Stress: A Potential Disruptor of Parent Perceptions and Family Interactions

Carolyn Webster-Stratton
University of Washington

Reviews research on the relationship between extrafamilial stressors (e.g., unemployment, low socioeconomic status), interpersonal stressors (e.g., marital distress, divorce), and child stressors and parents' perceptions and family interactions in families with conduct-problem children. Various stressors appear to have the power to disrupt parenting practices seriously by causing some parents to be more irritable, critical, and punitive. Such parenting behaviors increase the likelihood that children develop conduct problems, setting in motion a cycle of negative parent–child interactions and further stress on the parents. This process appears to be mediated by parents' psychological well being, quality of social support or degree of isolation, sex and drug use.

Anyone who has worked with a conduct-problem child has undoubtedly been aware that the child's family was experiencing considerable stress. Yet the concept of stress has received relatively little attention in the research related to conduct-problem children. Why? Perhaps social-interactional researchers have steered clear of stress research because stress is so complex, so difficult to define and measure. Even the Steering Committee for Research on Stress and Health and Disease conceded that "after 30 years, no one has formulated a definition of stress that has satisfied even a majority of stress researchers" (Eisdorfer, 1981). On the other hand, perhaps social-interactional researchers have avoided stress research because much of it was based on a physiological perspective (Selye, 1978) or, later, on a cognitive perspective (Lazarus & Folkman, 1984). Early behaviorists had little interest or experience in linking physiological and cognitive symptoms of stress to specific behavioral processes.

Although acknowledging the theoretical differences among researchers and the need to define stress with greater precision, it seems immensely useful for social-interactional researchers to study the concept of stress, particularly in relation to families with conduct-problem children. There are sev-

eral important reasons for doing so. First, research concerning families with conduct-problem children has primarily taken a "microscopic focus" in attempting to understand the dyadic relationships between specific parenting attitudes (e.g., warmth and self-confidence), parenting behaviors (commands, criticisms, spanking, time out, and praise), and specific child behaviors (aggression and noncompliance). Such research has attempted to determine how specific parental attitudes or excesses and deficits of specific parent behaviors influence the development of children's conduct problems. Comparatively less energy has been devoted to understanding the factors that influence parents' perceptions of their children or that alter the way parents interact with their children. The study of stress gives researchers a "wide-angle lens" for focusing on those stressful extrafamilial or intrafamilial factors that have the potential to disrupt or alter a parent's functioning and thereby have an impact on the child's adjustment.

A second reason to study stress is that those who have studied various factors influencing parents' perceptions of and interactions with their children have tended to target one or two isolated factors (e.g., depression, marital discord) rather than to assess the cumulative effects of various factors in combination or the relative effects of different factors. The concept of stress serves as a useful *umbrella term* to bring together a rather large body of research that has not been well integrated, particularly in reference to families with conduct-problem children. Some factors that have been shown to influence parent perceptions and behaviors are as fol-

lows: negative life events, marital discord, isolation, anxiety and depression, alcohol and drug abuse, low income, unemployment, daily hassles, and single parenthood. All these factors have a common theme: stress. Thus, the concept of stress can integrate some important phenomena affecting parent functioning and child adjustment.

This article discusses research that explores the relationships between various stressors, parents' perceptions, and family interactions. Although some of my discussion includes studies of nonclinic and normal families, it highlights the literature related to families with conduct-problem children, for this particular population exemplifies a group of families that experience considerable stress and disrupted or dysfunctional family interactions. In these families, the mechanisms that govern the effects of stressful influences on parental behavior can be discerned more clearly than in normal parenting. This article is not exhaustive, but emphasizes particular studies that explore the relationships between stress, disruptive parenting, and child behavior problems and that present promising new areas of research for the future. I also provide a synthesis of my own series of studies conducted over the past 10 years involving over 250 families with young conduct-problem children aged 3 to 8 years old.

Conceptual Model

The organization of this review is guided by the conceptual model shown in Figure 1. This model assumes that stressors due either to extrafamilial

factors, interpersonal factors, or child factors confront parents with a situation that requires coping skills. Whether these stressors will seriously disrupt the parents' functioning and their interactions with their children depends on the individual parent's psychological well being and personal resources, such as social and family support. Accordingly, the way a parent appraises the stressful situation will determine the degree to which the stress disrupts his or her parenting practices and consequently will determine the degree of risk that the children will develop conduct problems. Although extrafamilial and intrafamilial stressors may also have a direct effect on children's behaviors, in this model I propose an indirect pathway; I concur with Patterson (1983) that the impact of stress on children is mediated by the quality and sensitivity of the parents' interactions with their children. Because there is a considerable body of literature substantiating the theory that children who have coercive and rejecting relationships with their parents are more likely to be aggressive and to have increased conduct problems (see Patterson, 1982, for a review) and conversely, that warm, nurturing parent–child relationships are associated with a child's high self-esteem and competence (Baumrind, 1971), this part of the model is not reviewed in this article. Instead, the focus of this article is on those stressful factors that disrupt parental functioning and thereby indirectly affect children's adjustment, setting in motion a cycle of coercive parent–child interactions and further stress.
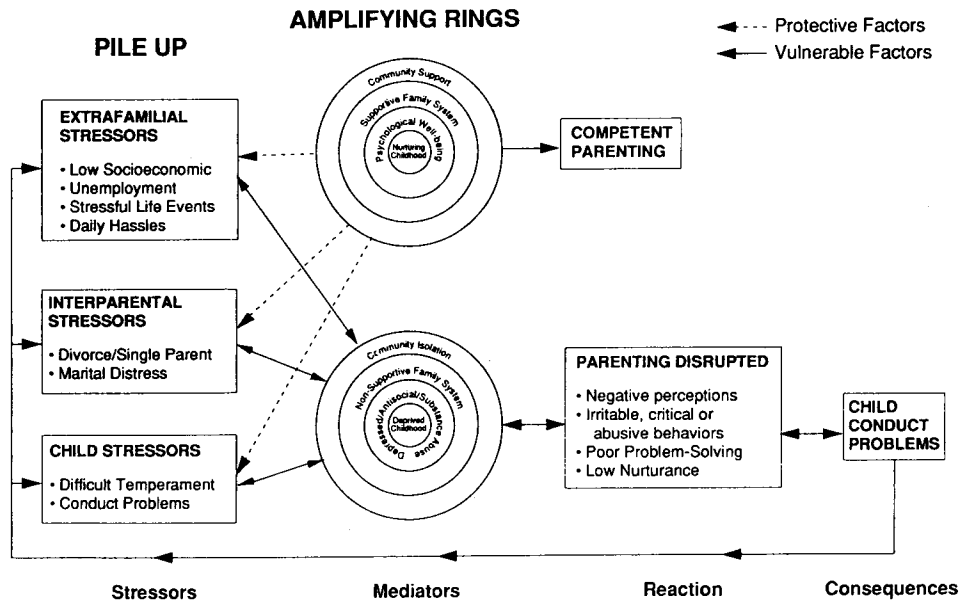

Figure 1. Conceptual model of how stressors affect parenting attitudes and parent–child interactions.

