

Research on the psychological effects of domestic violence on women and children has flourished in the past few years, concluding that both suffer increased adjustment problems and psychopathology. The current studies, however, have not provided an understanding of the processes or factors that can protect children from being detrimentally affected. The purpose of this study was to examine the potential moderating effects of maternal parenting stress on children's adjustment in homes with varying levels of domestic violence. The sample consisted of 60 sheltered battered women and their 7- to 12-year-old children, and 61 nonsheltered women and children from the same community. Results indicated that children's adjustment was significantly predicted by parenting stress after controlling for psychological and physical abuse of the mother. Results are discussed in light of protective and vulnerability factors for children's adjustment in high-risk families.

The Moderating Effects of Parenting Stress on Children's Adjustment in Woman-Abusing Families

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Research on the psychological effects of domestic violence on women and children has flourished in the past few years, concluding that survivors suffer increased adjustment problems and psychopathology (e.g., Finkelhor, Gelles, Hotaling, & Straus, 1983; McCloskey, Figueredo, & Koss, 1995; Sternberg et al., 1993). Battered women experience increased levels of depression, lower self-esteem, and higher levels of psychological distress when compared with nonbattered women (Cascardi & O'Leary, 1992; Khan, Welch, & Zillmer, 1993; Rounsaville & Lifton, 1983; Sato & Heiby, 1992; Testa, Miller, & Downs, 1993). In addition, the prevalence of posttraumatic stress disorder (PTSD) is high, ranging from 45% to 84% (Herman, 1992;

Authors' Note: This study was funded by a Research Partnership Award from the University of Michigan to both authors. We wish to thank the following students for their assistance in the data-collection phase of this project: Shannon Lynch, Neg Mahmoodzadegan, Stephanie Silberman, Tasha Tervelon, and Jennifer Wunder. Correspondence concerning this article should be addressed to Alytia A. Levendosky, Department of Psychology, Michigan State University, 129 Psychology Research Building, East Lansing, MI 48824; e-mail: levendo1@pilot.msu.edu

JOURNAL OF INTERPERSONAL VIOLENCE, Vol. 13 No. 3, June 1998 383-397

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Houskamp & Foy, 1991; Kemp, Rawlings, & Green, 1991; Saunders, 1994; Vitanza, Vogel, & Marshall, 1995). Finally, high levels of violence and physical abuse are positively correlated with the number of PTSD symptoms in women (Saunders, 1994).

Domestic violence also has been shown to negatively affect children's social and emotional adjustment (Hughes, 1988; Sternberg et al., 1993). Socially, children in families with woman abuse have more worries about family members and friends (Graham-Bermann, 1996). Emotionally, both boys and girls in families with woman abuse exhibit more depression and aggression (McCloskey et al., 1995; Wolfe, Jaffe, Wilson, & Zak, 1985), lower self-esteem (Hughes & Barad, 1983), increased behavior problems and psychopathology (Fantuzzo et al., 1991; Holden & Ritchie, 1991; Hughes, 1988), and posttraumatic stress symptoms (Graham-Bermann & Levendosky, in press; Rossman et al., 1993) than do children from nonviolent homes.

A few studies attempted to examine potential mediating variables in the effects of domestic violence on children. In some studies, parent-child aggression, child social support, maternal stress, and/or paternal irritability were found to be mediating variables in the effects of domestic violence on children's adjustment (Graham-Bermann, Levendosky, Porterfield, & Okun, 1997; Jouriles, Piffner, & O'Leary, 1988; Holden & Ritchie, 1991; Levendosky, 1995; Wolfe et al., 1985). For example, one study of 102 child witnesses from domestic violence shelters and 96 control children (ages 4 to 16) used regression analyses to predict maternal ratings of behavior problems and social competence (Wolfe et al., 1985). These researchers found that severity of violence, as measured by the Conflict Tactics Scale (CTS) (Straus, 1979), and maternal stress significantly predicted total behavior problems and social competence in these children, as reported by mothers. When maternal stress was entered first into the regression equation, it eliminated any variance due to the severity of the violence, so the researchers concluded that maternal stress may be a mediating variable in the emotional adjustment of children in families with domestic violence.

