Exposure to parental domestic violence in childhood is associated with long-term psychological maladjustment. Although previous studies controlled for childhood physical abuse, it is unclear how the coexisting risk factors of sexual abuse and parental substance use contribute to psychopathology. Questionnaires assessing childhood risk factors and current symptoms were completed by 131 college women. We compared a nonwitness control group with two groups exposed to moderate or to severe marital violence. Witnesses of marital violence experienced more sexual and physical abuse and more parental substance use in childhood than did nonwitnesses and there was more violence in their own dating relationships, even after controlling for other risk factors. Depression, trauma symptoms, antisocial behaviors, and suicidal behaviors were related to childhood experiences of sexual and physical abuse. The need for future research to examine multiple childhood stressors simultaneously is discussed.

Long-Term Psychological Consequences in Women of Witnessing Parental Physical Conflict and Experiencing Abuse in Childhood

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Two to three million American households experience parental physical conflict every year (Van Hasselt, Morrison, Bellack, & Hersen, 1988). Carlson (1984) estimated that each year, approximately 3.3 million children between the ages of 3 and 17 years in the United States are exposed to at least one violent incident between their parents. Surveys suggest that between 13% and 27% of adults recall witnessing physical conflict between their parents (Forsstrom-Cohen & Rosenbaum, 1985; Straus, 1992).

The child abuse literature has described witnessing marital violence as a traumatic event in which the child experiences overwhelming powerlessness

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and terror (Peled, Jaffe, & Edleson, 1995; Straus, 1992). Although the child may not be the direct victim, exposure to uncontrollable violence may have negative psychological outcomes similar to experiencing other childhood traumas, such as sexual or physical abuse. In the short term, witnessing parental domestic violence is associated with higher levels of aggression, passivity, withdrawal, somatic symptoms, anxiety, and suicidal gestures (Carlson, 1984; Hughes, 1988; McDonald & Jouriles, 1991).

In spite of the high prevalence and the documented short-term effects of witnessing marital violence, the long-term psychological consequences of witnessing parental physical conflict have not received much attention. Only a handful of studies have examined whether being a child witness of parental violence has detrimental consequences that persist into adulthood. In one study, Forsstrom-Cohen and Rosenbaum (1985) compared college women who witnessed marital violence to female students without a history of parental physical conflict: Witnesses reported higher levels of depressive symptoms. Similarly, Straus (1992) found that male as well as female adults who as teenagers had witnessed violence between their parents showed higher levels of depression and stress. Most recently, Henning, Leitenberg, Coffey, Turner, and Bennett (1996) showed that adult female witnesses exhibited higher levels of psychological distress and lower levels of social adjustment than did nonwitnesses, even after separately controlling physical abuse and parental verbal conflict. Unfortunately, their study did not assess sexual abuse or parental chemical dependency, which may be potent confounds.

Children who witness marital violence also experience other risk factors. Child sexual abuse and physical abuse are two forms of maltreatment that frequently coexist in families with domestic violence (Henning et al., 1996; Rose, Peabody, & Stratigeas, 1991). In addition, parental substance abuse is a predictor and correlate of domestic violence as well as of child sexual and physical abuse (Collins & Messerschmidt, 1993; Famularo, Kinscherff, & Fenton, 1992). There may be a multitude of other risk factors present in distressed families, such as parental psychiatric disorders, neglect, and verbal conflict. However, particularly critical to research on family violence are childhood stressors that result in symptoms parallel to the ones documented for witnessing domestic violence. Child victims of abuse, similar to witnesses of domestic violence, show higher levels of aggression, passivity, withdrawal, somatic symptoms, anxiety, and suicidal gestures than do children who have not been exposed to marital violence (Browne & Finkelhor, 1986). Also similar to abused children and children who have witnessed marital violence, children of chemically dependent parents share symptoms of depression, aggressive behaviors, somatization, and suicidality (Domenico & Windle, 1993; Williams & Corrigan, 1992).

Despite the documented comorbidity and the parallel symptoms of sexual abuse, physical abuse, domestic violence, and parental substance abuse, most researchers examining the impact of witnessing domestic violence have failed to assess the potential confounding presence of these other childhood risk factors. Omitting coexisting risk factors that have similar debilitating ramifications thus presents a serious challenge to the emerging literature on the psychological effects of witnessing domestic violence. It is also unclear whether specific symptoms associated with witnessing marital violence that are exhibited in the short term have a sustained impact on the course of developmental maturation.

