mother's arrest was so strong that none of the other measures related to a woman's family of origin remained statistically significant in multivariate analyses, although harsh physical discipline did remain in the model.

Much remains to be learned about factors in the lives of women that may place some of them at risk of victimization by men. The current study found that while a portion of the women who were sexually abused as children were at risk of revictimization throughout their life, others were not. The challenge to researchers will be to uncover more about the complex pathways that lead to resistance or vulnerability so that effective interventions can be appropriately targeted.

Dissemination of Findings

Four presentations of the findings reported on here have been made to date. The first was a paper presented at the Fifth International Family Violence Research Conference in Durham, NH in July 1999 and the second at the Victimization of Children and Youth Conference in Durham, NH in June 2000. Additional presentations were made at the NIJ Research Conference on Violence Against Women and Family in October 2000 and at the annual meeting of the American Society of Criminology in San Francisco in November 2000. A paper on the risk of sexual victimization will be presented at NIJ's Conference on Research and Evaluation in Criminal Justice in July 2001. Two journal articles presenting the separate findings about sexual victimization and intimate partner victimization are in preparation.

References

- Abbey, A., Ross, L. T., McDuffie, D., & McAuslan, P. (1996). Alcohol and dating risk factors for sexual assault among college women. Psychology of Women Quarterly, 20, 147-169.
- Astin, M. C., Ogland-Hand, S. M., Coleman, E. M., & Foy, D. W. (1995). Posttraumatic stress disorder and childhood abuse in battered women: Comparisons with maritally distressed women. Journal of Consulting and Clinical Psychology, 63:2, 308-312.
- Bernard, M. L., & Bernard, J. L. (1983). Violent intimacy: The family as a model for love relationships. Family Relations, 32, 283-276.
- Bookwala, J., Frieze, I. H., Smith, C., & Ryan, K. (1992). Predictors of dating violence: A multivariate analysis. Violence and Victims, 7, 297-311.
- Briere, J. (1995). Trauma symptom inventory professional manual. Odessa, FL: Psychological Assessment Resources, Inc.
- Briere, J., & Runtz, M. (1987). Post sexual abuse trauma: Data and implications for clinical practice. Journal of Interpersonal Violence, 2, 367-379.
- Browne, A., Miller, B., & Maguin, E. (1999). Prevalence and severity of lifetime physical and sexual victimization among incarcerated women. International Journal of Law and Psychiatry, 22, 301-322.
- Cascardi, M., O'Leary, K. D., Lawrence, E. E., & Schlee, K. A. (1995). Characteristics of women physically abused by their spouses and who seek treatment regarding marital conflict. Journal of Consulting and Clinical Psychology, 63:4, 616-623.
- Collins, M. E. (1998). Factors influencing sexual victimization and revictimization in a sample of adolescent mothers. Journal of Interpersonal Violence, 13, 3-24.

- Crowell, N. A., & Burgess, A. W. (1996). Understanding violence against women. Washington, DC: National Academy Press.
- Fergusson, D. M., Horwood, L. J., & Lynskey, M. T. (1997). Childhood sexual abuse, adolescent sexual behaviors, and sexual revictimization. Child Abuse & Neglect, 21:8, 789-803.
- Finkelhor, D., & Browne, A. (1985). The traumatic impact of child sexual abuse: A conceptualization. American Journal of Orthopsychiatry, 55, 530-541.
- Fleiss, J. L. (1981). Statistical methods for rates and proportions (2nd ed.). New York: John Wiley & Sons.
- Foo, L., & Margolin, G. (1995). A multivariate investigation of dating aggression. Journal of Family Violence, 10, 351-377.
- Fox, K. M., & Gilbert, B. O. (1994). The interpersonal and psychological functioning of women who experienced childhood physical abuse, incest, and parental alcoholism. Child Abuse and Neglect, 18, 849-858.
- Fromuth, M. E. (1986). The relationship of childhood sexual abuse with later psychological and sexual adjustment in a sample of college women. Child Abuse & Neglect, 10, 5-15.
- Gidycz, C. A., Coble, C. N., Latham, L., & Layman, M. J. (1993). Sexual assault experience in adulthood and prior victimization experiences: A prospective analysis. Psychology of Women Quarterly, 17, 151-168.
- Gidycz, C. A., Hanson, K., & Layman, M. J. (1995). A prospective analysis of the relationships among sexual assault experiences. Psychology of Women Quarterly, 19, 5-29.