In another study, researchers compared 37 sheltered battered women and their children, ages 2 to 8, with 37 matched nonbattered mothers and children (Holden & Ritchie, 1991). They found that mothers of child witnesses rated their children as having significantly more internalizing and total behavior problems and more difficult temperaments than nonwitnesses. Maternal stress and paternal irritability (both as rated by the mother) significantly predicted child behavior problems for the child witnesses, but only maternal stress significantly predicted child behavior problems in nonwitnesses. These findings suggest that characteristics of the batterer and the mother may play

an important mediating role for children's adjustment in these families. However, given that paternal irritability is rated by mothers, it is possible that this finding is confounded in the battered women's group because they are beaten by these men.

The most well-designed and thorough study to date on the effects of domestic violence on children used structural equation modeling to test hypotheses of the effects of violence, family supportiveness, and maternal mental health on child's mental health (McCloskey et al., 1995). This study supported findings of previous studies in that the children of battered women ($N = 172$) had significantly more symptoms than the comparison group ($N = 195$) and were significantly more likely to be abused themselves. The sample of children of battered women included sheltered ($n = 67$) and nonsheltered ($n = 105$) children. These groups did not differ in the amount of violence in the family. These researchers found that the violence had significant direct effects on both maternal and child mental health. However, here family supportiveness and maternal mental health were not mediating variables and had no effect on child outcomes.

Although the results are not entirely consistent, clearly children living in domestic violence families are at risk for social, emotional, and behavioral problems in childhood and adolescence that can have far-reaching consequences into adulthood. However, an important avenue of investigation that has been neglected in the literature on domestic violence is a developmental psychopathology approach of identifying potential moderating factors (protective/vulnerability factors) for these children. Several mediating variables, or mechanistic variables through which a risk factor affects an outcome, have been studied in this population. However, much less work has been done on moderating variables, which are understood as independent variables that can have an impact on the effect of a risk factor on outcomes (Baron & Kenny, 1986). Thus, the current studies have not provided an understanding of the processes or factors that can protect children from being detrimentally affected. One important potential moderating variable for children's adjustment in these families may be the quality of parenting by the mother. In fact, parenting by the nonviolent parent may serve as a potential protective/vulnerability factor for children regardless of the mechanisms through which they are affected by the violence.

Parenting Under Stress

Research on parenting in stressful circumstances (e.g., poverty, divorce, parental psychopathology) has demonstrated that parental functioning is

quite vulnerable to environmental stress (e.g., Abidin, 1990; Belsky & Vondra, 1989; McLoyd, 1990). A meta-analysis by Erel and Burman (1995) conclusively demonstrates the link between marital conflict and distress and parent-child relationships. In addition, several studies have shown that nurturant parenting can serve as a protective factor for children's adjustment in otherwise at-risk homes (Garnezy, 1985; Rutter, 1987). On the vulnerability side, maternal depression, withdrawal, and dissociative symptoms have been found to significantly and negatively affect parenting capacities (Rutter, 1990; Sameroff, Seifer, & Zax, 1982). Because many battered women suffer from both depression and traumatic symptoms (Sato & Heiby, 1992; Saunders, 1994), it is likely that many of them will exhibit diminished parenting abilities, which may in turn be a vulnerability factor for their children's adjustment.

One way to assess parenting is to examine parenting stress, that is, the mother's sense of her parenting role as stressful. Parenting stress is distinct from life stress. Life stress can be defined as environmental factors in the woman's life that may be stressful, such as her job, being unemployed, relationships with friends, parents, siblings, romantic partners, community situation, and financial situation. Parenting stress is specific to the role of parenting factors, for example, her perception of her relationship with her child or her perception of parenting as harming her social life or marital relationship. Parenting stress has been found to be related to children's adjustment both in high-risk environments (Prinz, Bella, & Oppenheimer, 1983; Zakreski, 1983) and low-risk environments (Abidin, Jenkins, & McGaughey, 1992). In addition, research on parenting stress has shown that it is highly affected by environmental factors, including poverty and marital satisfaction (Arena, 1989; Cowan & Cowan, 1983).