We do not know if the trauma of witnessing marital violence has any unique debilitating effects once other risk factors are controlled. For instance, are women who have witnessed marital violence in childhood more likely to become victims or perpetrators of violence in their adult relationships? Both psychodynamic theory and social learning theory suggest that experiencing violence in childhood can impair interpersonal functioning. Psychodynamic approaches assume that early childhood trauma can damage one's sense of self, which distorts healthy ways of relating (Davies & Frawley, 1994; Herman, 1994). Hence, women may be compelled to repeat the trauma of their childhood in adult relationships to master feelings of terror and helplessness experienced as child witnesses of relationship violence. Social learning theory predicts that children learn how to relate to others, resolve conflict, and communicate through the role modeling parents provide (Bandura, 1973). It is possible that witnesses of domestic violence acquire impaired conflict resolution skills and hence may be prone to aggression and antisocial responses as a means of coping in relationships. In sum, we expect childhood witnesses of marital violence to be at higher risk for becoming victims or perpetrators of violence in adult relationships.

Another relatively unexplored question is if and how the severity and the range of violence witnessed has a differential impact on long-term psychological functioning. Previous clinical research and theory suggest that domestic violence usually includes a range of mild to highly severe aggressive acts. That is, families with severe violence exhibit less violent behaviors as well. The recent trauma literature has identified severity of the traumatic experience as a critical risk factor for psychological consequences (Brand, King, Olson, & Ghaziuddin, 1996; Heath, Bean, & Feinauer, 1996). In keeping with these findings and the nature of marital violence, we propose that the progression of moderate to severe to extreme violence plays a crucial role in determining outcomes. That is, witnessing a range of increasingly severe acts increases the risk of poor psychological adjustment.

The purpose of the present study was to build on previous investigations of the long-term outcomes of being a child witness of marital violence and to address some of their shortcomings regarding comorbid childhood stressors. Our study used a multirisk model to include and control risk factors that frequently coexist in violent homes (physical abuse, sexual abuse, and parental chemical dependency). We compared witnesses and nonwitnesses of parental violence on presenting symptoms of depression, trauma symptoms, suicidality, antisocial behaviors, and violence in adult dating relationships. We studied a nonclinical sample to enhance the generalizability of our results. We expected that the degree of exposure to parental violence would show a linear relationship with the outcomes of interest; however, controlling for comorbid risk factors might reduce or eliminate some or all of these relationships.

METHOD

Participants

A total of 131 women from community colleges participated in the present study. The ages of the respondents ranged from 18 to 43 years, with a mean age of 22.2 years ($SD = 5.09$). Of the respondents, 91 indicated that they were Caucasian (69.6%), 19 (14.5%) African American, and 5 (3.8%) Asian American. Regarding marital status, 86.3% reported never being married, 9.2% were currently married, and 3.8% were separated or divorced. To determine socioeconomic status (SES), we used Hollingshead and Redlich's (1958) two-factor index of social status: a 5-point rating of SES based on parental educational level and occupation. According to this index and participants' self-indicated SES, the majority of the sample came from middle class families ($M = 2.81$; $SD = .98$).

Procedure

Participants were recruited from three community colleges in the Midwest. Contact was made with approximately 200 women in a wide range of arts and sciences classes by the first author, who read in person a standardized information sheet that described the study. Participants were informed that the project focused on women's mental and physical health and family and childhood experiences. Each participant was offered $15 upon completion of

TABLE 1: Types of Physical Conflict Witnessed by Women Exposed to Marital Violence Between Their Parents

CTS Physical Aggression Scale Items	*Degree of Violence*	*Percentage of Witnesses*
Threatened to hit or throw something at other parent	M	65.2
Threw, smashed, destroyed things in the house as a threat to the other parent	M	67.4
Threw something at other parent/partner	M	47.8
Pushed, grabbed, or shoved other parent	M	50.0
Kicked, hit with a fist, or bit other parent	S	23.9
Threatened to or actually used a knife or gun on other parent	E	15.2

NOTE: Table entries reflect the percentage of respondents who indicated that they had witnessed that type of violent behavior. M = moderate violence; S = severe violence; and E = extreme violence.

a battery of questionnaires to minimize self-selection bias. Of the 200 women who heard about the study, 180 respondents agreed to participate and were given questionnaires at the time of contact, and 131 women (73%) returned completed questionnaires by mailing them back to the principal investigator. The remaining women who did not return the questionnaires were contacted and asked why they did not participate. Most said that they did not have time or were too busy studying for exams. Approximately 5% of these women stated that they were not interested.