303

Sources of Stress: The "Pile-Up"

Extrafamilial Factors

Family stressors due to major demographic hardships, such as poverty and unemployment, have been shown to have deleterious effects on parenting. In general, research has indicated that parents of a lower socioeconomic class are less likely to use reason, to show support, and to allow independence in their children; they are more likely to use negative controlling behaviors and spanking with their children than are middle-class families (Gecas, 1979; Hess, 1970). In Elder and his associates' pioneering studies of families who had experienced economic decline during the Depression, they reported that fathers who sustained heavy financial losses were likely to be less nurturant and more irritable and punitive in their interactions with their children than were fathers who did not undergo such losses. In turn, these fathering behaviors were predictive of tantrums and negativism in the children (Elder, Liker, & Cross, 1984; Elder, Nguyen, & Caspi, 1985; Goldsmith & Radin, 1987). Elder's model linking economic loss indirectly to child misbehaviors through the father's behaviors has been replicated by recent studies (Galambos & Silbereisen, 1987; Lempers, Clark-Lempers, & Simons, in press).

Research concerning the impact of unemployment on women is sparse and less clear. However, there is some evidence to support a similar mechanism with regard to maternal job satisfaction. Namely, mothers who either did not want to work or who found their employment stressful have been reported to experience significantly more problems in childrearing than mothers who desired employment and felt satisfied with their jobs (Gove & Zeiss, 1987; Hock, 1980; Yarrow, Scott, DeLeuer, & Hernig, 1982).

Much of the stress research since the early 1970s has focused on the effects of major stressful life events such as those measured by the Life Experience Survey (LES) developed by Sarason, Johnson, and Siegel (1978; e.g., unemployment, housing problems, death of relative).

Families with conduct-problem children report high rates of major stressful life events. In a recent study, I found that the amount of negative life stress for clinic families was twice as high as for nonclinic families. In addition, the amount of negative stress significantly discriminated abusive families (known to Child Protective Services) from nonabusive families (Whipple & Webster-Stratton, 1989). However, socioeconomic status also significantly discriminated between the groups, suggesting that socioeconomic level and life stress are interrelated; this substantiates an earlier study's findings that the incidence of major stressors is two to four times greater for poor or lower-class families than for middle-class families (Roghmann, Hecht, & Haggerty, 1975). In my studies with conduct-problem children, I also found significant correlations between high negative life stress and negative maternal perceptions of child adjustment. Similarly, Middlebrook and Forehand (1985) reported that mothers experiencing high negative life stress perceived their children's behavior as more deviant than low-stress mothers.

In addition, on home observations, I found significant correlations between mothers who reported high stress on the LES and more controlling, abusive, and punitive parenting behaviors, as well as between high LES scores and greater child deviance (Webster-Stratton, 1988).

Studies have also reported that a high number of major stressful life events experienced by families is associated with attachment problems (Vaughn, Egeland, Sroufe, & Waters, 1979) and harsher discipline, including physical abuse (Gaines, Sandgrund, Green, & Power, 1978; Gil, 1970). Gelles and Straus (1988) found that parents who reported fewer stressors on the LES were less likely to abuse their children physically; as the number of stressors increased during the year, so did the rate of child abuse.

In assessing stress levels, Lazarus and Launier (1978) emphasized the importance of recognizing the impact of daily hassles and major life events. Studies have indicated that an accumulation of minor day-to-day chronic life hassles is related to more aversive maternal interactions. In particular, parents of conduct-problem children report higher frequencies of stressful events both of minor and of major dimensions (Patterson, 1982). Patterson (1983) showed that days characterized by high rates of minor stressors impinging on mothers were typified by higher rates of observed coercive behavior and irritability in the mothers' interactions with their children. Wahler and Dumas (1984) and Snyder (1988) corroborated these findings. Forgatch, Patterson, and Skinner (1988) and Capaldi and Patterson (1987) further developed a stress construct based on self-reports of negative life experiences, daily hassles, financial problems, and medical problems. High maternal stress in their model was shown to be associated with inept discipline practices, such as explosive discipline and "nattering" with children.

Interparental Stressors

Divorce and separation rank high among the major stressors affecting parenting attitudes and family interactions. In two of the most influential longitudinal studies concerning the effects of divorce on parent–child relationships, Hetherington, Cox,

and Cox (1982) and Wallerstein and Kelly (1980) reported that post-separation parents interacted with their children with less affection and involvement, and with greater punitiveness and irritability. They also reported that the children, especially the boys, showed significant increases in antisocial behaviors in the year or two following separation.

Forgatch, Patterson, and Skinner (1988) hypothesized that the effect of the increased stressors on a child's behavior when that child's parents separate would be mediated by the parents' discipline practices. Their study confirmed that recently separated mothers experienced significantly more minor hassles (16.5 in 3 days) and significantly increased major life events (9 per year) than mothers in two-parent families. These data with single mothers were corroborated by others (Weinraub & Wolf, 1983). Structural equation modeling confirmed their model that the effect of post-separation stress on children was mediated by its effects on inept parent discipline practices. However, these authors and others who have attempted to replicate the findings (Viken, 1985) indicated that although the model holds for single-parent families, it is not a good fit for intact families (Patterson, 1986).