The purpose of the study is to examine the potential moderating effects of maternal parenting stress on children's emotional and behavioral adjustment in homes with varying levels of domestic violence. The hypotheses are that (a) domestic violence, which includes both psychological and physical abuse by the partner toward the mother, negatively affects parenting stress; (b) parenting stress negatively affects children's adjustment independently of the domestic violence; and (c) parenting stress serves as a moderating factor for the effects of poverty and domestic violence on children's adjustment. Finally, the differential effects of psychological and physical abuse to the mother on parenting stress and children's adjustment will be explored.

METHOD

Participants

The sample consisted of 60 sheltered battered women and their children and 61 nonsheltered women and children from the same community. The children were school age, from 7 to 12 years. The families were primarily low income (see Table 1). The two samples were matched on child's age, ethnicity, and income. There were only two significant differences between the groups on these demographic characteristics. Family size was larger in the domestic violence group, and there were differences in the mother's education level, such that more battered women had some college education, but more of the comparison women had graduated from college.

The battered women and children were recruited from four domestic violence shelters in urban communities in southeastern Michigan. The women were given information about the study by the shelter staff who then informed the research project. The comparison sample was recruited in these same urban communities in southeastern Michigan through posters in low-income neighborhoods and flyers handed out in social services offices.

Measures

Children's adjustment. Mothers completed the Child Behavior Checklist (CBCL) (Achenbach & Edelbrock, 1986). This is a 113-item measure that taps children's emotional and behavioral problems. The two broadband subscales, internalizing and externalizing behaviors, were used for this study. Internalizing behaviors include withdrawal, anxiety and depression, and somatic complaints. Externalizing behaviors include delinquency and aggression. Reliability of these scales is high, ranging from .81 to .87 (Achenbach, 1991). The internal reliability of scales was even higher in this study, internalizing alpha = .90, externalizing alpha = .97.

Parenting stress. Mothers completed the Parenting Stress Index (PSI) (Abidin, 1983), which measures the amount of parenting stress they experience. This 101-item measure covers various aspects of parenting stress, including child and parent characteristics. The two broadband scores—child domain stress and parent domain stress—were used for this study. Each item was rated on a scale of 1 (*strongly agree*) to 5 (*strongly disagree*). This measure has been widely used in studies of parenting children at risk (Holden

TABLE 1: Means and Standard Deviations of the Demographic Features of the Sample

	<i>Domestic Violence (n = 60)</i>		<i>Comparison (n = 61)</i>		<i>Difference</i>
	M	SD	M	SD	
Child's age (years)	9.41	1.79	9.48	1.82	$t = .18$
Child's sex					$\chi^2 = .07$
Girls (<i>n</i>)	30		32		
Boys (<i>n</i>)	30		29		
Mother's age (years)	31.68	4.91	31.69	5.05	$t = .02$
Mother's education					$\chi^2 = 9.67^*$
Less than high school (<i>n</i>)	14		20		
High school graduate (<i>n</i>)	7		7		
Some college (<i>n</i>)	18		5		
College graduate (<i>n</i>)	21		29		
Monthly income (\$)	752.32	841.20	817.78	421.82	$t = .54$
Ethnicity					$\chi^2 = 3.05$
White (<i>n</i>)	33		31		
African American (<i>n</i>)	27		27		
Other (<i>n</i>)	0		3		
Family size	3.22	1.47	2.55	1.28	$t = -2.70^{**}$

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

& Ritchie, 1991; Webster-Stratton & Hammond, 1988). The reliabilities of these scales were .90 and .93 (Abidin, 1990). The internal consistency reliabilities for this study were child domain stress alpha = .85 and parent domain stress alpha = .92.

Child domain stress includes the characteristics of the child that are seen as stressors in parenting, including the temperament of the child, the degree to which the child fulfills parental expectations, and the degree to which the child rewards the parent. Sample items include, "My child gets upset easily over the smallest things," and "My child is always hanging on me." Parent domain stress includes the characteristics of the parent and the parent's environment that are seen as stressors in parenting (such as personality, investment in parenting, and relationship with spouse) and sense of resentment associated with parenting. Sample items include, "Being a parent is harder than I thought it would be," and "Since having a child I feel that I am almost never able to do things that I like to do."