Measures

Witnessing physical conflict between parents. The Parental (Husband-Wife) Violence Scale of the Conflict Tactics Scale (CTS-PVS) was used to assess whether participants had witnessed physical conflict (Straus, 1979). The items used to define physical conflict are shown in Table 1. Respondents were asked to indicate how many times before the age of 16 they had ever seen or heard their father or mother perform each of these behaviors. Participants were also asked to identify the parent(s) who enacted any of the above behaviors and the parent(s) who encountered them. For our purposes, the violence items were scored with 1 if the respondent had ever witnessed the violent act mentioned and 0 if she had never witnessed it. Based on Straus and Gelles's (1990) severity of violence index, the first four items are considered moderate violence, the fifth item severe violence, and the last item extreme violence. We expected endorsement of these items to reflect a Guttman scale:

Respondents who witnessed severe and extreme violence should also have experienced violence of less severity.

Violence in relationships. The Violence Scale of the CTS-PVS was also used to assess whether participants had been aggressors or victims of physical conflict in their own dating relationships (Straus, 1979). The same six items used to assess parental violence were used to assess dating violence. We had two scales, one pertaining to partners' violent behavior against respondents (self) and one pertaining to respondents' violent behavior toward partners. For the present purpose, the items were scored 1 if the respondents had been either victims or aggressors of the violent act mentioned in the item at least once and 0 if they had never experienced or performed it. Participants were also asked to provide the number of intimate relationships in which they had ever been involved during which any of these violent behaviors occurred.

The Trauma Symptom Checklist (TSC). Briere and Runtz (1989) developed a self-report symptom checklist to identify the particular symptoms that best distinguish adult survivors of childhood trauma from other clinical and nonclinical populations. In the present study, we used only 27 of the original items that comprised four subscales: dissociation, anxiety, depression, and sleep disturbance. (We omitted items dealing specifically with sexual trauma and sexual difficulties to reduce confounding by other measures.) Respondents were presented with a list of symptoms and asked to indicate how often they experienced each of them in the last 2 months. For each item, respondents circled a number between 0 and 3, representing occurrences of the symptoms ranging from *never* to *very often.* We computed a total trauma symptom score ($\alpha = .90$).

Beck Depression Inventory. A short form of the Beck Depression Inventory (BDI) was used to assess current depressive symptoms (Beck, 1972). The short form asks about 13 symptoms. Scores on the long and short forms of the BDI correlate between .89 and .97 (Beck, Steer, & Garbin, 1988). As in the original form, each item in the shortened version consisted of four alternative statements that were graded to reflect the severity of the particular symptom. In the present study, the internal consistency of the short form was high ($\alpha = .83$).

Antisocial Behavior Checklist. We adapted Zucker, Ham, and Fitzgerald's (1993) self-report scale and added items that specifically tap antisocial behaviors in young women (Maker & Zucker, 1996). This 74-item measure

asked about participants' criminal behaviors, truancy, arrests, and physical altercations during their lifetime. The scale had a high level of reliability ($\alpha = .89$).

Suicidal behavior. Participants were asked to list the number of suicide attempts they had made in their lifetime, their ages at the time of attempts, and the methods they had used. Responses were scored categorically as either 0 (no suicide attempts) or 1 (one or more suicide attempts).