Emery and O'Leary (1982) and O'Leary and Emery (1984) have argued that it is more critical to examine the relative effects of the interpersonal marital process (marital conflict vs. support) rather than family structure as such (single vs. intact) on family interactions. Belsky (1984) theorized that marital relations are a primary stress factor undermining or supporting parent functioning. Certainly the negative effects of marital distress on parents' attitudes and interactions with their children was consistently reported in studies of nonclinic populations (O'Leary & Emery, 1984). Straus (1980) found that parents who reported lower marital satisfaction had an 87% higher rate of child abuse. Marital conflict has also been associated with inconsistent parenting and the use of increased punitiveness, decreased reasoning, and fewer rewards with children (Stoneman, Brody, & Burke, 1989). For clinic-referred families with conduct-problem children, increased marital distress has been correlated with more negative parent perceptions of children's adjustment as well as with increased parental criticisms, commands, and physically negative behaviors, and with increased child conduct problems on home observations (Jouriles, Pfiffner, & O'Leary, 1988; Olweus, 1980; Rutter, 1970; Webster-Stratton, 1989). There is some suggestion in the literature, however, that marital distress may be less predictive of negative parental perceptions of child adjustment than of negative parent–child behaviors (Furey & Forehand, 1985; Schaughency & Lahey, 1985; Webster-Stratton & Hammond, 1990).

In a recent study, I examined the relationship of marital support, marital stress, and divorce to parental perceptions, parental behaviors, and children's behaviors in families with conduct-problem children. Results revealed that low marital satisfaction significantly correlated with more negative maternal perceptions of child adjustment, increased mother and father reports of parenting stress, increased mother commands, and increased child noncompliance. The single mothers perceived themselves as significantly more stressed, however, and reported more child behavior problems, and were observed to have more critical and controlling behaviors than either the maritally distressed or supported mothers. Home observations also indicated that the children of single mothers exhibited significantly more deviant and noncompliant behaviors than either the children of supported mothers or those of maritally distressed mothers (Webster-Stratton, 1989a).

Child Characteristics as Stressors

Research evidence abounds that "a temperamentally difficult" child causes more stress for parents and has the potential to undermine parental functioning (Bates, 1980; Thomas & Chess, 1977). For example, in the abuse literature, researchers reported that abused children are more difficult to manage, more demanding, stubborn, negativistic, and aggressive (Green, 1978; Kadushin & Martin, 1981; Patterson, 1977). In an earlier study of a nonclinic sample, I found that mothers who reported that their preschool children had difficult temperaments were more likely, based on independent observations, to be negative toward their children; moreover, their children were more likely to have behavior problems (Webster-Stratton & Eyberg, 1982). On the other hand, children with a generally positive mood, high regularity, and high adaptability were less likely to be the target of parental hostility, criticism, and irritability (Rutter, 1987).

More recently, in my studies of clinic-referred families with young conduct-problem children, I measured stress resulting from the child's characteristics by means of the child domain score on the Parenting Stress Index (PSI) developed by Abidin (1986). Abidin reported that children who score high (greater than 122) on this domain are not a source of reinforcement for the parent; on the contrary, they have certain characteristics that contribute considerable stress to the parent–child system. The mean score in our sample of 120 conduct-problem children was 136 ($SD = 16$), a score that exceeds the 95th percentile and indicates that these children were experienced by their parents as very stressful. There are also many stresses associated

with having a conduct-problem child. In my studies, families talk about associated hardships, such as their child's repeated expulsion from day care centers and schools; frequent distressful communication with frustrated teachers who are having difficulty managing their children; the isolation and rejection these parents feel from friends and neighbors who do not want the conduct-problem child to play with their own children; the difficulties involved in getting any leisure time away from the child because of limited child care possibilities—burned-out sitters and family members; the fear of going out in public to restaurants or grocery shopping because of the embarrassment if the child is disruptive; restricted options for family vacations; sibling competition for equal parental time and attention; and increased marital conflict. These additional stresses associated with having a conduct-problem child persist as a source of chronic strain, often simultaneously calling for attention. This pile-up of stressors undoubtedly has multiple impacts on the family.

Factors Mediating Stress Response

Stressors, whether they be major ones such as unemployment, a temperamentally difficult child, or divorce, or minor hassles, such as forgetting one's checkbook at the grocery store, do not uniformly disrupt parental functioning. Some parents who experience stressors recover their developmental stride and maintain parental competence, whereas others seem to become more enmeshed in conflict and increased stress symptoms. Several individual and family factors have been shown to act as protective factors or *buffers* ameliorating the effects of stress on the family system or, conversely, as vulnerability factors, intensifying the family's reactions to stressors. Some of the factors that appear to mediate the effects of stress are (a) the psychological characteristics of the parent, (b) the family's social support or isolation, and (c) the parent's sex and use of drugs.

Parent Psychological Well Being

It seemed evident that the manner in which an individual parent reacts to or interprets any of the stressors just mentioned would be influenced by his or her own personal psychological characteristics. The aspect of parental psychological functioning that has probably received the most attention in this regard is depression. Several studies have indicated that parental depression places parents at increased risk for irritable interactions with their children (Patterson, 1982). Orvaschel, Weissman, and Kidd (1980), Seagull (1987), and others have reported that depressed mothers are more disruptive, hostile, and

rejecting toward their children and that these parenting behaviors undermine the child's functioning. Studies of conduct-problem children have consistently indicated that clinic mothers have higher levels of depression than mothers of nonclinic children (Griest, Forehand, Wells, & McMahon, 1980; Mash & Johnston, 1983; Patterson, 1982). It is impossible to determine from correlational studies whether the depression is a cause or the result of having a behavior-problem child. Nevertheless, there has been much theorizing in this literature that maternal depression leads to negative perceptions of children, increased commands, irritability and criticisms with children, and finally to increased conduct problems. Research evaluating. the relationship between reports of depression, direct observations of depressed and nondepressed mothers' behaviors and their children's conduct problems has yielded somewhat conflicting conclusions. Rickard, Forehand, Wells, Griest, and McMahon (1981) first reported that depressed mothers of clinic-referred children gave fewer commands and that their children were less deviant. On the other hand, Rogers and Forehand (1983) found no correlation between maternal depression and maternal behavior toward children. Forehand and Brody (1985) found maternal depression to be related to more negative maternal perceptions of child adjustment but not to maternal behaviors. However, a subsequent study (Forehand, Lautenschlager, Faust, & Graziano, 1986) reported significant paths from maternal depression to negative maternal perceptions of child adjustment to increased commands and to increased child noncompliance. Another major study (Biglan, Hops, & Sherman, 1988; Hops et al., 1987), using extensive observational analysis and a normal control group, reported that depressed mothers exhibited high rates of critical and aversive behaviors that actually suppressed or reduced children's aversive behaviors. In our own study (Webster-Stratton & Hammond, 1988), we found that depressed mothers perceived their children as significantly more disturbed than did either the nondepressed mothers or their husbands. Home observations showed the depressed mothers to be more critical and to use more spankings with their children; yet the children were not observed to be more deviant than the children of nondepressed mothers. One must remember, however, that because this was a clinic sample, all the children had highly deviant behaviors.

