Journal of Traumatic Stress, Vol. 15, No. 3, June 2002, pp. 235–244 (© 2002)

Parental Caring as a Possible Buffer Against Sexual Revictimization in Young Adult Survivors of Child Sexual Abuse

M. Kay Jankowski,[1,2,6] Harold Leitenberg,[3] Kris Henning,[4] and Patricia Coffey[5]

This study examined whether parental caring provided a buffer against the revictimization effect. Nine hundred and seventy-four undergraduate women provided information about child sexual abuse, physical abuse, and whether they witnessed violence between their parents during childhood. They also reported whether they had ever been the victim of sexual assault in adulthood, and offered their perceptions of the degree of care they received as a child from each parent. Results indicated that women who had been sexually abused in childhood were twice as likely to be sexually assaulted in adulthood and that women with 2 or more types of childhood trauma were 3 times as likely to be sexually revictimized. Parental caring was not found to buffer against the revictimization effect.

KEY WORDS: child sexual abuse; sexual revictimization; sexual assault; parental caring; child physical abuse; witnessing domestic violence; childhood trauma.

One of the long-term adverse consequences of childhood abuse is that it increases the risk of sexual revictimization in adolescence and adulthood (Messman & Long, 1996; Muehlenhard, Higby, Lee, Bryan, & Dodrill, 1998). For example, research has consistently shown that women who were sexually abused as children are sexually assaulted in adulthood significantly more often than women who were never sexually abused as children (cf. Alexander & Lupfer, 1987; Fergusson, Horwood, & Lynskey, 1997; Fromuth, 1986; Gidycz, Coble, Latham, & Layman, 1993; Himelein, 1995; Koss & Dinero, 1989; Mandoki & Burkhart, 1989; Wind & Silvern, 1992; Wyatt, Guthrie, & Notgrass, 1992). Sexually abused girls also are more likely as adults to be victims of nonsexual dating or marital physical violence (cf. Briere & Runtz, 1988; Russell, 1986).

There is also evidence of an additive effect, that is, the likelihood of revictimization increases incrementally as a function of the number of different types of childhood abuse experienced. For example, Fox and Gilbert (1994) found that the greater the number of different traumatic childhood events experienced (sexual and physical abuse and parental alcoholism), the higher the likelihood of being sexually assaulted as an adult. Wind and Silvern (1992) and Moeller, Bachmann, and Moeller (1993) also found that combinations of childhood sexual and physical abuse increased the risk of later physical and sexual revictimization in adulthood above that of childhood sexual abuse alone or childhood physical abuse alone.

Although the perpetrator of a sexual assault is always responsible for its occurrence, women with a history of child abuse clearly are more vulnerable to later attacks in adulthood. Several theoretical models have been proposed

[1]Department of Psychiatry, Dartmouth Medical School, Lebanon, New Hampshire.
[2]The National Center for PTSD, Veterans Affairs Medical Center, White River Junction, Vermont.
[3]Department of Psychology, University of Vermont, Burlington, Vermont.
[4]Department of Criminology and Criminal Justice, University of Memphis, Memphis, Tennessee.
[5]Midwest Center for Human Services, Madison, Wisconsin.
[6]To whom correspondence should be addressed at National Center for PTSD (116D), VA Medical & Regional Office Center, 215 North Main Street, White River Junction, Vermont 05009; e-mail: kay.jankowski@dartmouth.edu.

0894-9867/02/0600-0235/1 © 2002 International Society for Traumatic Stress Studies

to account for the increased risk of revictimization among victims of child sexual abuse. Muehlenhard et al. (1998) and Russell (1986) described how Finkelhor and Browne's traumagenic dynamics of traumatic sexualization, betrayal, powerlessness, and stigmatization could place a woman at greater risk of being victimized in adolescence or adulthood (Finkelhor & Browne, 1985). Grauerholz (2000) offered an ecological model to show how intrapersonal, interpersonal, and sociocultural factors contribute to the increased risk for sexual assault among victims of sexual abuse in childhood. The handful of empirical studies examining mechanisms underlying the revictimization effect have identified such factors as increased number of sexual partners (Gidycz et al., 1993; Mandoki & Burkhart, 1989), poor recognition of risk (Meadows, Jaycox, Orsillo, & Foa, 1997; Wilson, Calhoun, & Bernat, 1999), self-blame (Arata, 2000), and posttraumatic stress symptoms (Arata, 2000; Koverola, Proulx, Battle, & Hanna, 1996).

It is important to learn what variables, if any, protect survivors of child abuse against sexual revictimization in adulthood. One possible ameliorating factor to consider is parental warmth and caring throughout childhood and adolescence. In the broader literature on children's resilience to many different kinds of negative experiences, studies have found that parental support and caring can have a protective impact against later psychopathology (e.g., Rutter, 1985; Werner & Smith, 1982). A warm and caring attitude from a parent presumably could counteract negative consequences of childhood abuse such as impaired self-image and self-efficacy. This, in turn, would be hypothesized to reduce the risk of being the victim of sexual assault in later adolescence or young adulthood.