Childhood sexual abuse. Questions pertaining to childhood sexual abuse were derived from Finkelhor's (1979) Childhood Victimization Questionnaire. Respondents were provided with a list of 14 unwanted sexual behaviors and asked to indicate whether they had experienced any of them before the age of 16. Relying on Russell (1986), the listed behaviors were classified as least severe sexual abuse (e.g., kissing, fondling), severe abuse (e.g., touching genitals), and very severe sexual abuse (e.g., vaginal/anal intercourse). A yes response was scored as 1 and a no response was scored as 0. We computed a summary score, weighting least severe abuse items by 1, severe abuse items by 2, and very severe abuse items by 3. This continuous score was used as a measure of sexual abuse in the present study ($\alpha = .88$). Only individuals who had not experienced sexual abuse were assigned a score of 0.

Childhood physical abuse. Seven items from Finkelhor's (1979) Childhood Victimization Questionnaire pertaining to respondents' experiences of physical abuse by their caretakers were used to assess childhood physical abuse. Respondents were asked to respond yes or no to the physically abusive acts they had experienced before the age of 16. The seven physically abusive acts measured ranged from moderate abuse (e.g., spanked with a switch or belt) to severe physical abuse (e.g., burned with cigarette, had a bone broken). We added the number of yes responses, weighing moderate physical abuse by 1 and severe physical abuse by 2. The resulting score reflected the number of different physically abusive acts they had experienced before the age of 16. The internal consistency of the scale was adequate (standardized $\alpha = .60$).

Parental drug use. Participants were asked to report retrospectively on mothers' and fathers' frequency of use of a wide range of nonprescription drugs, excluding alcohol (e.g., marijuana, cocaine, and speed). These 18 items were adopted from a substance use survey created by the University of

Michigan Substance Abuse Center (Foot, 1993). Participants were asked to report parents' frequency of drug use for each item before participants were 16 years old. Each parent received a score on a continuum based on the frequency of drug use known to the child. In the current study, the mothers' drug form had an internal consistency of $\alpha = .75$ and for the fathers' drug form, $\alpha = .55$.

Short Michigan Alcoholism Screening Test (SMAST). This measure was developed to assess fathers' (F-SMAST) and mothers' (M-SMAST) alcoholism as reported by children (Crews & Sher, 1992). The F-SMAST and M-SMAST consist of nine identical items; respondents were asked to respond yes or no to the presented list of behaviors that capture parental alcohol problems. A score of 3 or higher indicates parental alcoholism. The F-SMAST and M-SMAST have a high temporal stability and show good agreement across siblings (Crews & Sher, 1992). In the present study, the internal consistency for the mothers' SMAST was $\alpha = .87$ and for the fathers' SMAST, $\alpha = .74$.

RESULTS

Of the participants in this study, 45 (35.1%) reported that they had witnessed acts of domestic violence between their parents. The percentages of the different types of physical conflict witnessed are depicted in Table 1. The most frequently reported act of violence was destroying things in the house as a threat to the parent. Fathers were more frequently observed to enact violence against mothers (71.8%) than vice versa (34.8%). Only 6.4% of the participants reported witnessing reciprocal violence. We formed the following three groups: Individuals who had not witnessed domestic violence (control group, $n = 85$); those who had witnessed any number of moderate violence acts ($n = 31$); those who had witnessed severe violence plus any number of moderate violence acts ($n = 10$). Four respondents could not be classified because they did not complete the domestic violence measure.

Seven participants reported witnessing extreme violence. Six of the seven participants indicated witnessing moderate violence but no severe violence, thus violating the assumption of a Guttman scale. Perhaps the wording of the extreme violence question was a problem because respondents may have interpreted "threaten to use a knife or gun" as referring to a verbal threat and not requiring the actual involvement of a weapon. Hence, we chose a conser-

vative approach and classified these six individuals in the moderate violence group. Dropping these six individuals from the analyses resulted in identical findings. Only one participant witnessed moderate, severe, and extreme violence; she was not included in the analyses to be reported because placing her in the severe group created markedly unequal variances across groups with respect to the dependent variables of interest.

Women in the severe violence group witnessed a greater number of acts of moderate violence ($M = 1.84$, $SD = 1.07$) compared to women who only witnessed moderate violence ($M = 3.10$, $SD = .99$), $t(39) = .3.30$, $p < .003$. There were no differences among the three groups with respect to their age or social status, $F(2, 122) = .60$ and $F(2, 122) = 1.57$, both nonsignificant. In all groups, the overwhelming majority of participants were unmarried. The three groups did not differ in ethnicity, $\chi^2(2) = 1.72$, nonsignificant.