The significance of this study was the new information it yielded about the social and environmental stressors experienced by those depressed mothers with conduct-problem children. The depressed mothers reported significantly more stress than the nondepressed mothers on the PSI Parent Domain (Abidin, 1986) due to feelings such as social isola-

tion, self-blame, role restriction, incompetence, and lack of attachment to their child. In comparison with nondepressed mothers, the depressed mothers also reported twice as many negative life events in the previous year. Furthermore, family interviews suggested that these depressed mothers were significantly more likely to have been maltreated and physically abused by their own parents when they were children and to have had depriving, nonnurturing childhood experiences. The depressed mothers also reported significantly more experiences with spouse abuse than the nondepressed mothers.

Antisocial personality is a second parent characteristic shown to be related to ill-tempered disciplining of children. Patterson and Dishion (1988) defined antisocial personality in their sample on the basis of records of arrests, driving violations, and Minnesota Multiphasic Personality Inventory (MMPI) scales. Antisocial personality has been reported to be associated with increased irritable interactions with children (Patterson, 1982). In addition, Patterson and Dishion (1988) found significant correlations between retrospective reports of grandparent explosive reactions and parent antisocial personality. They reported that the effects of antisocial parental patterns on child antisocial behavior were mediated by poor parental practices. Other studies (e.g., Elder, Caspi, & Downey, 1986) have also found a significant relationship between retrospective accounts of grandparent explosive discipline and parent irritability. Moreover, irritable fathers tended to use explosive discipline practices with their own children. In our study (Webster-Stratton, 1985a), we found that a parent's retrospective history of having been abused as a child and of having a current low income were the most potent variables discriminating the abusive from the nonabusive parents.

In summary, these data suggest that parents' level of psychological functioning (e.g., depression or antisocial personality) can influence their perceptions of and behavioral interactions with their children. The data regarding the cross-generational developmental history of parents of conduct-problem children also suggest that early disrupted abusive or depriving childhood experiences make these parents more psychologically vulnerable (or more at risk for depression and antisocial behavior) and more at risk for maladaptive responses when faced with current life stressors. Elder, Caspi, and Nguyen (in press) describe this as an *amplifying effect*—that is, stressful events are more disruptive to those who have negative personality traits because stressors amplify their problems in adjustment. A further hypothesis is that these parents' early abusive childhood experiences contribute to a series of amplifying rings: parents' feeling less confident about their parenting

practices and more negative about their child's behaviors and about life events in general. These attitudes and perceptions lead to increased criticism and spanking, as well as to increased child maladjustment, confirming their negative thoughts and further increasing their stress and family disruption. Moreover, a similar negative cycle may ripple for relationships with partners and friends, leading to a loss of support, isolation, and further stress.

Social Support and Insularity

Social support has been defined as the availability of meaningful and enduring relationships that provide nurturance, security and a sense of interpersonal commitment (Shonkoff, 1985). In this article I previously discussed the effects of marital distress or lack of marital support as a possible disruptor of family interactions. Conversely, data suggest that the presence of family emotional support has a beneficial impact on parent–child interactions. Colletta (1979) reported that total support (provided by friends, relatives, and spouse) was associated with less maternal restrictiveness and punitiveness. Several other investigators also found that the presence of a tightly knit social network was positively associated with parents' sense of competence in parenting, their verbal and emotional responsiveness, and reduced punishment and restrictions (Crnic, Greenberg, Ragozin, Robinson, & Basham, 1983; McLanahan, Wedemeyer, & Adelberg, 1981; Powell, 1980). There has been increasing evidence supporting the general beneficial impact of social support as a possible protective or buffering influence to counteract the effects of stressful events on parent functioning (Mitchell & Trickett, 1980; O'Connell & Mayo, 1988). For example, social support has been found to insulate fathers against the negative psychological impact of unemployment (Gove & Zeiss, 1987). In another study, Turner and Noh (1983) found that for lower socioeconomic status mothers under high stress, a high level of social support buffered them against the effects of those stressors.

On the other hand, social isolation has frequently been associated with dysfunctional parenting and with parents of conduct-problem children. Wahler (1980) developed a construct called *insularity*, which is defined as "a specific pattern of social contacts within the community that are characterized by a high level of negatively perceived social interchanges with relatives and/or helping agency representatives and by a low level of positively perceived supported interchanges with friends" (Wahler & Dumas, 1984, p. 387). This definition is important, because it appears that rather than the number or the amount of social contacts, it is the individual's perception of whether the social contact is support-

307

ive or helpful that makes the social contact advantageous. Insularity has been shown to be related to negative parenting behavior and oppositional child behaviors (Dumas & Wahler, 1985). Insularity and lack of support have also been reported to be significant predictors of a family's relapse or failure to maintain treatment effects (Webster-Stratton, 1985b). In a nonclinic sample, Newberger, Hampton, Marx, and White (1986) used discriminant function analysis to differentiate between 209 control families and 209 families where child abuse, domestic accidents, failure to thrive, and ingestions occurred. The majority of significant variables were related to the mothers' level of social isolation.

Parents' Sex and Use of Drugs and Alcohol

A third factor that may differentially influence a parent's response to a particular stressor is the parent's sex. In our recent study (Webster-Stratton, 1988), we found that mothers perceived significantly more child behavior problems than did fathers. On the PSI, mothers reported significantly more stress due to difficult child characteristics and more stress due to individual parent factors such as depression, restricted role, low sense of competence, poor health, and lack of support from partners than did fathers. It was also interesting to note that mothers' reports of low marital satisfaction and high negative life stressors were significantly correlated with increased maternal demands and criticisms in observed interactions with their children, whereas for fathers there were no significant correlations between marital adjustment or life stressors and their interactions with their children nor with their perceptions of their children. It is possible that mothers may absorb more of the stress or guilt related to conduct problems and their own parenting role than do fathers. By implying that mothers are more distressed than fathers, these data suggest that there may be sex differences in response to various types of stressors.