In studies of the long-term effects of child sexual abuse, more attention has been paid to the additive corrosive effects of poor parenting than to the possible ameliorating effects of good parenting. It has long been known that child sexual abuse and poor parenting and attachment often overlap (cf. Briere, 1992; Briere & Elliott, 1993). Families of abuse victims tend to have greater problems including less cohesion, adaptiveness, and emotional engagement (Alexander & Lupfer, 1987), and greater conflict (Edwards & Alexander, 1992; Nash, Hulsey, Sexton, Harrelson, & Lambert, 1993) than do families without sexual abuse. Moreover, report of a poor relationship with one's father was associated with more severe psychiatric morbidity among women who were sexually abused as children (Romans, Martin, Anderson, O'Shea, & Mullen, 1995). Long and Jackson (1991) found that women who had been revictimized described their families as less cohesive and more conflictual than families of nonvictims and families of girls who reported child sexual abuse only. Koverola et al. (1996), however, found similar levels of family conflict and control between women victimized in childhood only and revictimized women, both of which were higher than for families of nonvictims. Mayall and Gold (1995) did not find that parental support predicted revictimization, but did predict sexual assault in late adolescence.

There has been debate about the extent to which the negative effects of family dysfunction supersede the negative effects of child sexual abuse (cf. Boney-McCoy & Finkelhor, 1996; Briere & Elliott, 1993; Nash et al., 1993; Rind, Tromovitch, & Bauserman, 1998). Evidence from the literature suggests, however, that both child sexual abuse and family factors contribute to adult maladjustment. Similarly, the effects of abuse, over and above the effects of poor parenting, contribute to being the victim of later sexual assault. Fromuth (1986) found that childhood sexual abuse continued to predict later rape but not other symptoms of psychopathology after controlling for parental support. Similarly, Fergusson et al. (1997) showed a significant relationship between child sexual abuse and subsequent adult sexual revictimization after controlling for parental attachment.

Neither of these studies, however, directly tested whether positive parenting buffered against the negative effects of child sexual abuse. Controlling for parenting in a covariance or regression analysis simply allows one to determine if child sexual abuse still accounts for any unique variance in predicting later assault when examined in conjunction with parenting or related family environment measures. The fact that sexual abuse may still have an effect after controlling for parenting does not, however, address the question of whether the extent of the negative effect might be ameliorated by parental caring. The question of interest here is whether parental warmth and caring by nonoffending parents serves as an antidote to child sexual abuse, reducing the otherwise higher risk of revictimization in adulthood.

In this study, we predicted that female respondents with a child sexual abuse history who reported experiencing high parental caring during childhood and early adolescence would not show the usual revictimization effect. In other words, they would have no greater incidence of later sexual victimization than a comparison group of women who were not sexually abused in childhood. In contrast, we expected that women with a sexual abuse history who did not report a particularly high level of parental warmth would show the usual sexual revictimization effect in later adolescence and young adulthood.

Because prior studies have shown that the risk of revictimization increases as a function of additional traumatic experiences in childhood (Fox & Gilbert, 1994;

Moeller et al., 1993; Wind & Silvern, 1992), we also examined in this study whether or not high parental caring would have a moderating effect in the face of multiple childhood traumatic experiences (childhood sexual abuse, witnessing domestic violence, and physical abuse).

Method

Participants and Procedure

A total of 974 undergraduate women from a New England university participated in this study. The mean age of the sample was 18.58 years ($SD = 1.95$). Seventy-eight percent of the women were in their 1st year of college, 15% were sophomores, 4% juniors, 2% seniors, and 1% identified themselves as nontraditional students. Family of origin SES for the sample as measured by the Hollingshead (1975) was 4.15 ($SD = 0.82$), falling in the range of smaller business owners and skilled manual workers. Ninety-five percent of the sample was Caucasian, which is consistent with the racial distribution of this university, and the surrounding community (United States Bureau of the Census, 1992).

Participants for this study were recruited from introductory psychology classes at the University of Vermont. Recruitment occurred over five consecutive semesters, and students were awarded extra credit points as compensation for their participation in this study. Although both men and women were asked to participate, only women participated in this study. For women and men combined, a total of 1,886 questionnaires were distributed and 84% were returned. The questionnaires were anonymous (course credit was obtained by turning in a separate card from the questionnaire).

Measures

Child Sexual Abuse

Child sexual abuse was measured as a dichotomous variable and defined as any sexual activity involving genital contact that occurred before the age of 16 (i.e., 15 or under) with either a perpetrator who was at least 5 years older than the respondent at the time or a perpetrator who was not 5 years older but who physically forced the respondent to engage in the sexual activity. This definition was designed to rule out consensual sex-play between children, but to consider as child sexual abuse any contact with someone 5 or more years older because of the power differential present in this age gap. We chose these age limits and age discrepancy because they are customary in studies of child sexual abuse (Finkelhor & Browne, 1985). In addition, while some research includes in the definition of child sexual abuse the showing or viewing of genitals, we restricted our sample to those who had physical contact with the perpetrator, such as being fondled or penetrated. The Childhood Sexual Experiences Scale (Coffey, Leitenberg, Henning, Turner, & Bennett, 1996) was used to gather descriptive information about the sexual abuse. This included the age the abuse occurred, relationship of the perpetrator to the respondent (e.g., acquaintance, teacher, parent) and the level of sexual contact.

Sexual Assault

Sexual assault in older adolescence/adulthood was measured as a dichotomous variable based on the response to the following question: "Since you turned 16, have you ever had to engage in any form of nonconsenting sexual contact because the other person threatened or used some degree of physical force. The other person could have been anyone, from a friend, or partner to a complete stranger." This is a more restrictive definition of sexual assault than is sometimes used in the literature because it excluded other forms of coercion that do not involve physical force, for example, giving alcohol or drugs. We also ascertained the relationship of the perpetrator to the respondent (e.g., acquaintance vs. stranger).