Group Comparisons on Outcome Measures

We relied on MANOVA as a general analytic strategy to compare women who had witnessed domestic violence before the age of 16 with women who did not observe such events. The comparison for our three groups on the outcome measures was significant, Wilks's lambda = .772, $F(14, 206) = 2.03$, $p < .02$. Next, we performed univariate comparisons on each of the seven outcome measures (see top of Table 2). The two witness groups differed between themselves and from the control group on different outcome measures. The severe violence group experienced more partner violence and exhibited more violent behaviors themselves in their dating relationships compared to the control and moderate violence groups, $F(2, 112) = 7.44$, $p < .002$, and $F(2, 112) = 5.59$, $p < .006$. At the same time, there was no difference in the number of violent relationships in which each of the groups had been involved, $F(2, 112) = 1.19$, nonsignificant. Witnesses of severe marital violence also exhibited a greater number of antisocial behaviors (stealing, truancy) than did women in the nonwitness group, $F(2, 112) = 3.42$, $p < .04$.

Next, we examined measures of psychological adjustment. We found significant differences on the Beck Depression Inventory, $F(2, 112) = 4.80$, $p < .02$. Women who had witnessed moderate and severe levels of violence showed higher levels of depression than did women in the control group. Also, we found that trauma symptoms increased with the severity of violence witnessed, $F(2, 112) = 4.72$, $p < .02$. Last, we found no group differences in the number of suicide attempts, $F(2, 112) = .35$, nonsignificant. In polynomial contrast analyses, we tested the hypothesis that severity of violence witnessed is associated with a linear increase in psychological symptoms.

TABLE 2: Outcome Measures and Predictor Variables as a Function of Marital Violence

	Marital Violence Witnessed					
	Control		*Moderate*		*Severe*	
	M	SD	M	SD	M	SD
Outcome measures						
Violence in relationships						
Self toward partner	$.16^{a}$	(.24)	$.16^{a}$	(.22)	$.44^{b}$	(.25)
Partner toward self	$.21^{a}$	(.28)	$.17^{a}$	(.25)	$.56^{b}$	(.34)
Number of violent relationships	1.18	(1.82)	1.10	(1.01)	2.00	(.71)
Antisocial behaviors	1.28^{a}	(.19)	1.33^{ab}	(.18)	1.45^{b}	(.18)
Beck Depression Inventory	18.07^{a}	(4.70)	20.69^{b}	(5.02)	22.00^{b}	(5.74)
Trauma Symptom Checklist	4.94^{a}	(3.03)	6.22^{ab}	(3.18)	7.94^{b}	(3.71)
Suicide attempts	.12	(.33)	.14	(.35)	.22	(.44)
Predictor variables						
Physical abuse index	1.54^{a}	(1.55)	2.80^{b}	(2.57)	2.40^{ab}	(2.01)
Sexual abuse index	2.64	(4.92)	4.65	(6.60)	5.70	(6.80)
Alcohol use						
Mother	.23	(1.02)	.21	(.69)	.50	(1.41)
Father	$.53^{a}$	(1.35)	1.21^{a}	(1.73)	3.25^{b}	(3.88)
Drug use						
Mother	3.38	(4.86)	4.04	(6.33)	5.75	(8.22)
Father	2.23^{a}	(3.43)	3.18^{a}	(4.03)	11.38^{b}	(11.08)

NOTE: Means that do not share the same superscript differ at the .05 level.

Except for the number of violent relationships and suicide attempts, all other outcomes increased significantly with severity.

Group Comparisons on Predictor Variables

A MANOVA confirmed that the three groups differed on our set of six risk factors, Wilks's lambda = .604, $F(12, 202) = 4.83$, $p < .001$ (see bottom of Table 2). As shown in subsequent univariate analyses, the three groups differed with regard to the physical abuse they had experienced, $F(2, 106) = 4.77$, $p < .02$. In the omnibus analysis, no significant differences emerged between the three groups for sexual abuse, $F(2, 106) = 1.69$, nonsignificant. To test the more general hypothesis that witnessing marital violence is associated with sexual abuse irrespective of severity, we ran a contrast analysis, comparing the combined witness groups to the nonwitness group. As predicted, this comparison was significant, $t(119) = 2.23$, $p < .03$.

