THE RELATIONSHIP OF STRESS AND DEPRESSED MOOD TO MATERNAL REACTIONS

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A THESIS SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTER OF ARTS
in THE FACULTY OF GRADUATE STUDIES
(Datepartment of Psychology)

We accept this thesis as conforming to the required standard

THE UNIVERSITY OF BRITISH COLUMBIA
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Date  MARCH 2, 1990
Models of parenting are becoming increasingly complex. The domain has evolved from a simple parent behavior - child behavior paradigm to one which considers systemic influences. Contextual variables, such as life stress and depressed mood, are beginning to receive much attention in the literature. Also, researchers have noted the importance of measuring parent cognition (i.e., perceptions) and affect in addition to acquiring information regarding parent behavior. The present study was designed to explore the role played by two levels of stress; global life events and daily hassles, and by depressed mood, in determining maternal affective, behavioral and cognitive responses to child behavior.

A community sample of 66 single mothers participated in the study. Mothers read 12 descriptions of child behavior, each embedded in one of three contexts of stress (i.e., global life event context, daily hassles context, no stress context). The sample was divided into three groups (n=22) on the basis of scores on a standard mood instrument. Only those mothers who received scores in the two extreme groups (i.e., depressed mood and nondepressed mood) were included in the main analyses.
A two-way repeated measures MANOVA revealed a main effect for stress, but not for mood, when the BDI was used to create the groups. When the CES-D was utilized, a main effect for stress, and for mood, was detected. No significant stress by mood interaction was observed. Follow-up univariate ANOVAs and multiple comparision tests revealed that the daily hassles context had a greater influence on maternal responses to child behavior than did the global life events context. That is, mothers were more affectively aroused, indicated a more intense anticipated behavioral reaction and perceived the child behavior to be more deviant, in the daily hassles condition compared to the other conditions. In addition, mothers who reported more depressed mood indicated greater affective responsiveness to the child behavior vignettes than mothers who did not report depressed mood. The results are discussed in terms of empirical and applied implications.
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Acknowledgement

I would like to take this opportunity to express my gratitude to Charlotte Johnston for her guidance and support throughout this project. Thanks are also extended to the members of my committee, Anita DeLongis and Dan Perlman, who contributed greatly to the completion of this study through their useful comments and suggestions. In addition I would like to acknowledge Kim Behrenz for her clerical assistance during the collection of the data.
Parents frequently seek the help of mental health professionals in response to child behavioral difficulties such as perceived child noncompliance, aggression and/or attentional difficulties (Offord et al., 1987; Yule, 1981). In recent years, there has been a movement to understand such child behavior problems in the context of the family (Bronfenbrenner, 1979; Mash, 1984; Peters & McMahon, 1987; Wahler, Leske & Rogers, 1979). It has been suggested that many child behavior problems may be attributed, at least in part, to dysfunctional parent-child interactions (Christensen, Phillips, Glasgow & Johnson, 1983; Patterson, 1982). In response to this, much research energy has been devoted to exploring the role of parent behavior in eliciting or maintaining child deviance.

The parent behavior - child behavior relationship

Considerable evidence exists demonstrating that parent behavior is related to child behavior. Developmental psychologists stress the importance of sensitive and responsive behavior (Ainsworth & Bell, 1974; Skinner, 1985) and warm, supportive care-giving (Beckwith, Chown, Kopp, Parmelee, & Marci, 1976; Bradley, Caldwell, & Elardo, 1979) for normal child development. Similarly, those who study clinical populations have found evidence to support the link between parenting practices and the development and maintenance of child behavior problems. Some researchers
have linked child deviance to parental power assertive disciplinary styles (Baumrind, 1971; Feshbech, 1974; Hoffman, 1960, 1970; Olweus, 1980; Saltzstein, 1976). This pattern of parenting techniques is typified by commands, negativeness, and permissiveness for aggression. Other researchers have utilized sequential analysis of observed mother and child behavior to demonstrate that inappropriate (i.e., vague) maternal commands tend to increase child noncompliance (Christensen, Phillips, Glasgow & Johnson, 1983; Patterson, 1982). Using an observational coding system, Forehand and McMahon (1981) reported that mothers of clinic-referred, noncompliant children are more likely to issue ineffective, lengthy, and vague commands in mother-child interactions than the effective, short, and precise commands used by nonclinic mothers with their children.

Similar findings have been demonstrated using samples of children who display specific behavioral disturbances. For instance, researchers have observed that mothers of unmedicated hyperactive children use more directive strategies and are less positive than mothers of normal children in mother-child interactions (Campbell, 1975; Cunningham & Barkley, 1979; Mash & Johnston, 1982). Childhood aggression has also been linked to maternal hostility, negativism, and power-assertion (Loney, Langhorne & Paternite, 1978; Olweus, 1980). Such research suggests that a relationship exists between parent behavior and child behavior problems.
Patterson (1976) provides a conceptual basis for this link. He describes the "coercive interactions" in which dysfunctional families commonly find themselves embroiled. He suggests that these interactions are maintained as deviant child behavior and maladaptive parenting styles are mutually reinforced. For instance, the child learns that if he throws a temper tantrum, he is likely to be reinforced by parent attention or withdrawal of demand because his parents have learned that they are rewarded by the termination of the unpleasant tantrum if they attend to or give in to their child's demands. Patterson (1986) has offered empirical evidence in support of this theory of child deviance. In a path analysis of observed parent and child behavior, it was revealed that poor parental monitoring and inept discipline accounted for a significant amount of the variance involved in the development and maintenance of child deviance. Thus, there appears to be both empirical and theoretical support for the link between parent behavior and child behavior.

Reciprocity of Influence

It is important to recognize that presumptions regarding the directionality of effects in parent-child interactions are likely to be premature at this time. Patterson's (1986) conceptualization of the parent-child relationship in dysfunctional families is in keeping with the bidirectional model proposed by Bell and Harper (1977). This model replaced traditional views, that emphasized solely parent influence, with a more comprehensive framework
for understanding parent-child exchanges. Bell and Harper (1977) suggest that children and their parents assert reciprocal patterns of influence upon one another. This newer theoretical conceptualization has also received empirical support. For instance, Barkley and Cunningham (1979) found that mothers of hyperactive children displayed fewer negative parenting strategies when their child was on stimulant medication than when the child was not medicated, suggesting that the maternal behavior was, at least in part, determined by drug-related changes in the child behavior. Such evidence suggests that traditional models focussing exclusively on parent influence may not offer sufficient breadth to explain parent-child interactions.

Bugental and Shennum (1984) have built upon this model of reciprocity. They suggest that these parent-child behavioral exchanges may be facilitated by parent perceptions of the child. That is, the way in which an adult reacts to the child's behavior may be a function of the beliefs that he/she holds about that child's manageability. Further, these researchers showed that the parents or adults act in a way that elicits child behavior that fulfils the adult beliefs. The evidence reported by Bugental and Shennum (1984) supports the notion that reciprocity theory also has a place in the domain of parent perceptions. In general, the bidirectional model has become widely accepted and provides a working framework for the study of parent-child relationships.
The parent perceptions - parent behavior relationship

Unlike the diagnosis of adult psychopathology, the assessment of child deviance is dependent more upon the reports of parents and other significant adults than on the responses of the target individual. A variety of rating scales have been developed for the purpose of determining child psychopathology on the basis of parental report (e.g., Achenbach & Edelbrock, 1978; Conners, 1970; Quay & Peterson, 1979). It is apparent that much of the clinical evaluation of children is based on parent perceptions of child behavior, rather than observed child behavior. In response to this, considerable research interest has been focussed on parent perceptions of child behavior. For example, in a study comparing clinic-referred and nonreferred children, Griest, Forehand, Wells and McMahon (1980) found that, compared to observations of child behavior, maternal perceptions of child behavior were better discriminators of clinic and nonclinic status. That is, it was the mothers' perceptions, rather than the behavior of the child as judged by objective observers, that determined whether or not the child was referred for treatment.

Parent perceptions may have an impact, not only on the identification of the child as problematic, but also on the way in which parents interact with their children. In the parenting literature, the term perception refers to the adult's view of the acceptability of the child's behavior and the extent to which the child was deemed to have
executed these behaviors intentionally (Bauer & Twentyman, 1985; Middlebrook & Forehand, 1986). The notion of causal attributions, as outlined by Weiner (1979), is therefore encompassed in this definition.