Child Physical Abuse

Childhood physical abuse was measured as a dichotomous variable by asking respondents the following question: "Now taking your whole childhood into account, did you ever receive physical injuries from the discipline used by your parents (that is, bruises, welts, cuts, lacerations, burns, broken bones, dental injuries, head injuries, etc.) before age 16."

Witnessing Interparental Physical Conflict

Witnessing interparental physical conflict was measured with the Physical Aggression Scale of the Conflict Tactics Scale (CTS; Straus, 1979). The CTS has been widely used in the family violence literature and is reported to have good internal consistency (.70–.88; Bulcroft & Straus, 1975; Straus, 1990). The specific items from the CTS used in this study were (1) slapped; (2) kick, bit, hit with a fist; (3) hit (or tried to hit) with something; (4) beat up; (5) choked; (6) threatened with a gun or knife; and (7) used a knife or gun. Respondents rated for each parent how many times before they turned age 16 they had ever

seen or heard their father/mother use each item against the other parent. A 7-point frequency scale was provided for responding to the items, with anchors ranging from 0 (*never*) to 6 (*more than 20 times*). For purposes of this study, respondents were categorized as having witnessed interparental physical aggression if they reported having observed at least one incident between their parents involving physical conflict before age 16.

Parental Caring

Perceived parental caring and warmth received during childhood (up to age 16) was assessed using the 12-item Parental Caring subscale of the Parental Bonding Instrument (PBI; Parker, Tupling, & Brown, 1979). The PBI is a widely used measure of perceived caring, warmth, support, and bonding and measures parental behaviors and attitudes. Examples of items on the scale are "spoke to me with a warm and friendly voice" and "was affectionate to me." Participants responded to what extent the items were like or unlike their mother or father during their childhood. They responded to the items separately for each parent, using a 4-point scale, from *very like* to *very unlike* their parent. The validity of this measure is supported by the finding that respondents' ratings of parents correlate strongly with those of their siblings and parents' self-reports (Parker, 1981). The internal consistency of the items is excellent ($\alpha = .96$; Parker, 1983). The PBI also has test-retest reliability of .76 over a 3-week period and split-half reliability of .88 (Parker et al., 1979). Scores were stable over 3 years (Gotlib, Mount, Cordy, & Whiffen, 1988). In the present study, Cronbach's alpha was .91–.93 for maternal and paternal caring respectively.

Results

Child Sexual Abuse

One hundred and seventy-four women (18%) in this sample reported experiencing sexual abuse as a child. The mean age at onset of the sexual abuse was 11.27 years ($SD = 3.86$), and abuse incidents occurred an average of 3.68 times ($SD = 3.43$). The sexual abuse lasted on average 2.78 years ($SD = 1.97$). Thirty-eight percent reported either attempted or completed intercourse, 16% reported digital penetration, and the remainder of these incidents consisted of oral sex (6%) and sexual fondling (41%). Thirteen percent of these women reported being abused by a parent or step-parent, 29% were abused by another relative, 49% were abused by another person (e.g., boyfriend/girlfriend of parent, family friend, or acquaintance), and 9% were abused by a stranger.

Sexual Revictimization

With respect to sexual assault in late adolescence and adulthood, 134 women (14%) reported that they had been the victim of sexual assault since age 16. Women reported a total of 200 sexual assault incidents (many women reported having been assaulted more than once). Of the 200 total assaults, 6% were by a "relative," 28% by a "boyfriend," 16% by a "date," 19% by a "nonromantic friend," 24% by an "acquaintance," and 8% by a "stranger."

We next examined whether sexual abuse as a child was associated with being the victim of sexual assault after age 16. Twenty-three percent of those who had experienced child sexual abuse also reported being the victim of sexual assault as an older adoescent or as an adult compared with 12% of those who had not been sexually abused as children, $\chi^2(1, N = 954) = 12.72$, $p < .001$. Because participants' age differed as a function of sexual abuse, $F(1, 963) = 6.19$, $p < .01$, with mean age of sexually abused women being 18.91 versus 18.51 for women not having been abused, we controlled for participants' current age in subsequent analyses. The effects of child sexual abuse remained after controlling for age, $\chi^2(1, N = 954) = 9.81$, $p < .01$. The odds of being sexually assaulted nearly doubled if one had been sexually abused (odds ratio [OR] = 1.97, 95% confidence interval [CI] = 1.28–2.99).

We also examined whether any of the characteristics of the child sexual abuse, including mean age at which the abuse began, duration of the abuse, frequency of incidents, nature of sexual contact, and whether the perpetrator was a relative or not, predicted later sexual assault. Using logistic regression, we found that none of these abuse characteristics were associated with later sexual assault, $\chi^2(5, N = 139) = 4.66$, *ns*.