TABLE 3: Dependent Measures as a Function of Marital Violence

	Covariates			
	Without Covariate	*Sexual Abuse*	*Physical Abuse*	*Sexual and Physical Abuse*
Violence in relationships				
Self toward partner	***	***	***	***
Partner toward self	***	***	***	***
Number of violent relationships	*ns*	*ns*	*ns*	*ns*
Antisocial behaviors	**	*ns*	*	*ns*
Beck Depression Inventory	**	**	*	*ns*
Trauma Symptom Checklist	*	*	*	
Suicide attempts	*ns*	*ns*	*ns*	*ns*
Multivariate comparison	**	**	**	**

NOTE: If significant, the patterns of post hoc comparisons were identical to those in Table 2. *$p < .10$. **$p < .05$. ***$p < .01$.

We also examined mothers' and fathers' substance use among the four groups. Respondents did not report different levels of mothers' drinking, $F(2, 106) = .29$, nonsignificant. Differences were reported for fathers' alcohol use, $F(2, 106) = 9.44$, $p < .001$, such that fathers of participants in the severe violence groups drank more heavily. It is noteworthy that the means in this group exceeded the clinical cutoff score of 3 on the MAST. The same pattern emerged for fathers' and mothers' drug use. There were no group differences in mothers' drug use, $F(2, 106) = .72$, nonsignificant, but differences emerged for fathers' drug use, $F(2, 106) = 9.44$, $p < .001$. The severe violence group showed the highest levels of fathers' alcohol and drug use, whereas the control and moderate violence groups did not differ from each other. In sum, we found that marital violence coexisted with higher levels of parental substance use, physical abuse, and sexual abuse.

Controlling for Risk Factors

To gauge the specific effects of witnessing marital violence, we performed a series of MANCOVAs. This allowed us to control possible confounding effects of childhood physical abuse, sexual abuse, and parental substance use when comparing symptom differences between the witness and nonwitness groups. The results of these comparisons are summarized in Table 3.

Controlling for sexual abuse. Even when we controlled for sexual abuse, the violence groups and the control group differed significantly on the seven outcome measures, Wilks's lambda = .777, $F(14, 196) = 1.88$, $p < .04$. Again, we used univariate analyses to explore differences on individual outcome measures. As summarized in Table 3, both scores for self and partner violence in dating relationships were unaffected by controlling sexual abuse ($p < .004$). Also, levels of depression were largely unaffected ($p < .05$). However, trauma symptoms became less prevalent in the violence groups once sexual abuse was partialled out ($p < .10$). Interestingly, controlling for sexual abuse eliminated group differences in antisocial behaviors.

Controlling for physical abuse. Entering physical abuse as a covariate did not eliminate the differences among the three groups, Wilks's lambda = .761, $F(14, 204) = 1.87$, $p < .04$. However, when we followed up with univariate analyses, except for self and partner violence in dating relationships, most previously significant univariate effects became nonsignificant once physical abuse was controlled.

Controlling for sexual abuse and physical abuse. When both control variables were entered simultaneously as covariates, the multivariate comparison was still significant, Wilks's lambda = .780, $F(14, 194) = 1.83$, $p < .04$. However, univariate tests indicated that the groups only varied significantly in the levels of violence in their dating relationships (see Table 3).

Controlling for parental substance abuse. Because mothers' drug and alcohol use did not yield any differences between the three groups, we used only the fathers' drug and alcohol use as covariates. However, the MANCOVA revealed that the covariates were not significantly related to our set of dependent variables.

DISCUSSION

The present results show that witnessing marital violence has a negative impact on long-term adjustment in young women. When examined in isolation, witnesses of marital violence experienced more violence in dating relationships, exhibited a greater number of antisocial behaviors, were more depressed, and showed a greater number of trauma symptoms. Relative to the comparison group, witnesses of severe violence reported higher levels for all the above outcomes, and witnesses of moderate violence had higher levels of

depression and trauma symptoms. These findings suggest that witnessing marital violence may affect a range of long-term psychological functioning.