Recently, researchers have begun to explore the relationship between parent perceptions of the child and parent behavior. Dix and Grusec (1985) found support for the notion that parents' attributions for child behavior change with the development of the child. Specifically, parents found child misbehavior to be more intentional, dispositional and upsetting with increasing child age. In addition, they found that, although the specific action chosen in response to child behavior may be a function of individual values and experiences, parent attributions influence the probability and intensity of the response. There is also evidence in the child abuse literature that a relationship exists between parent perceptions of the child and abusive parent behavior. Reid, Kavanagh and Baldwin (1987) used behavioral observation techniques and parent reports to determine differences between abusive and non-abusive families along the dimensions of observed child behavior and perceptions of child behavior. Parent report of child behavior differed significantly between groups. When compared with ratings of non-abusive families, abusive parents in this sample perceived more conduct problems in their children. However, these researchers found few significant differences in the child or parent behaviors of
these two groups as judged by professional independent observers. Larrance and Twentyman (1983) measured mothers' perceptions of their child's behavior along Weiner's dimensions of stability and locus of control (internal versus external). They found that mothers with a previous history of abusive behavior made different attributions for their child's misbehavior than those with no history of child maltreatment. Abusive mothers attributed their child's good behavior to unstable and external factors and perceived their child's transgressions to be caused by stable and internal sources. The normal mothers indicated a completely opposite pattern of responses (e.g., internal, stable attributions for positive child behavior; external, unstable attributions for negative child behavior). In a similar study, Bauer and Twentyman (1985) investigated the attributions made by a sample of abusive, neglectful and normal mothers and found that the mothers who had demonstrated abusive parent behavior in the past were more apt to interpret child behavior as malevolent than were other mothers. The researchers hypothesize that this type of faulty attribution for child behavior may aid in the precipitation of family violence. Thus, a link between parent perceptions of child behavior and parent behavior is supported in the literature.

Factors affecting parent behavior and perceptions

Given this link between parent and child behavior, and the role that parent perceptions appear to play in mediating
this link, it is important to identify factors that may be related to parent behavior and/or perceptions of child behavior. The literature suggests that parent behavior and perceptions of child behavior are affected by a variety of factors that may be conceptually grouped into two broad areas: personal characteristics of parents and environmental conditions. Personal characteristics would include variables such as parent mood, age, parenting experience and child-rearing attitudes. Environmental conditions relevant to parent behavior might include level of external stress, available social support, and the particular parenting situation. These two broad areas are obviously overlapping and nonindependent, but the distinction provides a useful heuristic for conceptualizing the influences on parent perceptions of child behavior and parent behavior. In the present paper, parent psychopathology, specifically depressed mood, and stress, specifically daily hassles and global life events, will serve as the factors representing these two broad areas. 

**Personal characteristics, parent behavior and child deviance**

Parent psychopathology is a personological variable that is commonly associated with family dysfunction and child behavior problems. Much of the empirical study in this area has been focussed on the psychological functioning of parents of clinic-referred children. For instance, Goodstein and Rowley (1961) showed that mothers of disturbed children, particularly acting-out children, displayed more
maladjustment on the MMPI than did mothers of normal children. Similarly, Patterson (1982) found that mothers of socially-aggressive children demonstrated higher MMPI profiles than mothers of normal children. In a study comparing families of hyperactive and normal children, Befera and Barkley (1985) showed that mothers of hyperactive children reported significantly more depressive symptomatology than those of normal children. These studies serve to demonstrate the link between parent characteristics and child behavior within families of clinic-referred children.

Other studies in this area have focused on the child-rearing practices of parents exhibiting some degree of psychopathology. Lobitz and Johnson (1975) found that, within their sample, elevations in parent responses on several MMPI scales were related to both observed parent negativenss toward the child and to observed child deviant behavior. Others suggest that mothers demonstrating psychopathology exhibit parent behavior that is characterized by emotional detachment from the child, a denial of child care concerns, low rates of interaction, and a lack of appreciation for a reciprocal mother-child relationship (Baldwin, Cole & Baldwin, 1982; Cohler, Grunebaum, Weiss, Hartman & Gallant, 1976). Empirical study in this area demonstrates a relationship between parent psychopathology and child deviance, and suggests that this association is mediated by parent behavior.
Depressed mood and parent behavior

Researchers have begun to recognize the need for further specification of the type of parent psychopathology most often associated with parent and child problems. The existence of depressed mood, especially among mothers, has been repeatedly identified as a factor associated with poor parent-child relationships (Billings & Moos, 1983; Cohler, Grunebaum, Weiss, Garner & Gallant, 1977; Cohn & Tronick, 1983; Weissman, Paykel & Klerman, 1972). Two different research methodologies have been utilized to assess the impact of depressed mood on parent behavior.

First, there exists a cluster of studies that utilize deviant child populations and assess the degree of depressed mood and/or parent-child conflict in the families of these children. It is important to note that these studies involve parents who vary along a continuum of depressive symptomatology or depressed mood, and may or may not exhibit clinical levels of depression. Researchers have found that mothers of clinic-referred children report significantly higher levels of depressed mood than mothers of normal children (Griest et al., 1980; Rickard, Forehand, Wells, Griest & McMahon, 1981). Consistent with the sex ratio in the general population, depressed mood appears to be more prevalent among mothers than fathers of clinic-referred children (Cunningham, Benness & Siegal, 1988). In a recent study, Cunningham and his colleagues (1988) found that mothers of hyperactive children reported significantly
higher levels of depressed mood than did mothers of normal children. The fathers of hyperactive children had depression scores that were indistinguishable from those of parents with normal children (Cunningham et al., 1988). Webster-Stratton (1988) also assessed differences between mothers and fathers of conduct disordered children in terms of the relationship between depressed mood and parent behavior. She showed that mothers who had higher depression scores used more commands and criticisms when interacting with their children than did those with low scores on the depression scale. The parenting behavior displayed by fathers was unrelated to self-reported depressed mood. Such studies reveal that a relationship exists between child deviance, maternal behavior, and maternal depressed mood.

A second type of study examining this link between maternal depression and child behavior focuses upon parent-child interactions in the families of clinically-depressed adults. For instance, Billing and Moos (1983) showed that children from families with a depressed parent had significantly more behavior problems, as reported by parents, than children in nondepressed homes. Moreover, these researchers indicated that maternal depression was associated with family conflict. Similarly, Hammen and her colleagues (Hammen, Gordon, Burge, Adrian, Jaenicke & Hiroto, 1987) found maternal affective disorder to be related to the diagnosis of behavior problems, school
problems and social competence difficulties in their children.

Other investigators have utilized this second methodological strategy to examine the link between maternal depression and parent behavior. For example, Weissman and Paykel (1974) reported that the depressed mothers in their sample had difficulty communicating with their children, felt a lack of affection toward them, and expressed overt hostility in their interactions with them. Cohler et al. (1977) also found that emotional detachment, feelings of resentment, and the expression of overt hostility towards children were characteristic of the parent behavior demonstrated by depressed mothers. Some researchers suggest that depressed mothers are unable to control their children because they lack adaptive assertion skills and tend to avoid necessary confrontational situations (Kochanska, Kucynski, Radke-Yarrow & Welsh, 1987). Through the use of behavioral coding systems, other researchers have been able to identify that maternal depression covaries with the use of negative commands and aversive mother-child interactions (Forehand, Lautenschlager, Faust & Graziano, 1986; Patterson, 1982; Webster-Stratton & Hammen, 1988).

More decisive evidence regarding the impact of depressed mood on parent-child interactions has evolved out of studies in which a depressed mood is induced in mothers prior to a behavioral observation session. Zekoski, O'Hara and Wills (1987) utilized the Velten mood induction
procedure to elicit a depressed state in a group of mothers. Other mothers were assigned to one of two control conditions: a euphoria-induction group and a no-induction group. During the interaction session, observers noted that infants of the depression-induced mothers became distressed and were less contingently responsive to their mothers than were children in the other groups. Moreover, mothers in the depression-induction group were rated as less able to elicit positive infant responses than were mothers in the control conditions. These results suggest that maternal depressed mood disrupts mother-infant interactions. In summary, support for the relationship between maternal depressed mood, parent behavior and child deviance exists in the literature. It is important to recognize, however, that, with the exception of the mood induction studies, many of the studies involved are correlational in nature, and, as such, the direction of causality cannot be determined. That is, it is unclear at this time whether maternal depression causes child behavior problems or whether child behavior problems cause maternal depression.