Parental Caring as a Buffer Against Sexual Revictimization

Next, we addressed the question of whether parental warmth and caring could serve as a buffer against the revictimization effect. We examined perceived caring from mothers and fathers separately. We also removed all participants who reported sexual abuse by a parent ($n = 21$) to be certain that parental care was reported only for nonsexually offending parents. To determine if there was a buffering effect, we first divided the sample by way of a median split for both maternal and paternal caring. This was done for descriptive purposes to be able to examine

more clearly the percentages of women who were revictimized as a function of high or low parental care status. Those falling below the median formed one group (mean score for this group for maternal care was 3.07, $SD = 0.62$, $n = 455$; mean score for this group for paternal care was 2.58, $SD = 0.60$, $n = 411$). All those falling above the median comprised the other group ($M = 3.95$, $SD = 0.07$, $n = 396$ for maternal care, and $M = 3.79$, $SD = 0.17$, $n = 443$ for paternal care). Those subjects falling at the median were removed from the analysis ($n = 74$ for maternal care and $n = 33$ for paternal care). As can be seen, the "high" groups were near the top of the scale and could not be much higher (possible range was 1–4). Although the "low" groups were not particularly low in an absolute sense, the high and low groups were still quite disparate, $F(1, 850) = 797.18$, $p < .001$, for maternal care and $F(1, 853) = 1698.45$, $p < .001$, for paternal care.

The percentage of those women who reported having been sexually revictimized were similar across both high and low perceived caring from mothers. In the high maternal care group, 27% of those who were sexually abused in childhood reported later sexual assault after age 16 compared with 12% of women who had not been sexually abused in childhood. In the low maternal care group, 24% of women sexually abused during childhood reported subsequent sexual assault compared with 13% of women who had not been sexually abused in childhood. Similarly, there was no apparent buffering effect against revictimization as a function of high perceived paternal caring. In the high paternal care group, 17% of those women who were sexually abused in childhood were later sexually assaulted compared with 8% of women who had not been sexually abused in childhood. In the low paternal care group, the respective percentages of sexual assault for women with and without a child sexual abuse history were 27% versus 15%.

To test a buffering effect statistically, moderating analyses were performed with the full sample and using maternal and paternal care as continuous variables, as indicated by Baron and Kenny (1986). According to Baron and Kenny (1986), the most appropriate way to test a buffering or moderating hypothesis is to determine if there is a significant interaction between the "independent" variable (child sexual abuse in this study) and the hypothesized moderating variable (parental warmth and caring in this study). Logistic regression was conducted with a product term representing an interaction between two variables. In addition, as recommended by Aiken and West (1991), the independent variables and the moderator variables were centered to address the problem of multicollinearity between the main effects and the interaction terms. Analyses were conducted separately for maternal and paternal caring. Specifically, four variables were entered into each model as predictors, including child sexual abuse, maternal or paternal caring, a variable representing the interaction between child sexual abuse and maternal or paternal caring, and participants' current age. As can be seen in Table 1, although the overall model for maternal care was significant, $\chi^2(4, N = 923) = 19.90$, $p < .001$, the interaction between child sexual abuse and maternal care did not significantly predict being the victim of sexual assault after age 16. As expected, there was a main effect for child sexual abuse, such that having been sexually abused more than doubled the odds of being sexually assaulted after age 16. Women who reported sexual assault were also more likely to be older. There was no significant main effect for maternal care.

Table 1. Logistic Regression Analysis for Parental Care as a Buffer Against the Revictimization Effect for Sexual Abuse Only

Variable	*B*	OR	CI
Maternal care			
Child sexual abuse	0.73	2.07**	1.30–3.22
Maternal care	−0.26	0.77	0.57–1.06
Child Sexual Abuse × Maternal Care	0.06	1.06	0.58–1.96
Age	0.08	1.09*	1.01–1.1
Paternal care			
Child sexual abuse	0.69	1.99**	1.20–3.19
Paternal care	−0.40	0.67*	0.52–0.87
Child Sexual Abuse × Paternal Care	−0.17	0.85	0.48–1.48
Age	0.08	1.08*	1.00–1.17

Note. OR = odds ratio. CI = 95% confidence interval.
$^*p < .05$. $^{**}p < .01$.

The overall model for paternal care was also significant, $\chi^2(4, N = 872) = 28.12$, $p < .001$, but similar to the model for maternal care, the interaction between paternal care and child sexual abuse was not significant. Both child sexual abuse and paternal care significantly predicted women's sexual assault during late adolescence or adulthood. In other words, regardless of paternal parental care scores, women who had been sexually abused in childhood were more likely to be sexually assaulted after age 16. Similarly, regardless of abuse history, the greater the amount of perceived paternal care, the less likely women were to have been sexually assaulted after age 16.

Multiple Abusive Experiences and Sexual Revictimization

In addition to the above analyses, we also examined the additive effects of multiple childhood abusive/traumatic experiences on likelihood of being sexually assaulted during older adolescence and adulthood. Three childhood abusive experiences in particular were identified: sexual

abuse, physical abuse, and witnessing interparental physical conflict. Two hundred and forty-six women (26%) in this sample reported that they had experienced only one of these events during childhood. (Twelve percent experienced child sexual abuse only; 5% experienced physical abuse only, and 8% witnessed domestic violence only.) Seventy-five women (8%) reported having experienced two or more of these events. Fifteen women (1.5%) experienced both sexual and physical abuse, 21 (2.2%) experienced sexual abuse and witnessed domestic violence, 25 (2.6%) experienced physical abuse and witnessed violence between their parents, and 14 women (1.4%) experienced all three childhood abusive events.