A fourth factor related to parents' vulnerability to stressors is parents' alcohol or drug abuse. Patterson (1986), Dishion, Reid, and Patterson (1988), and others found parents' substance abuse to be a correlate of poor parental monitoring and harsh discipline.

Summary

For ease of discussion, I presented the impact of stressors on family interactions in a somewhat linear way, dividing stressors into three categories: extrafamilial stressors, intrafamilial stressors, and child stressors. I suggested that the effects of these stressors are mediated by the psychological charac-

teristics of the parent, the degree of social support, and the parent's sex. It is clear, however, that we need a much more complex model, because these three categories of stressors overlap and may interact synergistically with each other, thus creating the "pile-up" effect (McCubbin & Patterson, 1983). For example, being single is associated with loss of intrafamilial social and emotional support; but it may also be accompanied by other extrafamilial stressors such as poverty and housing changes, which in turn are linked with depression. In fact, low socioeconomic status, single-parent status, low social support, and isolation are linked in many studies (e.g., Cohen & Adler, 1986; Weinraub & Wolf, 1983). It is also clear that any model of stress needs to be bidirectional and transactional. For example, if parents are depressed, antisocial, and poor problem solvers, they may be more vulnerable to stress, which may exacerbate their personal levels of functioning. Or, if people have high levels of psychological well being, they may be more likely to pick supportive partners and friends, reducing their levels of stress and resulting in more effective problem solving when faced with stressors. Factors such as child temperament may act as mediators of stress as well as contributors. For example, when a parent is faced with unemployment, a temperamentally easy child may buffer the potentially disrupted parenting style. Research that correlates single stressors with a particular parenting style or child behavior does not help us understand the relationships among the various types of stressors or the microsocial processes involved in parental functioning and child adjustment. Is parenting a *buffered system* as suggested by Belsky (1984), who proposed that as long as the parent's personal psychological functioning is intact, then parent–child functioning will be protected from stressors? With such a large number of theoretical possibilities to be tested, there is a need for further research to develop more complex models that examine the differential effects of different types of stressors on parenting and child adjustment as well as the relationships among these stressors.

New Trends in Research

Some very interesting microsocial research is being done by Patterson and Forgatch (in press) at the Oregon Social Learning Center. These researchers questioned why some single parents seem to do relatively well over time postseparation, whereas others are chronically depressed and report increased stress levels. After testing various models, they have hypothesized that, for some single parents the stress of divorce sets in motion a series of stages of increased depression and increased irritability; this increased irritability leads to a loss of friend-

ships and social support, placing the mothers at increased risk for more irritable behaviors, ineffective discipline, and poor problem-solving outcomes; the poor problem solving of these parents in turn results in increased depression and stress levels, completing the spiraling negative cycle. Forgatch (1988) concluded from her path analysis that stress and loss of support are significant contributors to depression and that maternal irritability is a constant companion of depression and stress. In a recent study, Forgatch (1989) hypothesized that the expression of negative emotions or irritability and negative parental behavior lead to poor problem solving outcomes, which further increase parental stress. She proposed that this irritability simultaneously sets in motion a process whereby the child also becomes increasingly antisocial.

In another recent study, Frick, Lahey, Hartdagen, and Hynd (1989) proposed two models to account for the correlation between marital distress and child conduct disorders. One model proposed a direct and an indirect path from marital satisfaction to child conduct problems, whereas the other model predicted that the significant correlations between marital satisfaction and child conduct problems were more an artifact of the common effects of maternal antisocial personality and social class. Using structural equation modeling, they found the relationship between marital satisfaction and child conduct problems was based primarily on the common association with maternal antisocial personality but that social class did not play an important role as a third variable. These findings seemed to argue the importance of the parents' psychological adjustment as a primary determinant of the effects of stress on parent–child interactions. This study is a good example of research that tests models and looks for related variables that may be confounding the interpretation of the relationships.

Gottman and Katz (1989) presented another new and promising area of research, linking the physiological aspects of stress to the parent–child social interactive processes. In an initial analysis, they provided some support for a model that relates maritally distressed and physiologically underaroused couples with cold, angry, and unresponsive parenting styles and also with an inability to set limits with children. These parent behaviors were also related to child anger, noncompliance, poor peer relations, and low levels of peer play as well as with the child's high level of stress-related hormones (urinary catecholamines in the children).

Another area of research is longitudinal studies that follow families who have received intensive therapy for conduct-problem children. There appears to be consensus among several investigators that a family's ability to maintain parent training

treatment effects posttreatment is influenced by extrafamilial stressors such as negative life events and socioeconomic status; by intrafamilial stressors such as marital discord and single-parent status; and by personal factors such as depression (Dumas & Wahler, 1985; Webster-Stratton, 1985b). However, these studies have either assessed only one or two isolated stressors at a time, or have combined stressors in index scores. Consequently, it has been unclear how several stressors would function in concert rather than in isolation, or what the extent of amplification might be among these stressors; and it is difficult to determine the relative effects of the individual components of the index. It also remains unclear whether some types of stressors are more powerful disruptors of the family system than others—for instance, extrafamilial stressors versus child stressors. In a recent study (Webster-Stratton & Hammond, 1990), I attempted to determine how extrafamilial stressors, intrafamilial stressors, and parents' individual psychological characteristics related to one another and acted in combination to predict treatment outcomes for families with conduct-problem children. Results indicated that maternal and paternal depression and negative life stress significantly contributed to the prediction of mother and father reports of child maladjustment, regardless of the time of posttreatment assessment. Taken together, socioeconomic and marital status were significant predictors of mothers' negative and critical behaviors with their children at both the immediate and 1-year posttreatment assessments. For fathers, marital adjustment was the greatest predictor of their negative behaviors with their children immediately posttreatment; however, at 1-year follow-up assessment, socioeconomic status emerged as a more significant predictor of father critical behaviors. For the child outcome variable, the best predictor of the amount of observed child deviance on the home observations was single-parent status or marital adjustment. For families who had a father present, the amount of negative life stress experienced by the family in the year following treatment was the best predictor of child deviance. Marital status was the best predictor of teacher reports of child adjustment in school at the 1-year follow-up.