The depressed mood - perceptions of child behavior relationship

As discussed previously, parents’ perceptions of child behavior are an integral part of the labelling and referral process. Given the finding that maternal perceptions of child behavior are the best discriminator of clinic and nonclinic status (Griest et al., 1980), many researchers
have begun to focus on the factors that influence these perceptions. In nonclinic families, parent perceptions appear to be primarily influenced by the behavior exhibited by the child (Griest et al., 1980). Researchers have shown that within clinic-referred families however, parent perceptions are not based solely on the child’s overt behavior (Brody & Forehand, 1986; Friedlander, Weiss & Traylor, 1986; Griest et al., 1980). Much attention has been given to the search for other relevant influences.

Repeatedly, researchers have demonstrated that a relationship exists between maternal depressed mood and perceptions of child behavior (Forehand et al., 1986; Forehand, Wells, McMahon, Griest & Rogers, 1982; Griest, Wells & Forehand, 1979; Rogers & Forehand, 1983). Some of this research has concluded that maternal depressed mood is the sole determinant of parent perceptions among clinic families and that child behavior fails to make any significant contribution (Forehand, Wells, McMahon, Griest & Rogers, 1982; Griest et al., 1979; Rogers & Forehand, 1983). Other research suggests that it is a combination of these two factors that determines parent perceptions (Brody & Forehand, 1986; Griest et al., 1980).

In an attempt to discern the relative contributions of depressed mood and observed child behavior to maternal perceptions of a child as deviant, Rickard et al. (1981) compared samples of clinic referred deviant, clinic referred non-deviant, and nonclinic children and mothers on both home
observations and parent questionnaires. Children were assigned to the clinic deviant group when their behavior was deemed inappropriate by trained independent observers. These researchers found that parents in both clinic groups perceived their children as more maladjusted than parents in the non-clinic groups. Among the clinic samples, parents in the clinic non-deviant group showed significantly more depression than those in the remaining two groups. Differences between the clinic groups were also found in the parent-child interactions observed. Parents in the Clinic Deviant groups issued more vague, interrupted commands than those in the Clinic Non-deviant group. This implies that among clinic referred families, there is a subset of parents who may erroneously perceive their children as deviant and these biased perceptions appear to be related to the presence of depressed mood. This study illustrates how parent depressed mood may play an influential role in determining perceptions of child behavior.

Environmental conditions, parent behavior and child deviance

Systems theory would suggest that family functioning does not occur in a social vacuum. Rather, it is hypothesized that there exist factors in the host environment that influence family practices and ways of thinking (Bronfenbrenner, 1979; Patterson, 1983). For instance, researchers have demonstrated that descriptive variables, such as socioeconomic status (Anastasiow, Hanes & Hanes, 1982; Segal, 1985; Skinner, 1985) and the degree of
maternal social support experienced (Dumas & Wahler, 1983; Wahler, 1980), are related to parent behavior. There is evidence to suggest that stress is a key environmental factor influencing parent behavior and child deviance (Gil, 1970; Hammen et al., 1987; Patterson, 1983; Wahler & Sansbury, 1988; Webster-Stratton, 1988; Weinraub & Ansul, 1984; Wolfe, Fairbank, Kelly & Bradley, 1983).

**Stress as an environmental variable**

Stress is a variable that has captured the attention of researchers across several disciplines. As a result of the diversity of the contexts in which it is considered, the concept has derived a variety of meanings (Lazarus, DeLongis, Folkman & Gruen, 1985). As it pertains to clinical psychology, stress may be best understood as the experience associated with external, situational conditions that tax an individual.

The stress-coping model proposed by Lazarus and his colleagues (Coyne & DeLongis, 1986; Folkman & Lazarus, 1980; Lazarus & Folkman, 1984; Folkman, Lazarus, Dunkel-Schetter, DeLongis & Gruen, 1986) provides the framework for much of the research in this area. Identified in this model are two processes, cognitive appraisal and coping, that are said to mediate environmental stress and its impact on well-being. Cognitive appraisal involves the way in which a stressful encounter is perceived. Lazarus and Folkman (1984) suggest that this process is a key ingredient in the recovery of individuals subjected to a taxing environmental event.
Coping is a term that refers to an individual's efforts to manage a stressful experience. These efforts may be classified as either problem-focussed (based upon cognitive or behavioral efforts to meet the demands of the stressor) or emotion-focussed (based upon attempts to ease the negative feelings associated with the stressor) (Folkman & Lazarus, 1980). Although causal links have yet to be empirically demonstrated, on the basis of cross-sectional data, Folkman and her colleagues (Folkman et al., 1986) speculated that an individual's appraisal of the stressful event influences his/her choice of coping strategy. This in turn affects his/her long- and short-term well-being. A bidirectional influence is also recognized. That is, as the coping process progresses, cognitive appraisal may be altered. Such causal speculation is intuitively appealing and, interestingly, parallels the pathways commonly advanced in the area of parenting. That is, cognitive appraisal of a stressful situation and parent perception of child behavior both play an intermediate role in the event-behavior sequence and are both subject to the same biases. Further, the choice of parent behavior may be influenced by parent perceptions in much the same way that reaction to a stressful event is mediated by cognitive appraisal (LaRose, Wolfe & Mattaroccia, 1986). This model constitutes the foundation upon which contemporary views of stress are based.
Lazarus and his associates consider only negative events to be stressful. These researchers suggest that positive life events counteract the feelings of stress caused by negative life events by acting as a type of buffer. This contemporary perspective is in conflict with early work in the stress literature that adhered to the notion that any event, regardless of its perceived desirability (positive or negative), asserted a stressful impact on the individual (Holmes & Masuda, 1974). Empirical evidence exists in support of Lazarus' claim. Vinokur and Selzer (1975) found that only negative life changes on the Schedule of Recent Events (SRE; Rahe, Meyer, Smith, Kjaer & Holmes, 1964) were related to self-reported depression, anxiety and tension. Positive change could not be linked to these measures. More recently developed scales, such as the Life Experience Survey (LES; Sarason, Johnson & Siegal, 1978), have attempted to circumvent this controversy by asking respondents to indicate the valence of desirability (positive or negative) associated with experienced events.

Levels of stress - daily hassles and global life events

Within the context of external stressors, two levels of the construct may be readily identified. First, potent, although presumably infrequent, events are assumed to be related to an individual's functioning. Researchers have linked the experience of major life trauma with a change in health status. Using retrospective studies, researchers have found a relationship between life change and myocardial
infarction (Edwards, 1971; Thoeorell & Rahe, 1971) and sudden cardiac death (Rahe & Lind, 1971). In a prospective study, Rahe (1968) divided 2,500 naval officers into high risk and low risk individuals on the basis of life change scores for a period of six months. Those identified as high risk reported more illnesses each month following the life events assessment and had one third more illnesses during the follow-up period than the low risk group. Holmes and Masuda (1974) proposed that the risk of health change increased with increased magnitude of life crises. These authors concluded that the greater the life change, the greater the individual's vulnerability to disease and the more severe the disease that is incurred. There are a number of scales in existence that claim to measure global life events. The Social Readjustment Rating Scale (SRRS; Holmes & Rahe, 1967) and the LES (Sarason et al., 1978) are two of the more widely used indices.