- Gold, S. R., Sinclair, B. B., & Balge, K. A. (1999). Risk of sexual revictimization: A theoretical model. Aggression and Violent Behavior, 4, 457-470.
- Harney, P. A., & Muehlenhard, C. L. (1991). Factors that increase the likelihood of victimization. In A. Parrot & L. Bechhofer (Eds.), Acquaintance rape: The hidden crime (pp. 159-175). New York: Wiley & Sons.
- Hartstone, E., & Hansen, K. V. (1984). The violent juvenile offender: An empirical portrait. In R. A. Mathias, P. DeMuro, & R. S. Allinson (Eds.), Violent juvenile offenders: An anthology (pp.83-112). San Francisco: National Council on Crime and Delinquency.
- Herman, J. L. (1981). Father-daughter incest. Cambridge, MA: Harvard University Press.
- Himelein, M. J. (1995). Risk factors for sexual victimization in dating: A longitudinal study of college women. Psychology of Women Quarterly, 19, 31-48.
- Himelein, M. J., Vogel, R. E., & Wachowiak, D. G. (1994). Nonconsensual sexual experiences in precollege women: Prevalence and risk factors. Journal of Counseling and Development, 72:3/4, 411-415.
- Hotaling, G. T., & Sugarman, D. B. (1986). An analysis of risk markers in husband to wife violence: The current state of knowledge. Violence and Victims, 1, 101-124.
- Hotaling, G. T., & Sugarman, D. B. (1990). A risk marker analysis of assaulted wives. Journal of Family Violence, 5:1, 1-13.
- Humphrey, J. A., & White, J. W. (2000). Women's vulnerability to sexual assault from adolescence to young adulthood. Journal of Adolescent Health, 27, 419-424.
- Hyman, B. & Williams, L. M. (2001). Resilience among adult women survivors of child sexual abuse. Affilia Journal of Women and Social Work, 16, 198-219.

- James, J., & Meyerding, J. (1977). Early sexual experience and prostitution. American Journal of Psychiatry, 134, 1381-1385
- Jasinski, J. L., & Kaufman Kantor, G. (1998). Dynamics and risk factors in partner violence. In J. L. Jasinski & L. M. Williams (Eds.), Partner violence: A comprehensive review of 20 years of research (pp. 1-43). Thousand Oaks, CA: Sage Publications.
- Jehu, D. (1988). Beyond sexual abuse. New York: John Wiley and Sons.
- Kalmuss, D. (1984). The intergenerational transmission of marital aggression. Journal of Marriage and the Family, 46, 11-19.
- Kleinbaum, D. G. (1994). Logistic regression: A self-learning text. New York: Springer-Verlag.
- Koss, M. P., & Dinero, T. E. (1989). Discriminant analysis of risk factors for sexual victimization among a national sample of college women. Journal of Consulting and Clinical Psychology, 57, 242-250.
- Krahé, B., Scheinberger-Olwig, R., Waizenhöfer, E., & Kolpin, S. (1999). Childhood sexual abuse and revictimization in adolescence. Child Abuse and Neglect, 23, 383-394.
- Lewis, D. O., Mallouh, C., & Webb, V. (1989). Child abuse, delinquency, and violent criminality. In D. Cicchetti & V. Carlson (Eds.), Child maltreatment: Theory and research on the causes and consequences of child abuse and neglect (pp. 7078-721). New York: Cambridge University Press.
- Magdol, L., Moffitt, T., Caspi, A. & Silva, P. (1998). Developmental antecedents of partner abuse: A prospective-longitudinal study. Journal of Abnormal Psychology, 107, 375-389.
- Malinosky-Rummell, R., & Hansen, D. J. (1993). Long-term consequences of childhood physical abuse. Psychological Bulletin, 114, 68-79.