Conclusions

Considerable theoretical and empirical work still needs to be done to understand the complex relationships between various stressors and family interactions, and the impact of both on the development of child conduct problems. Future research needs to move away from simple correlational studies that relate single stressor variables to particular parenting practices or directly to child adjustment.

Instead, more complex model-building studies are needed that provide a microsocial analysis of the direct and indirect pathways between various stressors and their pile-up effects on family interactions and child adjustment. Elder's amplifier hypothesis is important in this regard because it may help us to determine which family systems are more likely to be disrupted by stressors or are more at risk for disrupted discipline and the development of child antisocial behavior. One is reminded of an old analogy for stress: "That was the straw that broke the camel's back." As the story goes, when the first Arab sat on the camel's back, the camel's back swayed slightly. A second Arab sat on the camel's back, and the camel's back was able to adjust further. It was not until a straw was put on the camel's back that the camel actually collapsed. To determine the likelihood that other camels would collapse under similar loads, we need information such as how long the camel has been in the desert, the condition of his back, what support he has, when he was last taken to a watering hole, and how he has been treated by the Arabs. Whether a family system will be disrupted by stressors appears to be affected not only by the number and relative weight of the stressors that the family has to cope with but also by the family's personal vulnerability or protective factors. Intervention studies can help test these models by determining whether interventions that build a family's "protective factors"—teaching effective problem-solving skills, stress management, ways to give and get support, positive self-talk—help to mediate the disruptive effects of stressors. Do such interventions help prepare families, especially those with conduct problem children, for the long hot deserts that they encounter as they face society's reaction to their child's behavior? The task for future research in this area is to continue to conceptualize the complex and dynamic relationships between stressors and the family interaction system, as well as to identify those factors that can serve to increase or decrease a maladaptive outcome for the parents and the child. For the ultimate challenge is to recognize those families most at risk, those most vulnerable to disruption by life stressors, and to help them develop resources and coping skills that will minimize the disruption.

References

Abidin, R. R. (1986). *Parenting stress index—manual* (2nd ed.). Charlottesville, VA: Pediatric Psychology Press.

Bates, J. E. (1980). The concept of difficult temperament. *Merrill-Palmer Quarterly, 26,* 299–319.

Baumrind, D. (1971). Current patterns of parental authority. *Developmental Psychology Monographs 4* (1, Pt. 2, 1–103).

Belsky, J. (1984). The determinants of parenting: A process model. *Child Development, 55,* 83–96.

Biglan, A., Hops, H., & Sherman, L. (1988). Coercive family processes and maternal depression. In R. D. Peters & R. J. McMahon (Eds.), *Social learning and systems approaches to marriage and the family* (pp. 72–103). New York: Brunner/Mazel.

Capaldi, D., & Patterson, G. R. (1987). An approach to the problem of recruitment and retention rates for longitudinal research. *Behavioral Assessment, 9,* 169–177.

Cohen, C. I., & Adler, A. (1986). Assessing the role of social network interventions with an inner-city population. *American Journal of Orthopsychiatry, 56,* 278–288.

Colletta, N. D. (1979). Support systems after divorce: Incidence and impact. *Journal of Marriage and the Family, 41,* 837–846.

Crnic, K. A., Greenberg, M. T., Ragozin, A. S., Robinson, N. M., & Basham, R. (1983). Effects of stress and social support on mother and premature and full-term infants. *Child Development, 54,* 209–217.

Dishion, T. J., Reid, J. B., & Patterson, G. R. (1988). *Early drug use and formal intervention strategies.* Unpublished manuscript.

Dumas, J. E., & Wahler, R. G. (1985). Indiscriminate mothering as a contextual factor in aggressive-oppositional child behavior: "Damned if you do and damned if you don't." *Journal of Abnormal Child Psychology, 13,* 1–17.

Eisdorfer, C. (1981, March). *Conceptual issues in stress.* Paper presented at the Conference on Stress, Coping, and Development, Center for the Advanced Study in the Behavioral Sciences, Stanford, CA.

Elder, G. H., Jr., Caspi, A., & Downey, G. (1986). Problem behavior and family relationships: Life course and interpersonal themes. In A. B. Sorensen, F. E. Weinert, & L. R. Sherrod (Eds.), *Human development and the life course: Multidisciplinary perspectives* (pp. 293–340). Hillsdale, NJ: Lawrence Erlbaum Associates, Inc.

Elder, G. H., Jr., Caspi, A., & Nguyen, T. V. (in press). Resourceful and vulnerable children: Family influences in stressful times. In R. K. Silbereisen & K. Eyferth (Eds.), *Development in context: Integrative perspectives in youth development* New York: Springer.

Elder, G. H., Jr., Liker, J., & Cross, C. (1984). Parent–child behavior in the Great Depression: Life course and intergenerational influences. In P. Baltes & O. Brim (Eds.), *Life span development and behavior* (Vol. 6, pp. 109–158). Orlando, FL: Academic.

Elder, G. H., Jr., Nguyen, T. V., & Caspi, A. (1985). Linking family hardship to children's lives. *Child Development, 56,* 361–375.

Emery, R. E., & O'Leary, K. D. (1982). Children's perceptions of marital discord and behavior problems of boys and girls. *Journal of Abnormal Child Psychology, 10,* 11–24.

Forehand, R., & Brody, G. (1985). The association between parental personal/marital adjustment and parent-child interactions in a clinic sample. *Behaviour Research and Therapy, 23,* 211–212.

Forehand, R., Lautenschlager, G. J., Faust, J., & Graziano, W. G. (1986). Parent perceptions and parent–child interactions in clinic-referred children: A preliminary investigation of the effects of maternal depressive moods. *Behaviour Research and Therapy, 24,* 73–75.

Forgatch, M. S. (1988). *The disruptor model for single-mother families.* Unpublished manuscript.

Forgatch, M. S. (1989). Patterns and outcome in family problem solving: The disrupting effect of negative emotion. *Journal of Marriage and the Family, 51,* 115–124.

Forgatch, M. S., Patterson, G. R., & Skinner, M. (1988). A mediational model for the effect of divorce in antisocial behavior in boys. In E. M. Hetherington & J. D. Arasteh

(Eds.), *Impact of divorce, single parenting, and step-parenting on children* (pp. 135–154). Hillsdale, NJ: Lawrence Erlbaum Associates, Inc.