Recently, researchers have identified a second level of stress. It has been hypothesized that relatively minor events of daily living also have an impact on an individual's level of functioning. Some researchers have provided support for the notion that these small life events, termed daily hassles, are better predictors of health outcomes and of psychological distress than are major life events (DeLongis, Coyne, Dakof, Folkman & Lazarus, 1982; Kanner, Coyne, Schaefer & Lazarus, 1981; Monroe, 1983; Weinberger, Hiner & Tierney, 1987; Zarski, 1984). For
instance, using a middle-aged community sample, DeLongis et al. (1982) found that the frequency and intensity of daily hassles reported was more strongly related to physical health than were life event scores. Specifically, high levels of daily stress were found to be associated with health problems such as flu, headaches and backaches (DeLongis, Folkman & Lazarus, 1988). Similarly, Kanner et al. (1981) found a significant relationship between daily hassles and psychological functioning. DeLongis et al. (1982) suggests that hassles are more relevant because they are more proximal for the individual than the distal global life events. A number of scales have been developed to measure daily hassles. These include: Daily Stress Inventory (Brantley, Waggoner, Jones & Rappaport, 1987), Daily Hassles Scale (DeLongis, Folkman & Lazarus, 1988; Kanner et al., 1981) and Inventory of Stressful Life Events (Zautra, Guarnaccia & Dohrenwend, 1986). This brief summary of the literature regarding the effects of stress suggests that both global life events and daily hassles affect both physical and mental health.

The stress - parent behavior relationship

The literature suggests that parent behavior is linked to the stress incurred in the family’s environment. Most of the studies in this area operationalize stress through the use of global life event rating scales such as the SRRS and the LES. For instance, using a sample of families with conduct disordered children, Webster-Stratton (1988) found
that mothers who reported high levels of negative life stress on the LES issued more commands and used more critical or negative physical behaviors when interacting with their child than nonstressed mothers. In keeping with this notion that poor parenting is linked to environmental stress, Webster-Stratton (1985) found that those parents who failed to benefit from parent training treatment programs reported higher levels of negative life events and fewer positive life events than parents who were successful in therapy.

Further evidence for the link between maladaptive parent behavior and stress appears in the child abuse literature. For instance, Gaines, Sandgrund, Green and Power (1978) showed that environmental stress is associated with harsher maternal discipline, including physical abuse. Using the SRRS, Justice and Justice (1976) found that abusive parents had experienced significantly more change during the 12 months prior to their abusive episode than did non-abusing parents over the same time period. These researchers suggest that due to the frequency of occurrence of negative events among abusive parents, these individuals have no opportunity to gather their resources before a new crisis arises. Lahey, Conger, Atkeson and Trieber (1984) found that mothers with a history of abuse reported more stress-related symptoms of depression and emotional/physical distress than controls. These researchers hypothesize that
the mothers experiencing stress have a lower threshold for child misbehavior and therefore respond more intensely. There exist popular models of child abuse that implicate stress as the causal agent in the development of maladaptive parent behavior. The environmental stress model (Gil, 1970) maintains that factors such as poverty, poor education and occupational strain weaken parental self-control and precipitate family violence. Straus (1980) presents a more refined version of this model. He outlines a series of mediating variables that are prerequisite for the transition of stress to violence (eg. barriers to alternative responses to conflict such as leaving the situation). Most of the theories of child abuse that implicate environmental factors identify stress as the major contributing variable in the precipitation or maintenance of family violence.

Using a sample of single mothers, Weinraub and her colleagues (Weinraub & Ansul, 1984; Weinraub & Wolf, 1983) found that during behavioral observation periods, mothers who reported more stress on the SRRS communicated less optimally, demonstrated less maternal nurturance and tended to have children who were less compliant than mothers who reported lower levels of life event stress. Longfellow, Zelkowitz and Saunders (1983) explored the mother-child relationships in a sample of mothers who reported either high or low levels of stress in their environment. Mothers who reported high levels of stress described environments
that were characterized by a high incidence of stressors that occurred at both a global and a daily level. However, the authors did not identify or discriminate between these levels of stress. Using a modified version of the Transcultural Code for the Social Behavior of Children (Whiting, 1968), these researchers found that mothers experiencing high levels of stress displayed nonnurturant, nonresponsive and negative behavior in their interactions with their children. Given that these researchers had access to detailed information, it would have been interesting had they noted the differential impact of global versus daily stress. Nevertheless, such studies are valuable in that they suggest that stress has an impact on family functioning even within normal samples.

A number of theories have been proposed to account for the link between stress and parent behavior in general. In an analogue study with normal families, Zussman (1980) demonstrated that competing cognitive activity had an impact on parent behavior. Specifically, he found that when parents were asked to attend to a task and to monitor their children's play simultaneously, they exhibited a pattern of ineffective "minimal" parenting. That is, when stressed by cognitive demands, parents withdrew positive behaviors such as responsiveness, support and stimulation and increased negative responses such as interference, criticism and punishment. The generalization of these findings to actual family situations is obvious. Wahler and Sansbury (1988)
hypothesize that a mother's coercive interchanges with her child ("figural stimulus") and the stressful events in other areas of her life ("contextual stimulus") are related to her skill in describing figure-context patterns ("surveillance"). That is, they suggest that mothers who experience high figural and contextual stimulation demonstrate poor surveillance monitoring abilities. These researchers emphasize the importance of setting events in maternal behavior. Patterson (1986) proposes that the coercive interactions of dysfunctional families are exacerbated by the experience of extrafamilial stressors. He speculates that inefficient problem solving skills maintain this maladaptive cycle. Support for this postulation is derived from a study (Patterson, 1983) in which maternal stressful encounters were correlated with coercive interactions between parent and child. Each of these theories offers a unique contribution to the conceptualization of stress as it relates to child behavior. It is possible to see, however, that the underlying logic is consistent across theories. Like Lahey and his colleagues (Lahey et al., 1984), these researchers adhere to the notion that parent behavior must be viewed from a systemic perspective. Essentially, environmental conditions compete with the child for attention and therefore interfere with the adult's capacity to parent. It is apparent that stress and parent behavior are linked. To date, however, little attention has been given to an evaluation of the types of
stress, global life events versus daily hassles, that have the greatest impact on parent behavior.

The stress - parent perceptions relationship

There has also been empirical work in support of the link between stress and parent perceptions of child behavior. In an analogue study, Middlebrook and Forehand (1986) investigated the maternal perceptions of deviance in child behavior as a function of stress. They discovered that in written vignettes depicting neutral child behavior that occurs under highly stressful conditions, mothers rate the behavior to be significantly more deviant than when the same behavior occurs with a backdrop of low stress.

There is empirical evidence to suggest that mothers who report high levels of stress in their lives perceive their children to be more deviant than non-stressed mothers. For example, Webster-Stratton (1988) found that mothers who reported more negative life stress on the LES rated their children as more deviant than low-stressed mothers. Crnic and Greenberg (1985) measured the daily hassles associated with parenting and found that the frequency and intensity of this daily stress was related to parent report of internalizing and externalizing disorders on the Child Behavior Checklist (Achenbach & Edelbrock, 1983). More negative behaviors were reported by parents when ratings of daily hassles were high. Finally, Furey and Forehand (1982) found that mothers who were distressed reported less satisfaction with their children. Such findings suggest
that parent perceptions of child behavior may be linked to the stress occurring in the family system.

The Role of Parent Affect

Throughout this discussion, emphasis has been placed on the relationship of certain variables to parent behavior and parent perceptions of child behavior. In keeping with the tripartite model of assessment (Herson & Bellack, 1981; Lang, 1971; Mash & Terdal, 1981), a third component of parent functioning, parent affect, should also be considered. This model advocates multimodal assessment and stresses the importance of sampling behavioral, cognitive and affective responses.

Of the three components of the parenting response, affect appears to have received the least empirical attention. Despite the fact that a few clinically useful measures of affect have recently been introduced, instruments tapping behavioral and cognitive dimensions of parenting far outnumber those assessing parental affect (Linehan, Paul & Egan, 1983). This domain remains primarily within the realm of empirical study. Typically, studies tap this dimension through the use of simple scales designed to reflect the degree of emotional arousal associated with some experimental manipulation (Bauer & Twentyman, 1985; Dix, Ruble, Grusec & Nixon, 1986; LaRose et al., 1986). For instance, in a study of parent attribution, Dix et al. (1986) measured parents' affective reactions to child misconduct. These researchers found that parent affect was
associated with the causal attributions that the parent made for the child behavior. Specifically, parents who perceived the child's behavior to be intentional and deliberate also reported negative affect on three likert-type scales designed to tap this dimension. It is evident that this is a growing area but, to date, research in parent behavior and cognition far exceeds the study of parent affect.