- Marshall, L. L., & Rose, P. (1987). Gender, stress and violence in the adult relationships of a sample of college students. Journal of Social and Personal Relationships, 4, 299-316.
- Mayall, A., & Gold, S. R. (1995). Definitional issues and mediating variables in the sexual revictimization of women sexually abused as children. Journal of Interpersonal Violence, 10, 26-42.
- McCahill, T., Meyer (Williams), L., & Fischman, A. S. (1979). The aftermath of rape, Lexington, MA: Lexington Books.
- Menard, S. (1995). Applied logistic regression analysis (Sage University Papers series on Quantitative Applications in the Social Sciences, 07-106). Thousand Oaks, CA: Sage.
- Merrill, L. L., Newell, C. E., Thomsen, C. J., Gold, S. R., Milner, J. S., Koss, M. P., & Rosswork, S. G. (1999). Childhood abuse and sexual revictimization in a female Navy recruit sample. Journal of Traumatic Stress, 12, 211-225.
- Messman, T. L., & Long, P. J. (1996). Child sexual abuse and its relationship to revictimization in adult women: A review. Clinical Psychology Review, 16, 397-420.
- National Research Council. (1993). Understanding child abuse and neglect. Washington, D. C.: National Academy Press.
- Neufeld, J., McNamara, J. R., & Ertl, M. (1999). Incidence and prevalence of dating partner abuse and its relationship to dating practices. Journal of Interpersonal Violence, 14, 125-137.
- Neumann, D. A., Houskamp, B. M., Pollock, V. E., & Briere, J. (1996). The long-term sequelae of childhood sexual abuse in women: A meta-analytic review. Child Maltreatment, 1, 6-16.

- Paperny, D. M., & Deisher, R. W. (1983). Maltreatment of adolescents: The relationship to a predisposition toward violent behavior and delinquency. Adolescence, 18, 499-506.
- Russell, D. E. H. (1986). The secret trauma: Incest in the lives of girls and women. New York: BasicBooks.
- Sanders, B., & Moore, D. L. (1999). Childhood maltreatment and date rape. Journal of Interpersonal Violence, 14, 115-124.
- Selzer, M. L. (1971). The Michigan Alcohol Screening Test: The quest for a new diagnostic tool. American Journal of Psychiatry, 127, 1653-1658.
- Siegel, J. A. (2000). Aggressive behavior among women sexually abused as children. Violence and Victims, 15, 235-255.
- Silbert, M. H., & Pines, A. M. (1981). Sexual child abuse as an antecedent to prostitution. Child Abuse and Neglect, 5, 407-411.
- Simons, R. L., Johnson, C., Beaman, J., & Conger, R. D. (1993). Explaining women's double jeopardy: Factors that mediate the association between harsh treatment as a child and violence by a husband. Journal of Marriage and the Family, 55, 713-723.
- Simons, R. C., & Whitbeck, L. B. (1991). Sexual abuse as a precursor to prostitution and victimization among adolescent and adult homeless women. Journal of Family Issues, 12, 361-379.
- Sugarman, D. B., & Hotaling, G. T. (1989). Dating violence: Prevalence, context, and risk markers. In M. A. Pirog-Good & J. E. Stets (Eds.), Violence in dating relationships: Emerging social issues (pp. 3-32). New York: Praeger.

- Tjaden, P., & Thoennes, N. (1998). Prevalence, incidence and consequences of violence against women: Findings from the National Violence Against Women Survey. Washington, D. C.: National Institute of Justice.
- Ullman, S. E., Karabatsos, G., & Koss, M. (1999). Alcohol and sexual assault in a national sample of college women. Journal of Interpersonal Violence, *14*, 603-625.
- Urquiza, A. J., & Goodlin-Jones, B. L. (1994). Child sexual abuse and adult revictimization with women of color. Violence and Victims, *9:3*, 223-232.
- Vissing, Y. M., Straus, M. A., Gelles, R. J., and Harrop, J. W. (1991). Verbal aggression by parents and psychosocial problems of children. Child Abuse and Neglect, *15*, 223-238.
- Vogel, R. E. & Himelein, M. J. (1995). Dating and sexual victimization: An analysis of risk factors among precollege women. Journal of Criminal Justice, *23*, 153-62.
- Walker, L. E. (1984). The battered woman syndrome. New York: Springer Publishing Company.
- West, C. M. (1998). Lifting the political "gag order:" Breaking the silence around partner violence in ethnic minority families. In J. L. Jasinski & L. M. Williams (Eds.), Partner violence: A comprehensive review of 20 years of research (pp. 184-209). Thousand Oaks, CA: Sage Publications.
- West, C. M., Williams, L. M., & Siegel, J. A. (2000). Adult sexual revictimization among black women sexually abused in childhood: A prospective examination of serious consequences of abuse. Child Maltreatment, *5*, 49-57.
- Widom, C. S. (1989). The cycle of violence. Science, *244*, 160-166.