A central goal of this research was to explore the consequences of witnessing marital violence in the context of other childhood risk factors. Henning et al. (1996) and Straus (1992) emphasized the need to assess multiple stressors associated with domestic violence while pointing out the difficulty in teasing apart the differential effects of coexisting risk factors. In the present study, witnesses of marital violence experienced greater levels of sexual and physical abuse and had fathers who used more drugs and alcohol than nonwitnesses. These findings provide further evidence for the comorbidity of childhood risk factors in distressed families.

To assess the unique impact of marital violence, we included these coexisting risk factors as covariates in our analysis. Our results showed that sexual abuse accounted for the differences in the trauma symptoms and antisocial behaviors between the witness and nonwitness groups. This suggests that the trauma symptoms reported by the witness groups were related to childhood sexual abuse rather than to witnessing marital violence. Furthermore, our results showed an association between sexual abuse and antisocial behaviors in women, extending previous findings with men.

When physical abuse was assessed in conjunction with witnessing marital violence, the differences in depression, trauma symptoms, and antisocial behaviors between the groups became nonsignificant. The only outcomes that remained significant were partners' violence toward participants and participants' violence toward partners in dating relationships. Once again, this result suggests that childhood physical abuse is an important correlate and predictor of depression and trauma symptoms in witnesses of marital violence.

In the multivariate analysis, parental drug and alcohol use were not related to the set of seven outcome variables. This finding was surprising given that previous research has documented a relationship between parental chemical dependency and symptoms of depression, suicidality, and aggression in children (Domenico & Windle, 1993; Williams & Corrigan, 1992). Consequently, we did not include parental substance use as a covariate in the MANCOVA. Given this null result, it is difficult to draw any firm conclusions about the comorbid impact of parental substance use. Future research should continue to explore the differential consequences of marital violence and parental substance use.

The present study demonstrated that the confounding presence of physical and sexual abuse accounted for some of the differences in symptoms reported between witnesses and nonwitnesses. Thus, examining the potential impact of coexisting stressors is necessary to accurately identify the differential

effects of witnessing marital violence in childhood. In fact, the experience of violence in dating relationships proved to be uniquely associated with witnessing marital violence. Witnesses of severe marital violence were victims of more violence by their dating partners compared to witnesses of moderate violence and nonwitnesses. Also, witnesses of severe violence exhibited more violent behaviors toward their partners in their dating relationships. Unfortunately, we did not inquire about the context or motivation for participants' violent behaviors toward their partners. It is therefore unclear if these women engaged in violent behaviors toward their partners as a means of self-defense in response to being victimized. It is important to note that relationship violence was specifically associated with the trauma of witnessing severe marital violence in childhood and not with child sexual abuse, physical abuse, or parental substance use.

We acknowledge limitations to this study. Our research was conducted with a sample of college women in the Midwest. It is possible that the sample we used was higher functioning than was a community sample, thereby reducing the probability of symptom differences between witnesses and nonwitnesses of marital violence. This limitation, however, cannot explain why sexual and physical abuse were more powerful predictors of differences in trauma symptoms, antisocial behaviors, and depression. One possible explanation for our results is that childhood physical and sexual abuse may have a more severe impact on certain realms of long-term functioning in women than does witnessing marital violence in childhood.

Another limitation was the retrospective nature of the project. Participants may have exaggerated certain incidents in their reports or may have not recalled certain traumatic events that did occur. Gathering corroborating information from siblings and parents would be a useful way to overcome possible reporting biases and distortions. Although we were unable to survey family members, the impact of retrospective reporting by the participant was minimized by the fact that all of the risk factors measured in the present study were assessed in the same manner. It is therefore unlikely that a general distortion of memory or reporting bias occurred and was responsible for the given findings.

In sum, the present study contributes to the emerging literature on the long-term consequences of witnessing marital violence in childhood. We found that young women who had witnessed marital violence as children had also experienced greater levels of physical abuse, sexual abuse, and parental substance use in childhood. Witnesses of severe marital violence reported higher levels of violence in their dating relationships, even when we partialled out the effects of other risk factors. Witnesses of marital physical conflict during

childhood may become victims of violence in their own adult relationships, a possibility to which clinicians and researchers should be alert.

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