Likelihood of sexual victimization as an older adolescent or young adult increased incrementally as a function of additive abusive/traumatic experiences during childhood, $\chi^2(2, N = 934) = 32.57$, $p < .001$. Thirty-one percent of the sample that had experienced two or three types of childhood abuse were sexually victimized in older adolescence or adulthood compared with 19% of women who had experienced one type of abuse only and 10% of women with none of these experiences in their histories. Current age of participants and parents' SES differed according to endorsement of multiple traumatic experiences such that the greater the amount of trauma endorsed, the greater the current age, $F(2, 942) = 8.17$, $p < .001$, and the lower the SES, $F(2, 933) = 8.51$, $p < .001$. Therefore, current age and parents' SES were controlled for with logistic regression. The effects of multiple types of childhood abusive experiences on sexual revictimization remained after controlling for these variables, $\chi^2(3, N = 925) = 43.94$, $p < .001$. With every increase in number of childhood traumas experienced, the odds of sexual assault during late adolescence and adulthood doubled (OR = 2.14; CI = 1.61–2.76).

Parental Caring as a Buffer Against the Effects of Additive Childhood Abuse on Sexual Revictimization

We also examined whether maternal or paternal warmth and caring could serve as a buffer against the increased likelihood of being the victim of sexual assault as a function of experiencing multiple types of abuse during childhood. As can be seen in Table 2, the percentage of women who reported having been sexually assaulted since age 16 increased incrementally according to number of different kinds of childhood abuse experienced, regardless of whether they perceived either their mother or their father as having been especially warm and caring.

We tested this statistically by way of logistic regression using a continuous measure of maternal and paternal care and a product term representing an interaction between two variables, as previously described. We examined separate models for maternal and paternal care. Specifically, five variables were entered into each model as predictors, including childhood abuse (either none, one, or two or three types), maternal or paternal care as a continuous variable, and a variable that represented the interaction of childhood abuse and parental care. In addition, women's current age and parents' SES were entered because of the fact that both variables were correlated with number of traumas experienced. As can be seen in Table 3, although the overall model for maternal care was significant $\chi^2(5, N = 905) = 43.58$, $p < .001$, the interaction between child sexual abuse and maternal care did not significantly predict being the victim of sexual assault.

As expected, there was a main effect for additive traumas such that with each additional type of abuse experienced, the likelihood of being the victim of sexual assault more than doubled. There was no main effect for maternal caring.

Findings for paternal care were similar to those for maternal care. The overall model for paternal care was significant $\chi^2(5, N = 860) = 48.93$, $p < .001$, but the interaction between child sexual abuse and paternal caring was not predictive of later sexual assault. There was a main effect for additive traumas, and paternal caring significantly predicted sexual assault.

Table 2. Percentage of Women Sexually Assaulted During Older Adolescence and Adulthood as a Function of Number of Different Types of Childhood Trauma and Parental Caring

Childhood Traumas	Maternal care (%)		Paternal care (%)	
	High (n = 385)	Low (n = 446)	High (n = 428)	Low (n = 456)
None	10.8	9.7	7.2	12.6
One trauma	20.2	19.5	15.1	20.3
Two or three traumas	50.0	32.1	22.2	32.3

Table 3. Logistic Regression Analysis for Parental Care Against the Revictimization Effect for Additive Childhood Traumas

Variable	B	OR	CI
Maternal care			
Child traumas	0.77	2.16***	1.6–2.92
Maternal care	−0.19	0.83	0.59–1.18
Child Traumas × Maternal Care	0.16	1.17	0.80–1.73
Age	0.09	1.09*	1.01–1.18
Parents' SES	0.40	1.50	1.16–1.95
Paternal care			
Child traumas	0.65	1.92***	1.40–2.62
Paternal care	−0.40	0.67**	0.57–0.89
Child Traumas × Paternal Care	0.06	1.06	0.74–1.52
Age	0.08	1.09*	1.00–1.18
Parents' SES	0.51	1.66	1.27–2.21

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

Discussion

This study found a robust sexual revictimization effect; that is, women who were sexually abused in childhood were significantly more likely to be the victim of sexual assault during older adolescence or young adulthood than were women without a history of child sexual abuse. This finding replicates prior research that also has found a strong association between child sexual abuse and later victimization (for reviews, see Messman & Long, 1996; Muehlenhard et al., 1998). Moreover, an additive effect of childhood trauma was found such that risk for sexual victimization increased according to number of different types of trauma experienced. Although the effects of multiple traumas have been examined less frequently than the effects of child sexual abuse alone, results from this study are consistent with prior studies that have found that childhood physical and sexual abuse combined predict greater risk for sexual and physical victimization during adulthood than either abuse experience alone (Fox & Gilbert, 1994; Moeller et al., 1993; Wind & Silvern, 1992). This study, however, was the first to examine the additive effects of sexual abuse, physical abuse, and witnessing interparental violence as a child on risk for subsequent sexual victimization. Women who experienced two or more of these types of childhood abuse were three times as likely to be sexually assaulted in late adolescence and young adulthood compared with women with none of these experiences in their history.

Parental caring was examined in this study as a potential buffer or antidote to the increased risk for later sexual assault associated with child sexual abuse. Because parental caring and warmth can sometimes have a protective effect against general psychopathology in the face of various negative childhood experiences (e.g., Rutter, 1985), we anticipated that high levels of parental warmth and support might also protect against the revictimization effect. But this was not the case in this sample; high levels of perceived caring from mothers and fathers did not buffer against the increased risk of later sexual revictimization associated with either child sexual abuse alone or additive childhood traumas. In other words, even in a sample of young college women who reported very high levels of parental caring and who come from relatively high SES families, parental caring was not able to protect against the increased likelihood of revictimization among childhood abuse survivors. These findings are in contrast to research that has found positive effects of parenting on women's general psychological adjustment in adulthood following a history of child sexual abuse (Edwards & Alexander, 1992; Harter, Alexander, & Neimeyer, 1988; Wind & Silvern, 1994). Studies also have found protective effects of parental support following disclosure of child sexual abuse on women's later psychological adjustment (Everill & Waller, 1995; Wyatt & Mickey, 1988).