Domestic violence. Two scales were combined to measure the frequency and presence of domestic violence during the past year. The mild and severe violence items from the CTS (Straus, 1979) were combined into a measure of physical abuse. Psychological abuse was assessed using the Violence

Against Women Scales (Marshall, 1992). Items used from this scale included physical threats, intimidation, and coercive tactics. Women were asked to report on the number of times that each abuse item had happened during the past year and whether the child had witnessed the abuse. Thus, two content scales—psychological abuse and physical abuse—were computed for frequency of occurrence that had been witnessed by the child during the past year. Items for each scale were summed and averaged to get an average frequency of abuse for the past year for each woman. These scales were then used as continuous variables in the analyses because women had scores ranging from 0 to 365.

Sample items from the psychological abuse scale include, "He threatened to harm or damage things you care about," and "He said you could not leave or see certain people." Sample items from the physical abuse scale include, "He used a knife or gun on you," and "He pushed, grabbed or shoved you." The validity and reliability of the CTS was established by Straus (1979) in a series of studies. In this study, reliability for the two scales was high; alphas were .89 and .92 for the psychological abuse and physical abuse scales, respectively.

Procedure

Mothers were administered the questionnaires by trained female advanced undergraduate and graduate student research assistants. Training of the research assistants consisted of 40 hours of training about domestic violence conducted by a local domestic violence shelter and 6 hours of training on administering questionnaires conducted by the first author. Mothers signed informed consent forms before the interviews began. As this was part of a larger study, the interviews lasted between 1 and 2 hours. Questionnaires were administered in the shelters for the domestic violence group and in the women's homes for the comparison group. In the case of a family with more than one child in the desired age range, the mothers were asked to choose one child for participation. The mothers were paid \$10 for their participation.

RESULTS

Parenting Stress

Student *t* tests between the two groups revealed that women did not differ in their assessment of the child domain as stressful for parenting ($t = -.33$,

$p = .73$). A trend was found for a difference between the groups in their experience of the parent domain as stressful for parenting ($t = -1.88, p < .10$), such that the women in the sheltered domestic violence group reported more parent domain stress than did the comparison group.

When the total sample of this study was compared with Abidin's (1990) national sample of 2,633 subjects, this sample differed significantly in the number of women reporting stress in the clinical range. For parent-related stress, 23% of the women in the current study reported levels above the clinical cutoff, which Abidin defined as being the top 10% of his national sample. For child-related stress, 36% of the women reported levels above the clinical cutoff. In the current study, the domestic violence group did not differ significantly from the comparison group on either parent domain or child domain stress, indicating that both samples were reporting high levels of parenting stress compared to the national sample.

Because both groups were determined to be high-risk groups, due to low income and the presence of woman abuse in one third of the comparison group, regression analyses were used to test the study hypotheses. This allowed for the examination of domestic violence as a continuous variable rather than a grouping variable.

Hierarchical multiple regressions were performed separately to predict parent domain stress and child domain stress (see Table 2). To control for income, this variable was entered as the first step. Then, psychological and physical abuse were entered as the second step. All independent variables were standardized.

Income was not a significant predictor of either of the parenting stress variables. Parent domain stress was significantly predicted by both of the violence indexes—psychological and physical abuse. Child domain stress, similarly, was significantly predicted by both of the violence variables. However, only a small amount of variance was accounted for by these models, either for parent domain stress (14%) or for child domain stress (7%), indicating that there are important additional predictors of parenting stress.