A notable exception to the observation that there is a dearth of research in the area of affect lies within the realm of child abuse where the assessment of emotion has been critical (Bauer & Twentyman, 1985; Gil, 1974; Wolfe et al., 1983). Within this domain, emotional arousal has been implicated as a precipitant of abusive episodes (Gil, 1974). Wolfe and his colleagues (1983) tested this hypothesis by measuring the physiological reactions of abusive and non-abusive mothers to stressful and non-stressful scenes of child behavior. Using measures such as skin conductance response magnitude and heart rate, these researchers found that abusive mothers displayed more emotional arousal in response to stressful child behavior scenes than non-abusive mothers. This research is consistent with Gil's (1974) hypothesis that abusive mothers experience a heightened emotional sensitivity to stressful situations, which magnifies their risk for involvement in abuse.

In sum, it is proposed that the affective, behavioral and cognitive domains of parenting should all be considered in that each appears to offer a unique contribution to
understanding parent functioning. These dimensions are not mutually exclusive however, and, are best viewed in combination to offer a possible model for the creation and maintenance of maladaptive parent-child interactions. Specifically, it has been suggested that if parents perceive their child's behavior to be deviant and intentional (cognitive dimension), they may experience negative emotional arousal (affective dimension) which increases the likelihood of an intense behavioral response (behavioral dimension) (Dix & Grusec, 1985; LaRose et al., 1986). In this study, dependent measures were chosen to represent each of the components of this pathway.

**Rationale**

In the literature, there exists considerable correlational data to suggest that depressed mood and life stress are related to parent perceptions of child behavior, emotional reactions to this behavior, and behavioral responses to the behavior. Through the experimental manipulation of the stress variable, the present study attempted to test one possible pathway of influence; the causal impact of stress on parent affect, behavior and cognitions. Further, previous studies have failed to specify the type of stress that is most likely to play a role in parenting. The present investigation addressed this question by incorporating three levels of stress into the design (i.e., global life events, daily hassles, and no
stress). Each of these stress conditions was evaluated in relation to the three parenting domains. Depressed mood was utilized as a between subjects classification variable in this study. That is, mothers were divided in groups of relatively high and relatively low levels of depressed mood. This classification allowed for the examination of the effects of maternal depressed mood on the three domains of parenting response. In addition, in the no stress condition, it was possible to compare the relationship found between depressed mood and the parenting variables with the correlational results of previous studies. Finally, the design also allowed for the detection of possible interaction effects between maternal life stress and depressed mood.

Hypotheses

On the basis of previous research findings the following predictions were made for the present study:

1) Mothers would perceive the child behavior to be more deviant and intentional, would report greater emotional arousal, and more intense behavioral reactions when the child behavior was presented in the context of major life events or daily hassles than in the no stress control condition. Further, because daily hassles are more proximal events, it was postulated that mothers would score higher on all three scales following the daily hassles vignettes than following global life event vignettes.
2) Across stress conditions, mothers falling into the low (depressed) mood category would demonstrate higher scores on all three parenting measures (i.e., affective, behavioral, cognitive) than would mothers in the high (non-depressed) mood category.

3) Specific hypotheses regarding interaction effects, or differential effects across the three dependent measures were not made.

Justification for sample

A sample of single mothers participated in this study. Canadian census tracts indicate that from 1971 to 1981 the number of single parent families increased from 480,000 to 714,000. This is an increase of over 50%. Female-headed families made up the bulk of these single parent families (590,000 were females, 124,000 were males) (Davids, 1986). In general, single parent families utilize social services more than traditional two parent families (Ferri, 1976). The problems faced by lone parents appear compounded when that parent is female. This is likely to be primarily due to economic realities. The average salary of a single father in Canada in 1981 was $23,000. For females, the average hovers around $14,000 (Davids, 1986). According to a recent U.S. study (Garfinkel & McLanahan, 1986), about half of the single mothers in that country are dependent on welfare and use a disproportionate share of mental health services. Brown and Harris (1978) indicate that lack of an
intimate relationship with a husband and having children under 14 living at home act as risk factors for maternal depression. In short, this population appears to experience a disproportionate number of environmental stressors and mental health problems (Brown & Harris, 1978; Campbell, Cope & Teasdale, 1983).

Further, the children who are raised in single parent families may also be considered at risk for psychological difficulties. Researchers suggest that youngsters from single parent families, particularly those who have experienced their parents' divorce, exhibit more noncompliance, aggression, and maladaptive behavior at both home and school than children from intact families, at least within two years of the divorce (Felner, Ginter, Boike & Cowen, 1981; Felner, Stolberg & Cowen, 1975; Hetherington, Cox & Cox, 1978; Hodges, Buchsbaum & Tierney, 1983; Kalter, 1977; McDermott, 1970; Schoette & Cantwell, 1980; Tuckman & Regan, 1966). It is apparent that children from single parent families are likely to come into contact with mental health professionals. Given that single mothers are vulnerable to both depression and stress, and that their children are likely to pose behavior problems, the use of a sample of single mothers increases the external validity of this study of the relationships among maternal depressed mood, life stress and child behavior disorders.
Method

Subjects

Participants learned of the study through information sheets posted in public places throughout the Lower Mainland (e.g., community centers, laundromats, women centers, health centers, libraries, day care facilities and campus bulletin boards). In addition, a written notice appeared in the "Parent Advisory" column of a local newspaper and in a monthly newsletter for the Big Brothers organization. Interested single mothers were asked to contact the Parenting Lab in the Psychology Department at The University of British Columbia to receive further information about the study. Callers were provided with a rationale and overview of the study. Basic descriptive information gathered during the initial telephone contact determined eligibility for the study. The mothers were required to be single parents over 18 years of age and to have at least one elementary school aged child in the home (i.e., 5 - 12 years old). Mothers with live-in partners (or relatives) with whom they have shared parenting responsibilities for more than 6 months were not asked to participate in the study. This exclusionary criteria was designed to restrict the sample to functionally single mothers.

A total of 66 single mothers returned completed questionnaires. This is an 81% rate of return. Sample
characteristics were derived from the General Information Sheet and a summary of this descriptive information may be found in Table 1. Of particular interest is the relatively low average socioeconomic status. This score translates to level 4 of 5 on the Hollingshead Index of Social Status (Hollingshead, 1975), where a score of 1 represents a high social status. Also note that mean scores on the Conners’ Parent Rating Scale (Goyette, Conners & Ulrich, 1978) are expressed as standard scores and indicate that the mothers in this sample perceived their children to be more problematic than average in that mean scores fell approximately one half of a standard deviation above the normative mean on all five of the scales on this instrument. Finally, it is important to recognize that these mothers report high levels of stress over the past year (i.e., mean of 4.64 on a scale from 0 to 6). The characteristics of this sample are consistent with descriptive reports of single mothers in the literature (Davids, 1986; Tuckman & Regan, 1966).

Mothers were assigned to groups on the basis of self-reported mood (i.e., depressed mood, nondepressed mood). An analysis of power using tables in Cohen (1977), indicated that, assuming a medium effect size between groups (depressed/nondepressed), 47 subjects per cell would be required to detect a significant difference 2/3 of the time if one existed. However, a total of 94 subjects was seen as unreasonable given the financial and time constraints of
Table 1

Descriptive Information for the Total Sample (n=66)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean (SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maternal age</td>
<td>35.56 ( 6.37)</td>
</tr>
<tr>
<td>Socioeconomic status</td>
<td>30.36 (16.96)</td>
</tr>
<tr>
<td>Number of children</td>
<td>1.85 ( 1.03)</td>
</tr>
<tr>
<td>Age of target child</td>
<td>8.06 ( 2.35)</td>
</tr>
<tr>
<td>Number years single parent</td>
<td>6.26 ( 3.81)</td>
</tr>
<tr>
<td>BDI</td>
<td>9.18 ( 8.04)</td>
</tr>
<tr>
<td>CES-D</td>
<td>33.89 (10.61)</td>
</tr>
<tr>
<td>Stress - past year</td>
<td>4.64 ( 1.29)</td>
</tr>
<tr>
<td>Stress - past month</td>
<td>3.73 ( 1.58)</td>
</tr>
<tr>
<td>Stress - past day</td>
<td>2.21 ( 1.78)</td>
</tr>
<tr>
<td>CPRS</td>
<td></td>
</tr>
<tr>
<td>conduct problems</td>
<td>.77 ( 1.54)</td>
</tr>
<tr>
<td>learning problems</td>
<td>.94 ( 1.82)</td>
</tr>
<tr>
<td>somatic problems</td>
<td>1.01 ( 2.15)</td>
</tr>
<tr>
<td>inattention problems</td>
<td>.35 ( 1.09)</td>
</tr>
<tr>
<td>anxiety problems</td>
<td>.52 ( 1.48)</td>
</tr>
</tbody>
</table>
Table 1