A critical question, therefore, is why positive aspects of parenting seem to buffer against harm to psychological adjustment in general but not against revictimization. It may be that risk for revictimization is influenced more by factors specific to the way that child sexual abuse, and other traumatic experiences in childhood, affect the development of one's sexuality and formation of dating relationships. Caring and warm parenting may be less able to counteract these effects compared to more general psychological adjustment because sexual attitudes, feelings, and behaviors are more private concerns that usually are not shared with parents either in childhood or in later adolescence and adulthood. In addition, the traumagenic dynamics of child sexual abuse originally described by Finkelhor and Browne (1985), namely feelings of self-blame, stigma, powerlessness, betrayal, and sexual objectification, have been shown to contribute to the revictimization effect (Muehlenhard et al., 1998). It may be that parents have only limited ability to strongly influence or change these dynamics. The link between child sexual abuse and later sexual assault also may be accounted for partly by emotional avoidance strategies, such as dissociation and numbing, that survivors may have developed originally to cope with their earlier sexual abuse. They presumably would influence risk for revictimization through their effects on later risk recognition (Irwin, 1999; Meadows et al., 1997; Wilson et al., 1999). General parental caring may not be able to effectively counter these coping strategies in this context. These explanations, however, are offered with caution in light of the fact that this study did not examine these possible mechanisms empirically.

It is also important to consider the impact of other risk factors for sexual assault in adolescence and adulthood that may be more proximal and not as readily moderated by parental caring and support. Both increased sexual activity and alcohol use are associated with increased vulnerability for rape (Koss & Dinero, 1989) and may be more influenced by peers than by any parental factors. In addition, Grauerholz (2000) argues that revictimization must be understood not just in terms of intrapersonal and interpersonal dynamics related to abuse situations, but also to other factors such as sociocultural norms and influences at the larger social systems level including work, social networks, and community. For example, she argues that women who have been abused as children experience greater social disadvantage and isolation that could place them at increased risk of experiencing violence. Parenting would not be expected to moderate such factors that might be related to revictimization.

This study also found that not only child sexual abuse alone but additive traumas of physical abuse and witnessing domestic violence also were correlated with increased risk for later sexual assault. This would suggest that the traumagenic dynamics of child sexual abuse and emotional avoidance strategies that may increase risk for revictimization are applicable also to other forms of childhood trauma. It certainly would not be a surprise to find that feelings of betrayal, powerlessness, stigma, and self-blame result from child physical abuse and witnessing domestic violence just as they do from sexual abuse. If these dynamics indeed partly mediate the revictimization effect, it would also follow that experiencing multiple types of abuse would make one especially vulnerable to revictimization. The link between witnessing violence between one's parents and later sexual victimization, in particular, could be accounted for by greater desensitization to violence associated with witnessing physical conflict between one's parents, which in turn could result in impaired recognition of risk cues.

Although not the main focus of this study, an unexpected finding was that perceived paternal but not maternal caring had a direct relationship to the likelihood of being sexually assaulted in late adolescence and young adulthood regardless of the respondent's child sexual abuse history. Higher perceived paternal caring was associated with a lower incidence of sexual assault after age 16. It may be that women who receive high warmth and caring from their fathers have a better model of male behavior and therefore may be less likely to become involved with men who are assaultive. A more secure attachment to their fathers may also make women less fearful of rejection by men and therefore more secure in asserting their will in early dating interactions when most acquaintance and "date" rapes occur.

This study has some limitations that are important to consider. First, the sample consisted of college women who were predominantly Caucasian and from relatively high SES backgrounds, thereby limiting the generalizability of the findings to other populations. Moreover, the mean age of the sample was between 18 and 19 years which allows only approximately 2–3 years for nonchildhood revictimization to occur. However, given that college students comprise a large segment of the young adult population and are a group considered at risk for sexual assault (for reviews, see Bohmer & Parrot, 1993; Schwartz & DeKeseredy, 1997), they are an important group to include in studies of sexual revictimization. In light of this study's findings that the revictimization effect was unaltered by extremely high parental caring scores, we would predict that the same result would also be found in an older and more ethnically and SES diverse sample. But this remains an empirical question requiring further study.

It could also be argued that because the parental warmth and caring variable was quite skewed in this sample, the ability to detect a moderating effect may have been reduced, in that a much lower parental caring group could have had an even greater revictimization effect. However, the main question in this study is not whether sexual revictimization would still be greater with lower caring parents. Instead, the question is whether high parental caring can prevent the revictimization effect following child sexual abuse. Our high parental caring abused group could not have had a much higher parental caring score (mean of 3.95 on a 4-point scale for mothers and 3.79 for fathers), yet they were still sexually assaulted in later adolescence and young adulthood twice as often as the comparison high parenting group who had not been sexually abused in childhood. We also compared the lowest quartile and highest quartile on maternal and paternal care to create more extreme groups. Unfortunately this reduced the sample size enough to prohibit a statistical analysis. By observation, however, the percentage differences in sexual assault in late adolescence and young adulthood for formerly abused and nonabused groups were very similar to the percentages attained using a median split for both maternal and paternal care.