Child Adjustment Outcomes

Hierarchical multiple regressions were performed to predict the child behavioral symptoms, using income, psychological and physical abuse, and parenting stress as independent variables (see Table 3). Once again, all independent variables were standardized. Income was entered at the first step as a control variable. In the second step, the two violence variables were entered to test for the effects of parenting stress above and beyond the effects

TABLE 2: Multiple Regression Analyses of the Parenting Stress Indexes: Beta Weights and Significance Levels for Each Variable

	<i>Parent Domain Stress</i>	<i>Child Domain Stress</i>
Income	-.12	-.15
Violence variables		
Psychological abuse	.39***	.25**
Physical abuse	.29**	.27**
Adjusted R^2	.14	.07

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

TABLE 3: Multiple Regression Analyses of Child Outcome Measures: Beta Weights and Significance Levels for Each Variable

	<i>Internalizing Behaviors</i>	<i>Externalizing Behaviors</i>
Income	.06	-.07
Violence		
Psychological abuse	.31***	.21*
Physical abuse	.25**	.11
Parenting stress		
Parent domain	.50***	.46***
Child domain	.49***	.67***
Interactions		
Psychological abuse by parent domain	.89*	.78*
Psychological abuse by child domain	.41	.71*
Physical abuse by parent domain	.64	.49
Physical abuse by child domain	.30	.49
Adjusted R^2	.35	.47

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

of the domestic violence on the children's adjustment. Then, the parenting stress variables were entered in the third step. Finally, to test the hypothesis that parenting stress moderates domestic violence for the child, the interactions between the parenting variables and the violence variables were entered last.

Internalizing behavior was significantly predicted by both psychological and physical abuse. In addition, both parenting stress variables, the parent domain and the child domain, contributed significantly to the prediction of internalizing problems independent of the violence. Finally, there was an interaction between psychological abuse and parent domain stress. The

interaction revealed that at high levels of psychological abuse of the mother, high levels of parenting stress had more of a negative impact on children's internalizing behaviors than at low levels of psychological abuse. The total model accounted for 35% of the variance in the child's internalizing behavior.

Externalizing behavior was significantly predicted by psychological violence (see Table 3). In addition, both of the parenting stress variables contributed significant predictive value. Finally, there were two significant interactions: psychological abuse and parent domain stress, and psychological abuse and child domain stress. Both interactions revealed that at low levels of psychological abuse, high levels of parenting stress had more of a negative impact on children's externalizing behaviors than at high levels of psychological abuse. The total model accounted for 47% of the variance in externalizing behavior.

DISCUSSION

Domestic violence clearly has a significant, although modest impact on parenting stress and on children's adjustment. Although parenting stress did not differ significantly between the two groups, when violence was used as a continuous variable in predicting parenting stress, the amount of violence was significantly related to parent domain and child domain stress. These results support the first hypothesis that domestic violence is associated with higher levels of parenting stress. This is consistent with a prior study of domestic violence and parenting stress (Holden & Ritchie, 1991).

One striking finding in this study was that domestic violence was reported by one third of the families in the comparison group. This has implications for other studies of domestic violence that use a comparison group. Clearly, it is important to measure the amount of violence in the comparison group even though they are not in a shelter. This finding also suggests that there may be a high frequency of woman abuse in some low-income communities.

In this study, domestic violence was divided into psychological and physical abuse so that the differential effects of these aspects of domestic violence could be explored. Both types of abuse significantly and negatively affected parenting stress; however, psychological abuse was the stronger predictor of children's adjustment. Psychological abuse toward the mother, consisting primarily of threats and coercion as measured in this study, may contribute to an atmosphere of fear that affects children's behaviors. Although these overall findings support earlier studies on the effects of witnessing woman abuse on children's adjustment (e.g., Wolfe et al., 1985), these earlier studies did not consider the differential effects of witnessing psychological

versus physical abuse. In general, studies of domestic violence emphasize the importance of the physical abuse. The results from this study indicate that the psychological abuse of the mother is a potentially powerful influence in the lives of these children and needs to be examined independently of physical abuse in future studies on the effects of domestic violence.