Descriptive Information (Continued)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marital status</td>
<td></td>
</tr>
<tr>
<td>never married</td>
<td>28.80</td>
</tr>
<tr>
<td>separated</td>
<td>19.70</td>
</tr>
<tr>
<td>widowed</td>
<td>1.50</td>
</tr>
<tr>
<td>divorced</td>
<td>50.00</td>
</tr>
<tr>
<td>married</td>
<td>0.00</td>
</tr>
<tr>
<td>Sex of target child</td>
<td></td>
</tr>
<tr>
<td>male</td>
<td>65.20</td>
</tr>
<tr>
<td>female</td>
<td>34.80</td>
</tr>
<tr>
<td>Sought Psych services - self</td>
<td>63.60</td>
</tr>
<tr>
<td>Sought Psych services - child</td>
<td>27.30</td>
</tr>
</tbody>
</table>
this study. Instead, power was increased by maximizing the distinctiveness of the groups so as to increase the effect size on the between subjects dimension. In contrast to a median split procedure, groups were distinguished by including in the formal data analysis only those who provided extreme scores on a standard mood inventory. That is, only mothers with scores in the upper and lower thirds of the 66 person sample were considered (n=22). In a study with a similar design to the proposed investigation, Middlebrook and Forehand (1986) found significant differences between groups using 10 mothers of clinic-referred children and 10 mothers of nonclinic children. Given that these researchers found an n of 10 to be sensitive to differences across conditions, confidence may be placed in the present experiment with an n of 22.

Procedure

If the information gathered in the initial telephone contact indicated that the mother was eligible for the study, she was given instructions and a brief description of each of the questionnaires to be completed. Mothers were informed that they had the right to refuse to participate or to withdraw from the study at any time. The receipt of a completed package was taken to be indicative of consent for participation.

The entire questionnaire package took approximately 45 minutes to complete. Mothers were asked to set aside one
hour for the task. In order to minimize the possibility of uncontrolled environmental stress during the task administration, all mothers were asked to fill out the questionnaires during a quiet time at home (e.g., after the child(ren)’s bedtime). In addition, baseline stress levels were attained by having mothers indicate the degree of stress experienced over the past year, month and day. Following task completion they were asked to note any events that arose and to record the level of stress that these events evoked. Mothers were asked to return completed questionnaires in an unmarked envelope so that confidentiality could be maintained. This unmarked envelope was enclosed in an envelope that included the subject’s name and address. The names and addresses were kept separate from the confidential questionnaires and were used to mail a written explanation of the study, a thank-you note, and payment of five dollars to each participant.

Materials

The questionnaire package. Each mother received a package containing: an explanatory cover letter (Appendix A), a General Information Sheet (Appendix B), the Beck Depression Inventory (Appendix C), The Center for Epidemiological Studies - Depression scale (Appendix D), a Conners’ Parent Rating Scale (Appendix E), the Life Stress Index (Appendix F), Instructions for completing the mother reaction section (Appendix G), the 12 vignettes (global life
event context - Appendix H, daily hassles context - Appendix I, no stress context - Appendix J), each followed by the mother reaction scales (Appendix K) and a Stress Manipulation Check (Appendix L), and the Recent Stress Index (Appendix M). Mothers were asked to first complete the background information forms, including the measures of depression. Participants then read each child behavior vignette, presented in a random order across subjects, and completed the dependent measures and stress manipulation checks for each vignette. The presentation of the dependent variables was counterbalanced across mothers to control for possible order effects.

The demographic information. On the General Information Sheet, mothers were asked to indicate: their age, occupation, education, marital history (single, separated, widowed, divorced), number of children, age(s) of child(ren), sex of target child, the number of years as a single parent and, whether or not they have sought help for child or maternal psychological problems (Appendix B). This data was used to describe the sample and to identify possible factors that covaried with mood.

The measures of depressed mood. In keeping with the literature in the area, the Beck Depression Inventory (BDI; Beck et al., 1961) was utilized to assign mothers to mood groups (Appendix C). This 21-item instrument has been used
to assess the severity of depressed mood in both clinical and nonclinical populations (Hollon & Kendall, 1980; Krantz & Hammen, 1979; Oliver & Burkham, 1979). Respondents are asked to indicate the degree to which they experience each of the symptoms of depression. The instrument is scored by adding the responses given across items. Higher scores correspond to greater severity of depressed mood. The BDI has demonstrated good reliability and validity (Corcoran & Fischer, 1987). In terms of reliability, investigators have established that it has good internal consistency (split-half reliabilities range from .53 to .93) (Beck et al., 1961; Weckowitz, Muir & Cropely, 1967) and good test-retest reliability (.78 in a non-clinical sample over one week) (Oliver & Burkham, 1979). Concurrent validity has also been demonstrated in that this instrument correlates highly with behavioral measures of depression (Williams, Barlow & Argas, 1972) and with clinical judgement (Beck et al., 1961). In previous studies, the BDI scores for mothers of clinic-referred children have ranged from 7 to 13.5 (Brody & Forehand, 1986; Griest et al., 1979; Griest et al., 1980).

In many studies of maternal mood, the BDI has been the sole instrument used to assess depressed mood (eg., Griest et al., 1979; Griest et al., 1980; Webster-Stratton & Hammen, 1988). However, since this measure was primarily developed for use with clinically-depressed populations, a second questionnaire, the Center for Epidemiological Studies - Depression scale (CES-D; Radloff, 1977) was also completed
by mothers (Appendix D). The CES-D is a 20-item scale that is designed to measure the affective component of depression within a normal population. This instrument has a good empirical base and is easy to administer and score (Corcoran & Fischer, 1987). Split-half and Spearman-Brown reliability coefficients range from .77 to .92 indicating good internal consistency (Radloff, 1977). Test-retest correlations up to eight weeks are moderate (.57) (Radloff, 1977). The CES-D correlates significantly with other depression and mood scales (Craig & Van Natta, 1976) and displays high discriminant validity (Radloff, 1977; Weissman, Kleber, Ruben, Williams & Thompson, 1977). Given its solid psychometric properties and sensitivity within the general population, the CES-D was used to supplement the BDI in the assessment of depressed mood.

The child behavior information. Mothers completed a standardized child rating scale, the Conners Parent Rating Scale (Goyette et al., 1978) to assess perceptions of behavior problems such as hyperactivity, anxiety, learning problems, somatic problems and conduct disorder. Respondents were asked to indicate, on the 4-point scale provided, the degree to which their child exhibits each of the symptoms listed (Appendix E). The data gathered in this manner provided information about each mother's perception of her own child.
The indices of stress. Participants were asked to indicate the average level of stress they had experienced within the past year, month and day (Appendix F). Also, after completing the task, subjects rated, on a 7-point scale, the level of stress provoked by any events that arose during completion of the package of questionnaires (Appendix M).

The descriptions of child behavior. Twelve descriptions of child behavior were presented to subjects in written form. In a study with a similar design, Middlebrook and Forehand (1986) found that using child behaviors that were either blatantly deviant or blatantly appropriate produced no significant differences in maternal perceptions across stress conditions. However, when the child behaviors were ambiguous; that is, not clearly appropriate or inappropriate, maternal perceptions were affected by the stress manipulation. Therefore, in this study, only ambiguous descriptions of child behavior were used as stimuli.

Middlebrook and Forehand (1986) utilized two ambiguous descriptions of child behavior that were repeatedly paired with contexts of varying stress levels. This method increases internal validity in that confounds are unlikely to be introduced into the stimuli because identical scenes are utilized across the stress conditions. However, external validity may suffer because generalizability is
limited and the reliability of responses may be diminished by the repetitive nature of the stimuli. In response to these latter concerns, the present study utilized different, but equivalent, scenes of child behavior across the stress conditions.