Frick, P. J., Lahey, B. B., Hartdagen, S., & Hynd, G. W. (1989). Conduct problems in boys: Relations to maternal personality, marital satisfaction, and socioeconomic status. *Journal of Clinical Child Psychology, 18,* 114–120.

Furey, W. H., & Forehand, R. (1985). *What factors are associated with mothers being more subjective and less objective in evaluating their clinic-referred child's behavior?* Unpublished manuscript.

Gaines, R., Sandgrund, A., Green, A. H., & Power, E. (1978). Etiological factors in child maltreatment: A multivariate study of abusing, neglecting, and normal mothers. *Journal of Abnormal Psychology, 87,* 531–540.

Galambos, N. L., & Silbereisen, R. K. (1987). Income change, parental life outlook, and adolescent expectations for job success. *Journal of Marriage and the Family, 49,* 141–149.

Gecas, V. (1979). The influence of social class on socialization. In W. R. Burr, R. Hill, F. I. Nye, & I. L. Russ (Eds.), *Contemporary theories about the family* (Vol. 1, pp. 365–404). New York: Fiel Press.

Gelles, R. J., & Straus, M. A. (1988). *Intimate violence: The definitive study of the causes and consequences of abuse in the American family.* New York: Simon & Schuster.

Gil, D. G. (1970). *Violence against children: Physical child abuse in the United States.* Cambridge, MA: Harvard University Press.

Goldsmith, R., & Radin, N. (1987, April). *Objective versus subjective reality: The effects of job loss and financial stress on fathering behaviors.* Paper presented at the meeting of the Society for Research in Child Development, Baltimore, MD.

Gottman, J. M., & Katz, L. F. (1989). Effects of marital discord on young children's peer interaction and health. *Developmental Psychology, 25,* 373–381.

Gove, W. R., & Zeiss, C. (1987). Multiple roles and happiness. In F. Crosby (Ed.), *Spouse, parent, worker* (pp. 125–137). New Haven, CT: Yale University Press.

Green, A. H. (1978). Psychopathology of abused children. *Journal of the American Academy of Child Psychiatry, 17,* 92–103.

Griest, D. L., Forehand, R., Wells, K. C., & McMahon, R. J. (1980). An examination of differences between nonclinic and behavior-problem clinic-referred children and their mothers. *Journal of Abnormal Psychology, 89,* 497–500.

Hess, R. D. (1970). Social class and ethnic influences on socialization. In P. H. Mussen (Ed.), *Carmichael's manual of child psychology* (Vol. 2, pp. 457–558). New York: Wiley.

Hetherington, E. M., Cox, M., & Cox, R. (1982). Effects of divorce on parents and children. In M. E. Lamb (Ed.), *Nontraditional families: Parenting and child development* (pp. 233–288). Hillsdale, NJ: Lawrence Erlbaum Associates, Inc.

Hock, E. (1980). Working and nonworking mothers and their infants: A comparative study of maternal caregiving characteristics and infant social behavior. *Merrill-Palmer Quarterly, 26,* 79–101.

Hops, H., Biglan, A., Sherman, L., Arthur, J., Friedman, L., & Osteen, V. (1987). Home observations of family interactions of depressed women. *Journal of Consulting and Clinical Psychology, 55,* 341–346.

Jouriles, E. N., Pfiffner, L. J., & O'Leary, S. G. (1988). Marital conflict, parenting, and toddler conduct problems. *Journal of Abnormal Child Psychology, 16,* 197–206.

Kadushin, A., & Martin, J. A. (1981). *Child Abuse: An interactional event.* New York: Columbia University Press.

Lazarus, R. S., & Folkman, S. (1984). *Stress, appraisal, and coping.* New York: Springer.

Lazarus, R. S., & Launier, R. (1978). Stress-related transactions between person and environment. In L. A. Pervin & M. Lewis (Eds.), *Perspectives in interactional psychology* (pp. 287–327). New York: Plenum.

Lempers, J., Clark-Lempers, D., & Simons, R. (in press). Economic hardship, parenting, and distress in adolescence. *Child Development.*

Mash, E. J., & Johnston, C. (1983). Sibling interactions of hyperactive and normal children and their relationship to reports of maternal stress and self-esteem. *Journal of Clinical Child Psychology, 12,* 91–99.

McCubbin, H., & Patterson, J. (1983). Family stress and adaptation to crises: A double ABCX model of family of behavior. In H. McCubbin, M. Sussman, & J. Patterson (Eds.), *Advances and development in family stress theory and research.* New York: Haworth.

McLanahan, S. S., Wedemeyer, N. V., & Adelberg, T. (1981). Network structure, social support, and psychological well-being in the single-parent family. *Journal of Marriage and the Family, 43,* 601–622.

Middlebrook, J. L., & Forehand, R. (1985). Maternal perceptions of deviance in child behavior as a function of stress and clinic versus nonclinic status of the child: An analogue study. *Behavior Therapy, 16,* 494–502.

Mitchell, R., & Trickett, E. (1980). Task force report: Social networks as mediators of social support. *Community Mental Health Journal, 16,* 27–44.

Newberger, E. H., Hampton, R. L., Marx, T. J., & White, K. M. (1986). Child abuse and pediatric social illness: An epidemiological analysis and ecological reformulation. *American Journal of Orthopsychiatry, 56,* 589–601.

O'Connell, R. A., & Mayo, J. A. (1988). The role of social factors in affective disorders: A review. *Hospital and Community Psychiatry, 39,* 842–851.

O'Leary, K. D., & Emery, R. E. (1984). Marital discord and child behavior problems. In M. D. Levine & P. Satz (Eds.), *Middle childhood: Development and dysfunction* (pp. 345–364). Baltimore: University Park Press.

Olweus, D. (1980). Familial and temperamental determinants of aggressive behavior in adolescent boys: A causal analysis. *Developmental Psychology, 16,* 644–660.

Orvaschel, H., Weissman, M. M., & Kidd, K. K. (1980). Children and depression: The children of depressed parents; the childhood of depressed patients; depression in children. *Journal of Affective Disorders, 2,* 1–16.

Patterson, G. R. (1977). A performance theory for coercive family interaction. In L. Carros (Ed.), *Social interaction: Methods, analysis and illustration.* Chicago: University of Chicago Press.

Patterson, G. R. (1982). *Coercive family process.* Eugene, OR: Castalia.