The second hypothesis predicted that parenting stress would have a negative effect on children's adjustment independent of the impact of domestic violence. This hypothesis was supported by the finding that parenting stress had a significant direct effect on children's adjustment. These results also support Holden and Ritchie's (1991) study, which found that parenting stress was a significant predictor for children's total behavior problems in domestic violence families. However, their study did not examine the effects of the domestic violence itself, as a continuous variable, on children's adjustment. In the present study, children were found to be responsive to the effects of their mother's stress over and above the effects of the domestic violence. Children whose mothers were suffering high levels of parenting stress exhibited more internalizing, externalizing, and total behavior problems. These results suggest that the children of women who feel less stressed by their parenting responsibilities in the face of domestic violence suffer less emotional and behavioral impact. Perhaps increased parenting stress causes mothers to react to their children's behaviors in less effective ways, which leads to more internalizing and externalizing behavior problems. This hypothesis is supported by research on other high-risk environments that has shown that stress negatively affects parenting behaviors that are, in turn, related to children's behavior problems (Conger et al., 1992, 1993; Hetherington, 1991).

The significant interactions of psychological abuse and parent domain stress support the third hypothesis that parenting stress can moderate the effects of woman abuse on children. For internalizing behavior problems, parenting stress served as a vulnerability factor for children in families in which the mother experienced high levels of psychological abuse. Clearly, the decrease in maternal functioning has a multiplicative effect for children when there is psychological abuse of the mother. Perhaps the decrease in maternal functioning leaves these children feeling alone and abandoned. Another possible explanation is that in families with domestic violence, children who cannot count on their mother's consistency and psychological stability as a parent are more likely to develop internal paradigms of relationships that encourage withdrawal and depression.

In contrast, for externalizing behavior problems, parenting stress served as a vulnerability factor for children in families in which the mother experienced low levels of psychological abuse. These apparently contradictory

findings for parenting stress as a moderator may have to do with the difference in mechanisms causing internalizing and externalizing behavior problems. Although for internalizing problems one can postulate about the effects of maternal stress on internal paradigms of relationships, for externalizing problems, behaviors are often viewed as reactions to disciplinary styles. Thus, perhaps in families with low levels of domestic violence, parenting stress on the part of the mother can provoke acting-out (externalizing) behavior on the part of her children because they do not receive the structure and guidance that they need. In families with domestic violence, acting-out behavior may be provoked by the violence rather than by mother's stress level.

This study is an attempt to understand the effects of domestic violence on family life, that is, its effects on women's experiences of parenting stress and the effects of this stress on children's adjustment. The important findings of this study suggest two pathways through which domestic violence may affect children's adjustment: first, directly through their observations of the violence, and second, indirectly through the effects on maternal parenting stress. These findings suggest that future research must take the indirect pathway into account to fully address the total effects of domestic violence on children's development.

There are several important limitations of this study. First, all of the measures were completed by the mothers, which may lead to a single-reporter bias. Thus, this study should be followed up with observational data or additional reporters on children's adjustment and maternal stress. Second, the sample was from a low-income population, which limits the generalizability of the results to the broader population of battered women. Finally, due to the cross-sectional nature of the data collection, it is impossible to test for causality between the variables.

More research is needed that examines and identifies the other protective and vulnerability factors for children's adjustment and parenting in domestic violence families. It is important to remember that although parenting may have a moderating role in affecting children's adjustment, it is ultimately the violence that has caused the problems in both spheres. Thus, researchers must be careful not to further pathologize women who have suffered from domestic violence but rather continue to explore the ways that their functioning may be inhibited or damaged by the battering. In addition, an attempt should be made to uncover the protective factors for women who parent under these conditions that, in turn, may serve as protective factors for children's adjustment. Some examples of protective factors for women and children might be social support, education, and ability to access community resources. Finally, as researchers continue to study the impact of domestic violence on children, studies that provide evidence for risk and protective factors will help us first

to identify which children may grow up to continue the cycle of domestic violence and then to develop appropriate interventions.

Clinical implications of this study include the importance of interventions around parenting for battered women who are mothers. Instead of focusing only on the violence or only on helping the woman to leave the violent situation, it would be important also to reduce the parenting stresses that these women face. For example, increasing social support resources, supplying parenting education or information about normal child development, or finally, providing intervention for children's behavioral difficulties might be helpful in reducing the negative consequences for children in woman-abusing families.

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