This equivalence was achieved using a pilot study (Appendix N). The descriptions of child behavior were derived from materials utilized by other researchers who focus on parenting (e.g., Dix & Grusec, 1985; Gordon, Jones & Nowicki, 1979; Grusec, Dix & Mills, 1982). Thirty female undergraduates were asked to read 20 child behavior descriptions and to rate the degree of ambiguity and stress implied in each of them. Specifically, they were asked to indicate on Likert-type scales, "How stressful you found the child behavior to be", "How much you think the child acted deliberately to annoy his mother", "How sure you are about this rating" (i.e., ambiguity) and "How much of a problem you think this child behavior is". Based on these ratings, the 12 descriptions that were rated as being most equivalent, in terms of ambiguity and stress, were chosen for the study. The mean stress score across vignettes chosen, on a scale from 0 (none) to 6 (lots), was 2.19. Mean scores ranged from 2.03 to 3.86. The mean ambiguity score across vignettes chosen on a scale from 0 (very sure) to 6 (not sure) was 2.20. Mean scores ranged from 1.86 to 2.66.
The stress contexts. Stress was the within-subject variable manipulated in the present study. Three levels of stress were considered: global life events (GLE), daily hassles (DH) and no stress (NO) contexts. Each description of ambiguous child behavior was randomly assigned to one of these stress levels, creating 12 vignettes, four of each stress level. Subjects were asked to imagine themselves in the position of the mother in each of these vignettes and to complete the ratings from this perspective. Each participant was presented with four vignettes in each condition (i.e., four child behavior scenes in each of three stress conditions (GLE/DH/NO) for a total of 12 vignettes).

In the GLE vignettes, the ambiguous child behavior followed a description of major stressors that affected the story mother over the past year (Appendix H). To control for the presence of daily events, a statement indicating the absence of daily stress accompanied the GLE vignettes. In order to create the impression of great life stress, the story mother endured five global life events of moderate severity over the past year. In keeping with contemporary thinking in this area (Vinokur & Selzer, 1975), only events that implied a negative change were included in the vignettes. The global life stressors used in this study were derived from the LES (Sarason et al., 1978) and were equated with respect to intensity according to the following procedure. First, the LES forms of 30 mothers of clinic-referred children were reviewed and the most frequently
endorsed items were identified. Of these, 20 items that received negative and approximately equivalent stress ratings were selected. By combining five of these items, a GLE narrative was formed. A series of 12 GLE descriptions were created in this manner. Then, as a part of the aforementioned pilot study, undergraduate female students rated these 12 brief narratives in terms of stressfulness and negativity. Of these 12, the four most equivalent global life event descriptions were chosen for the study. The mean stress rating across the vignettes chosen, on a scale from 0 (no stress) to 6 (a lot of stress), was 4.40. Mean scores ranged from 4.24 to 4.66. Mean negativity scores ranged from 4.24 to 5.00, on a scale from 0 (very positive) to 6 (very negative), and produced an average score of 4.52. By using the information collected in the pilot study in this way, it was possible to select GLE narratives that were approximately equivalent.

In the DH condition, the child’s behavior was detailed following the description of a series of daily hassles that the story mother incurred over the course of the day (Appendix I). To control for the presence of global life events, a statement indicating the lack of negative global life events over the past year accompanied the daily hassles descriptions. The daily hassles chosen were derived from the revised version of The Hassles Scale (DeLongis, Folkman & Lazarus, 1988). In an attempt to quantify a high level of daily stress, the mothers depicted experienced five hassles,
of moderate severity, on the day being described. Again, the degree of stress evoked by these scenes, and the negativity inherent in them, was assessed and equated with the help of undergraduate pilot data. The mean stress rating for the vignettes chosen, on a scale from 0 (no stress) to 6 (a lot of stress), was 3.52, with a range of 3.03 to 3.76. The mean negativity score for the vignettes chosen, on a scale from 0 (very positive) to 6 (very negative), was 3.74, with a range of 3.48 to 4.03. It is noteworthy that, in general, these undergraduate females rated the daily hassles as somewhat less stressful and less negative than the global life events described.

In the No Stress condition, the child behavior was accompanied by two statements; one indicating the absence of significant global life events and one describing freedom from daily hassles.

The dependent measures. According to the tripartite model of psychological functioning, there are three aspects of responding that may be assessed: affect, behavior and cognition (Hersen & Bellack, 1981). In the present study, maternal affective, behavioral and cognitive reactions to the child behavior depicted were quantified through the use of six Likert-type scales (i.e., two per domain of response). The presentation of these was counterbalanced across mothers and followed each of the 12 vignettes.
The two questions regarding affective response were designed to provide information about maternal emotional reactions to the child behavior scenes in each of the three stress conditions. First, mothers were asked to indicate the intensity of emotional upset they would feel in response to the child behavior depicted. The anchor points on this scale were "not upsetting" to "very upsetting." Second, mothers were to estimate the duration of the upset (from "not affected" to "very affected"). These two scales were similar to those used when evaluating the emotional reactions associated with ambiguous child behavior in studies of both normal and abusive parents (Dix & Grusec, 1985; LaRose et al., 1986).

The two questions regarding behavioral response were designed to measure the anticipated maternal instrumental reaction following the child behavior. The first question assessed the degree to which mothers were inspired to act in response to the child behavior. Anchor points read "unlikely to discipline" and "very likely to respond." The second question was designed to tap the intensity of this anticipated reaction. Mothers were asked to indicate the strength of their reaction (from "no response" to "intense response"). This latter dimension has been deemed relevant by a number of researchers (Bauer & Twentyman, 1985; Gordon, Jones & Nowicki, 1979). A third component, designed to yield qualitative information only, was also included in the behavioral measure. Mothers were asked to choose, from a
list of six behavioral parenting responses, the item that would most closely matched their immediate response to the child behavior depicted. If none of the choices provided were applicable, mothers were given the opportunity to describe another response. Only one response was permitted for each vignette.

Maternal perception of child behavior was the construct used to represent the cognitive dimension of parental response. The first question, derived from the study by Middlebrook and Forehand (1986), assessed the degree to which the child behavior was seen as deviant. Anchor points read "not a problem" and "a big problem." Middlebrook and Forehand (1986) showed that this dimension was sensitive to changes in the intensity of environmental stress. That is, mothers rated the children as more deviant in high stress conditions as opposed to nonstressful contexts. The second question measured the degree to which mothers believed that the child’s behavior was deliberate. This scale tapped the attributions made by mothers in response to child behavior in stress/no stress conditions. The scale was anchored by the statements "not on purpose" and "very much on purpose." Similar measures have been used in studies of parenting by Dix and Grusec (1983), Bauer and Twentyman (1985) and Larrance and Twentyman (1983).

The stress manipulation check. After each vignette, mothers answered three questions about the narrative that
they just read. First, they were asked to record the level of subjective stress associated with the scene on a 7-point rating scale. This rating measured whether the vignettes that were intended to be stressful actually exerted this influence on mothers and whether No Stress conditions were perceived as non-stressful. Second, mothers were asked to indicate, on the 7-point scale provided, the degree to which the events would affect their daily functioning if they happened "in real life." This question was designed to tap the proximity dimension. That is, events perceived to be more proximal should have a greater impact on daily functioning than more distal events. The manipulation would be considered successful if respondents rated the DH scenes to have a greater impact on daily functioning than the GLE events. Finally, participants were asked to rate, on a 7-point scale, the realism of the events described (Appendix K).
Results

Preliminary Analyses

As an initial step in data analysis, a series of calculations were performed to produce summary scores. Because two questions were used to assess maternal reactions in each of three areas (i.e., affective, behavioral and cognitive), it was decided that if significant positive correlations existed between responses within each domain, then the two scores would be collapsed in further analyses. Pearson correlations indicated that the two questions within each domain produced responses that were positively and significantly correlated (i.e., affective responses $r = .853, p < .05$; behavioral responses $r = .662, p < .05$; cognitive responses $r = .756, p < .05$) and the scores within domains were summed for further analyses.

Summary scores were also produced within each of the stress conditions. Since pilot data had indicated that the four vignettes within each condition were comparable in terms of stress, negativeness and realism; responses were summed across the four vignettes in each stress condition.