- Widom, C. S., & Kuhns, J. B. (1996). Childhood victimization and subsequent risk for promiscuity, prostitution, and teenage pregnancy: A prospective study. American Journal of Public Health, 86, 1607-1612.
- Williams, L. M. (1994). Recall of childhood trauma: A prospective study of women's memories of child sexual abuse. Journal of Consulting and Clinical Psychology, 62, 1167-1176.
- Williams, L. M., Siegel, J. A., Banyard, V. L., & Mahoney, P. (1999). Adult memories and consequences of child sexual abuse: A longitudinal study. Durham: University of New Hampshire, Family Research Laboratory.
- Williams, L. M., Siegel, J. A., Hyman, B., & Jackson-Graves. (1993). Recovery from sexual abuse: A longitudinal study 1973-1990. Durham: University of New Hampshire, Family Research Laboratory.
- Williams, L. M., Siegel, J. A., & Pomeroy, J. J. (2000). Validity of women's self-reports of documented child sexual abuse. In A. Stone, & J. S. Turkkan (Eds.), The science of self-report: Implications for research and practice. Mahwah, NJ: Lawrence Erlbaum.
- Wyatt, G. E., & Riederle, M. (1994). Sexual harassment and prior sexual trauma among African-American and White American women. Violence and Victims, 9:3, 233-247.
- Wyatt, G. E., Guthrie, D., & Notgrass, C. M. (1992). Differential effects of women's child sexual abuse and subsequent sexual revictimization. Journal of Consulting and Clinical Psychology, 60:2, 167-175.

Biographical Information

Jane A. Siegel is Assistant Professor of Criminal Justice at Rutgers University in Camden, NJ. She is also an associate at the Center for Children and Childhood Studies at Rutgers, Camden and a research associate at the Stone Center of Wellesley College in Wellesley, MA. From 1996 until 2000, she was an Assistant Professor of Criminal Justice at Widener University in Chester, PA; her work on the current grant began while she was on the faculty at Widener. From 1997 to 2000, Dr. Siegel also served as president of New Directions for Women, a community-based residential program that is an alternative to incarceration for female offenders in Philadelphia. Dr. Siegel continues to serve as a member of the board of directors and is also a member of the board of the Crime Prevention Association of Philadelphia.

Dr. Siegel has been co-investigator and project director for a longitudinal study of the long-term consequences of child sexual abuse among a group of women and project director for a similar study of male survivors of child abuse. She is an author of several articles on this subject and has presented numerous papers focusing especially on the violent behavioral and criminal consequences of child abuse. Dr. Siegel received her B.A. from Drew University in Madison, NJ and her M.S. and Ph.D. in criminology from the University of Pennsylvania in Philadelphia, PA.

Linda Williams, Ph.D., is Director of Research at the Stone Center, and Co-Director of the National Violence Against Women Prevention Research Center at Wellesley Centers for Women, at Wellesley College. Dr Williams also has an appointment as Research Associate Professor at the Family Research Laboratory, University of New Hampshire, Durham. Dr. Williams has conducted research on violence, child sexual abuse, rape and women's mental health for the past 27 years and is the author of five books and many articles on sexual abuse, including *Partner Violence: A Comprehensive Review of 20 Years of Research* (1998), *Nursery Crimes: Sexual Abuse in Day Care* (1988) and the *Aftermath of Rape* (1979). She is co-editor, along with Dr. Victoria Banyard, of the book *Trauma and Memory*. She served on the National Research Councils' panel on Violence Against Women. Dr Williams has directed longitudinal research on violence prevention, violence against women, family violence, sex offenders, and the consequences of child abuse. She has directed research funded by the National Center on Child Abuse and Neglect, the National Institute of Mental Health, the U.S. Justice Department, private foundations, and is currently Principal Investigator for the Navy Family Study funded by the U.S. Department of the Navy. In 1995-96, she served as president of the American Professional Society on the Abuse of Children.

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