Patterson, G. R. (1983). Stress: A change agent for family process. In N. Garmezy & M. Rutter (Eds.), *Stress, coping and development in children* (pp. 235–264). New York: McGraw-Hill.

Patterson, G. R. (1986). Performance models for antisocial boys. *American Psychologist, 41,* 432–444.

Patterson, G. R., & Dishion, T. J. (1988). Multilevel family process models: Traits, interactions and relationships. In R. Hinde & J. Stevenson-Hinde (Eds.), *Relationships within families: Marital influences* (pp. 283–310). Oxford, England: Clarendon.

Patterson, G. R., & Forgatch, M. S. (in press). Some models for aggression and depression in families. In G. R. Patterson (Ed.), *Depression and aggression: Two facets of family interaction.* Hillsdale, NJ: Lawrence Erlbaum Associates, Inc.

311

Powell, D. R. (1980). Personal social networks as a focus for primary prevention of child maltreatment. *Infant Mental Health Journal, 1,* 232–239.

Rickard, K. M., Forehand, R., Wells, K. C., Griest, D. L., & McMahon, R. J. (1981). Factors in the referral of children for behavioral treatment: A comparison of mothers of clinic-referred deviant, clinic-referred non-deviant, and non-clinic children. *Behaviour Research and Therapy, 19,* 201–205.

Rogers, T. R., & Forehand, R. (1983). The role of parent depression in interactions between mothers and their clinic-referred children. *Cognitive Therapy and Research, 7,* 315–324.

Roghmann, K., Hecht, P., & Haggerty, R. (1975). Coping with stress. In R. Haggerty, K. Roghmann, & I. Pless (Eds.), *Child health and the community* (pp. 54–66). New York: Wiley.

Rutter, M. (1970). Sex differences in children's responses to family stress. In E. J. Anthony & C. Koupernik (Eds.), *The child in his family* (pp. 165–196). New York: Wiley.

Rutter, M. (1987). Psychosocial resilience and protective mechanisms. *American Journal of Orthopsychiatry, 57,* 316–331.

Sarason, I. G., Johnson, J. H., & Siegel, J. M. (1978). Assessing the impact of life changes: Development of the Life Experiences Survey. *Journal of Consulting and Clinical Psychology, 46,* 932–946.

Schaughency, E. A., & Lahey, B. B. (1985). Mothers' and fathers' perceptions of child deviance: Roles of child behavior, parental depression, and marital satisfaction. *Journal of Consulting and Clinical Psychology, 53,* 718–723.

Seagull, E. A. W. (1987). Social support and child maltreatment: A review of the evidence. *Child Abuse and Neglect, 11,* 41–52.

Selye, H. (1978). *The stress of life.* New York: McGraw-Hill.

Shonkoff, J. (1985). Social support and vulnerability to stress: A pediatric perspective. *Pediatric Annals, 14,* 550–554.

Snyder, J. J. (1988). *Intradyad analysis of the effects of daily variations in maternal stress on maternal discipline and irritability: Its effects on child deviant behaviors.* Unpublished manuscript.

Stoneman, Z., Brody, G. H., & Burke, M. (1989). Marital quality, depression, and inconsistent parenting: Relationship with observed mother-child conflict. *American Journal of Orthopsychiatry, 59,* 105–117.

Straus, M. A. (1980). Stress and child abuse. In C. H. Kempe & R. E. Helfer (Eds.), *The battered child* (3rd ed., pp. 86–103). Chicago: University of Chicago Press.

Thomas, A., & Chess, S. (1977). *Temperament and development.* New York: Brunner/Mazel.

Turner, R. J., & Noh, S. (1983). Class and psychological vulnerability among women: The significance of social support and personal control. *Journal of Health and Social Behavior, 24,* 2–15.

Vaughn, B., Egeland, B., Sroufe, L. A., & Waters, E. (1979). Individual differences in infant-mother attachment at twelve and eighteen months: Stability and change in families under stress. *Child Development, 50,* 971–975.

Viken, J. R. (1985). *Stress, family process and child antisocial behaviors.* Unpublished manuscript.

Wahler, R. G. (1980). The insular mother: Her problems in parent-child treatment. *Journal of Applied Behavior Analysis, 13,* 207–219.

Wahler, R. G., & Dumas, J. E. (1984). Changing the observational coping styles of insular and noninsular mothers: A step toward maintenance of parent training effects. In R. F. Dangel & R. A. Polster (Eds.), *Parent training: Foundations of research and practice* (pp. 379–416). New York: Guilford.

Wallerstein, J. S., & Kelly, J. B. (1980). *Surviving the breakup: How children and parents cope with divorce.* New York: Basic Books.

Webster-Stratton, C. (1985a). Comparison of abusive and non-abusive families with conduct-disordered children. *American Journal of Orthopsychiatry, 55,* 59–69.

Webster-Stratton, C. (1985b). Predictors of treatment outcome in parent training for conduct-disordered children. *Behavior Therapy, 16,* 223–243.

Webster-Stratton C. (1988). Mothers' and fathers' perceptions of child deviance: Roles of parent and child behaviors and parent adjustment. *Journal of Consulting and Clinical Psychology, 56,* 909–915.

Webster-Stratton, C. (1989). The relationship of marital support, conflict, and divorce to parent perceptions, behaviors, and childhood conduct problems. *Journal of Marriage and the Family, 51,* 417–430.

Webster-Stratton, C., & Eyberg, S. M. (1982). Child temperament: Relationship with child behavior problems and parent-child interactions. *Journal of Clinical Child Psychology, 11,* 123–129.

Webster-Stratton, C., & Hammond, M. (1988). Maternal depression and its relationship to life stress, perceptions of child behavior problems, parenting behaviors, and child conduct problems. *Journal of Abnormal Child Psychology, 16,* 299–315.

Webster-Stratton, C., & Hammond, M. (1990). Predictors of treatment outcome in parent training for families with conduct problem children. *Behavior Therapy, 21,* 319–337.

Weinraub, M., & Wolf, B. (1983). Effects of stress and social supports on mother-infant interactions in single and two parent families. *Child Development, 54,* 1297–1311.

Whipple, E., & Webster-Stratton, C. (1989). *The role of parental stress in physically abusive families.* Unpublished manuscript.

Yarrow, M. R., Scott, P., DeLeuer, L., & Hernig, C. (1982). Childrearing in families of working and nonworking mothers. *Sociometry, 25,* 122–140.