Future research needs to consider whether other dimensions of parenting, especially following disclosure of sexual abuse, could have a more protective effect against later sexual revictimization. If disclosure does take place, this could be a critical period for parental intervention. Also, although the Parental Caring subscale of the PBI has been shown to be an important aspect of parenting, by no means do we suggest that it is the only dimension of parenting to consider.

Another limitation of this study is the use of a single question to measure sexual assault in late adolescence/adulthood. Studies have shown that use of multiple questions using behavioral anchors to measure different types of sexual assault experiences results in a more accurate estimation and higher prevalence of sexual assault (Fisher, Cullen, & Turner, 2000; Koss & Dinero, 1989). The wording of the question used in this study likely provides a conservative estimate, particularly as it specifies physical force as the criterion for defining sexual assault.

An additional limitation of this study is its retrospective design and potential for biased recall of childhood abuse. Women who have been sexually victimized since age 16 may be more likely to report having experienced a childhood trauma because of saliency. Alternatively, it could be the case that women who were abused during childhood would be less likely to admit to later

assault even in an anonymous questionnaire because of feelings of shame about their victimization experiences. There is no way of knowing how much of either possible bias was in effect or whether they may have canceled each other out. Prospective research in which children would be followed beginning in childhood, when the trauma first occurred, and assessed routinely thereafter through adolescence and adulthood, would help to better understand what might be protective versus exacerbating factors associated with risk for subsequent victimization. Even such a design, however, would be limited because only a minority of children disclose their abuse during childhood and thus may not be representative of abused children in general.

Prior studies have tended to control for negative parenting and family dysfunction in order to examine the unique effects of childhood abuse. This study is the first to address the question of whether high levels of warm and supportive parenting as perceived by the child could actually protect or buffer against the increased risk for later sexual victimization associated with childhood trauma. Unfortunately it failed to find any evidence that it could. Additional research is strongly needed to better understand the mechanisms that underlie the link between childhood traumatic experiences and later victimization in adolescence and adulthood, and to identify which factors protect children from this potential outcome of abuse.

Acknowledgment

This study was supported in part by the Child and Adolescent Psychology Training and Research Foundation.

References

Aiken, L. S., & West, S. G. (1991). *Multiple regression: Testing and interpreting interactions*. Newbury Park, CA: Sage.

Alexander, P. C., & Lupfer, S. L. (1987). Family characteristics and long-term consequences associated with sexual abuse. *Archives of Sexual Behavior, 16,* 235–245.

Arata, C. M. (2000). From child victim to adult victim: A model for predicting sexual revictimization. *Child Maltreatment, 5,* 28–38.

Baron, R. M., & Kenny, D. A. (1986). The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology, 51,* 1173–1182.

Bohmer, C., & Parot, A. (1993). *Sexual assault on campus*. New York: Lexington Books.

Boney-McCoy, S., & Finkelhor, D. (1996). Is youth victimization related to trauma symptoms and depression after controlling for prior symptoms and family relationships: A longitudinal, prospective study. *Journal of Consulting and Clinical Psychology, 64,* 1406–1416.

Briere, J. (1992). *Child abuse trauma: Theory and treatment of the lasting effects*. Newbury Park, CA: Sage.

Briere, J., & Elliott, D. M. (1993). Sexual abuse, family environment, and psychological symptoms: On the validity of statistical control. *Journal of Consulting and Clinical Psychology, 61,* 284–288.

Briere, J., & Runtz, M. (1988). Symptomatology associated with childhood sexual victimization in a nonclinical adult sample. *Child Abuse and Neglect, 12,* 51–59.

Bulcroft, R., & Straus, M. (1975). *Validity of husband, wife, and child reports of intrafamily violence and power* (mimeographed paper v16). Durham, England: Family Violence Research Program, University of New Hampshire.

Coffey, P., Leitenberg, H., Henning, K., Turner, T., & Bennett, R. T. (1996). The relation between methods of coping during adulthood with a history of child sexual abuse and current psychological adjustment. *Journal of Consulting and Clinical Psychology, 64,* 1090–1093.

Edwards, J. J., & Alexander, P. C. (1992). The contribution of family background to the long-term adjustment of women sexually abused as children. *Journal of Interpersonal Violence, 7,* 306–320.

Everill, J., & Waller, G. (1995). Disclosure of sexual abuse and psychological adjustment in female undergraduates. *Child Abuse and Neglect, 19,* 93–100.

Fergusson, D. M., Horwood, L. J., & Lynskey, M. J. (1997). Childhood sexual abuse, adolescent sexual behaviors, and sexual revictimization. *Child Abuse and Neglect, 21,* 789–803.

Finkelhor, D., & Browne, A. (1985). The traumatic impact of child sexual abuse: A conceptualization. *American Journal of Orthopsychiatry, 55,* 530–541.

Fisher, B. S., Cullen, F. T., & Turner, M. G. (2000). *The sexual victimization of college women* (NCJ 182369). Washington, DC: U.S. Department of Justice.

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 and 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. *Psychology of Women Quarterly, 17,* 151–168.

Gotlib, I. H., Mount, J. H., Cordy, N. I., & Whiffen, V. E. (1988). Depressed mood and perception of early parenting: A longitudinal investigation. *British Journal of Psychiatry, 152,* 24–27.

Grauerholz, L. (2000). An ecological approach to understanding sexual revictimization: Linking personal, interpersonal, and sociocultural factors and processes. *Child Maltreatment, 5,* 5–17.

Harter, S., Alexander, P. C., & Neimeyer, R. A. (1988). Long-term effects of incestuous child abuse in college women: Social adjustment, social cognition, and family characteristics. *Journal of Consulting and Clinical Psychology, 56,* 5–8.

Himelein, M. J. (1995). Risk factors for sexual victimization in dating: A longitudinal study. *Psychology of Women Quarterly, 10,* 31–48.

Hollingshead, A. (1975). *Four factor index of social status*. Unpublished manuscript, Yale University, New Haven, CT.

Irwin, H. J. (1999). Violent and nonviolent revictimization of women abused in childhood. *Journal of Interpersonal Violence, 14,* 1095–1110.

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.

Koverola, C., Proulx, J., Battle, P., & Hanna, C. (1996). Family functioning as predictors of distress in revictimized sexual abuse survivors. *Journal of Interpersonal Violence, 11,* 263–280.

Long, P. J., & Jackson, J. L. (1991). Children sexually abused by multiple perpetrators: Familial risk factors and abuse characteristics. *Journal of Interpersonal Violence, 6,* 147–159.

Mandoki, C. A., & Burkhart, B. R. (1989). Sexual victimization: Is there a vicious cycle? *Violence and Victims, 4,* 179–191.

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.

Meadows, E., Jaycox, L., Orsillo, S., & Foa, E. (1997, November). *The impact of assault on risk recognition in ambiguous situations.* Poster session presented at the annual meeting of the Association for the Advancement of Behavior Therapy, Miami Beach, FL.

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.

Moeller, T. P., Bachmann, G. A., & Moeller, J. R. (1993). The combined effects of physical, sexual, and emotional abuse during childhood: Long-term health consequences for women. *Child Abuse and Neglect, 17,* 623–640.

Muehlenhard, C. L., Higby, B. J., Lee, R. S., Bryan, T. S., & Dodrill, W. A. (1998). The sexual revictimization of women and men sexually abused as children: A review of the literature. *Annual Review of Sex Research, 9,* 177–223.

Nash, M. R., Hulsey, T. L., Sexton, M. C., Harrelson, T. L., & Lambert, W. (1993). Long-term sequelae of childhood sexual abuse: Perceived family environment, psychopathology, and dissociation. *Journal of Consulting and Clinical Psychology, 61,* 276–283.

Parker, G. (1981). Parental reports of depressives: An investigation of several explanations. *Journal of Affective Disorders, 3,* 131–140.

Parker, G. (1983). *Parental overprotection: A risk factor in psychosocial development.* New York: Grune & Stratton.

Parker, G., Tupling, H., & Brown, L. (1979). A parental bonding instrument. *British Journal of Medical Psychology, 52,* 1–10.

Rind, B., Tromovitch, P., & Bauserman, R. (1998). A meta-analytic examination of assumed properties of child sexual abuse using college samples. *Psychological Bulletin, 24,* 22–53.

Romans, S. E., Martin, J. L., Anderson, J. C., O'Shea, M. L., & Mullen, P. E. (1995). Factors that mediate between child sexual abuse and adult psychological outcome. *Psychological Medicine, 25,* 127–142.

Russell, D. E. H. (1986). *The secret trauma: Incest in the lives of girls and women.* New York: Basic Books.

Rutter, M. (1985). Resilience in the face of adversity: Protective factors and resistance to psychiatric disorders. *British Journal of Psychiatry, 147,* 598–611.

Schwartz, M. D., & DeKeseredy, W. S. (1997). *Sexual assault on the college campus.* Thousand Oaks, CA: Sage.

Straus, M. (1979). Measuring intrafamily conflict and violence: The Conflict Tactics Scales. *Journal of Marriage and the Family, 41,* 75–88.

Straus, M. (1990). Measuring intrafamily conflict and violence: The Conflict Tactics Scales. In M. Straus & R. Gelles (Eds.), *Physical violence in American families: Risk factors and adaptations to violence in 8,145 families* (pp. 29–44). New Brunswick, NJ: Transaction Publishers.

United States Bureau of the Census. (1992). *1990 Census of housing: General housing characteristics, Vermont* (GPO Publication No. 92-0508-PC). Washington, DC: U.S. Department of Commerce, Economics, and Statistics Administration, Bureau of the Census.

Werner, E. E., & Smith, R. S. (1982). *Vulnerable but invincible: A study of resilient children.* New York: McGraw-Hill.

Wilson, A. E., Calhoun, K. S., & Bernat, J. A. (1999). Risk recognition and trauma-related symptoms among sexually revictimized women. *Journal of Consulting and Clinical Psychology, 67,* 705–710.

Wind, T. W., & Silvern, L. (1992). Type and extent of child abuse as predictors of adult functioning. *Journal of Family Violence, 7,* 261–281.

Wind, T. W., & Silvern, L. (1994). Parenting and family stress as mediators of the long-term effects of child abuse. *Child Abuse and Neglect, 18,* 439–453.

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,* 167–173.

Wyatt, G. E., & Mickey, M. R. (1988). Ameliorating the effects of child sexual abuse: An exploratory study of support by parents and others. *Journal of Interpersonal Violence, 2,* 403–414.