Main Analyses

Mothers were divided into three groups based on scores on the BDI. A three-way split of these scores yielded a lower third consisting of 22 scores of five and under
(nondepressed mood (NM)) and an upper third consisting of 22 scores of 11 and over (depressed mood (DM)). Only the responses of these 44 mothers were used in the primary analyses.

A two-way repeated measures Multivariate Analysis Of Variance (MANOVA) was conducted. Stress context (GLE, DH, NO) was the within-subject independent variable, mood (NM, DM) was the between-subjects grouping factor and the dependent variables were maternal summary scores for affective (Aff), behavioral (Beh) and cognitive (Cog) responses to the child behavior vignettes. Higher scores indicated more affective arousal, intense response and perceptions of the child behavior as deviant. The cell means for this analysis are presented in Table 2. A significant main effect for stress context ($F(6, 37) = 14.05, p < .001$), but not mood group ($F(3, 40) = 2.04, p > .10$), was revealed through this analysis. There was no stress by mood interaction in this analysis. Univariate tests showed significant effects for stress on each of the dependent variables (Aff $F(2, 84) = 40.32, p < .001$; Beh $F(2, 84) = 19.07, p < .001$; Cog $F(2, 84) = 18.60, p < .001$). Multiple comparisons were calculated using the Tukey method and revealed that the two stress conditions (i.e., GLE and DH) elicited higher scores than the no stress control condition (i.e., NO) on all three dependent measures. Further, the DH condition produced significantly higher scores than the GLE condition across all measures. For the mothers in this sample, it
Table 2

Cell Means for MANOVA (groups formed using BDI scores)

<table>
<thead>
<tr>
<th>Stress Context</th>
<th>Group</th>
<th>DH</th>
<th>GLE</th>
<th>NO</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>(mean)</td>
<td>(SD)</td>
<td>(mean)</td>
</tr>
<tr>
<td>Depressed Mood</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Affective</td>
<td>22.82</td>
<td>(2.22)</td>
<td>19.41</td>
<td>(1.65)</td>
</tr>
<tr>
<td>Behavioral</td>
<td>22.55</td>
<td>(1.74)</td>
<td>18.59</td>
<td>(1.91)</td>
</tr>
<tr>
<td>Cognitive</td>
<td>18.32</td>
<td>(2.17)</td>
<td>15.14</td>
<td>(2.12)</td>
</tr>
<tr>
<td>Nondepressed Mood</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Affective</td>
<td>17.41</td>
<td>(1.55)</td>
<td>15.09</td>
<td>(1.74)</td>
</tr>
<tr>
<td>Behavioral</td>
<td>19.86</td>
<td>(1.74)</td>
<td>18.05</td>
<td>(1.63)</td>
</tr>
<tr>
<td>Cognitive</td>
<td>14.86</td>
<td>(1.64)</td>
<td>12.82</td>
<td>(1.83)</td>
</tr>
</tbody>
</table>
appears that daily hassles were more related to the intensity of response following child behavior than were the more distal global life events. That is, in the DH condition mothers indicated that they were more affectively aroused by the child behavior, that they would respond more severely to this behavior and that they perceived the behavior to be more deviant and purposeful than in the other stress contexts.

Since the BDI was designed to be applied within clinical samples, the present study also relied upon an instrument designed for use with community samples, the CES-D. In this sample, the correlation between CES-D and BDI scores was .74 (p<.05). As with the BDI, scores on the CES-D were divided into three groups. The 22 mothers who received scores in the lower third of the sample, scores below 28, were identified as the nondepressed mood (NM) group and those who scored in the upper third, scores above 37, became the depressed mood (DM) group. A two-way repeated measures MANOVA conducted using these two groups produced different results than those attained using BDI scores. The means for this analysis are displayed in Table 3.

In this analysis, main effects for both stress (F(6,37) = 13.81, p<.001) and mood (F(3,40) = 5.47, p<.003) were significant. No stress by mood interaction was detected in this analysis of the data. In terms of the stress effect,
Table 3

Cell Means for MANOVA (groups formed using CES-D scores)

<table>
<thead>
<tr>
<th>Group</th>
<th>Stress Context</th>
<th>DH</th>
<th>GLE</th>
<th>NO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Depressed Mood</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Affective</td>
<td></td>
<td>23.18 (2.06)</td>
<td>19.32 (1.75)</td>
<td>15.18 (1.60)</td>
</tr>
<tr>
<td>Behavioral</td>
<td></td>
<td>23.27 (1.77)</td>
<td>20.64 (1.87)</td>
<td>17.86 (1.84)</td>
</tr>
<tr>
<td>Cognitive</td>
<td></td>
<td>18.41 (2.04)</td>
<td>16.27 (2.19)</td>
<td>14.36 (2.12)</td>
</tr>
<tr>
<td>Nondepressed Mood</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Affective</td>
<td></td>
<td>16.59 (1.69)</td>
<td>12.32 (1.29)</td>
<td>7.23 (0.76)</td>
</tr>
<tr>
<td>Behavioral</td>
<td></td>
<td>19.55 (1.94)</td>
<td>15.59 (1.90)</td>
<td>13.32 (1.57)</td>
</tr>
<tr>
<td>Cognitive</td>
<td></td>
<td>16.09 (1.87)</td>
<td>12.41 (1.72)</td>
<td>9.32 (1.26)</td>
</tr>
</tbody>
</table>
univariate calculations indicated that the difference was significant across the three dependent measures (Aff $F(2,84) = 38.37, p<.001$; Beh $F(2,84) = 14.99, p<.001$; Cog $F(2,84) = 13.55, p<.001$). Follow-up multiple comparisons revealed that the responses to child behavior were more intense in the two stress conditions than when the behavior occurred in a stress-free context. Again, the daily hassles condition stimulated significantly higher responses across the measures.

In this analysis a significant effect for mood was also detected. Univariate t-tests showed significant differences between NM and DM groups on the affective scores (Aff $F(1,42) = 13.99, p<.001$). There was a trend for behavioral scores to differ between groups (Beh $F(1,42) = 3.85, p<.06$), but scores on the measure of maternal cognitive response were not significantly different (Cog $F(1,42) = 2.45, p<.12$). Across all dependent variables, mothers in the DM group had higher scores than those in the NM group.

Since only two-thirds of the total sample was utilized in the main analyses ($n=44$), it was deemed necessary to identify this subsample in terms of basic descriptive information. A summary of this data may be found in Table 4. It is apparent that demographic composition of this subgroup is consistent with that of the larger sample of 66 respondents.

Given the significant effect of CES-D mood on mother responses, t-tests were conducted to determine whether or
<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean (SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maternal age</td>
<td>35.77 (7.14)</td>
</tr>
<tr>
<td>Socioeconomic status</td>
<td>30.39 (18.41)</td>
</tr>
<tr>
<td>Number of children</td>
<td>1.86 (1.07)</td>
</tr>
<tr>
<td>Age of target child</td>
<td>8.16 (2.28)</td>
</tr>
<tr>
<td>Number years single parent</td>
<td>6.23 (3.67)</td>
</tr>
<tr>
<td>BDI</td>
<td>10.23 (9.28)</td>
</tr>
<tr>
<td>CES-D</td>
<td>35.09 (12.77)</td>
</tr>
<tr>
<td>Stress - past year</td>
<td>4.59 (1.32)</td>
</tr>
<tr>
<td>Stress - past month</td>
<td>3.52 (1.68)</td>
</tr>
<tr>
<td>Stress - past day</td>
<td>2.32 (1.86)</td>
</tr>
<tr>
<td>CPRS</td>
<td></td>
</tr>
<tr>
<td>conduct problems</td>
<td>.90 (1.61)</td>
</tr>
<tr>
<td>learning problems</td>
<td>1.27 (2.02)</td>
</tr>
<tr>
<td>somatic problems</td>
<td>1.42 (2.39)</td>
</tr>
<tr>
<td>inattention problems</td>
<td>.29 (1.18)</td>
</tr>
<tr>
<td>anxiety problems</td>
<td>.73 (1.65)</td>
</tr>
</tbody>
</table>
Table 4  
Descriptive Information (Continued)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marital status</td>
<td></td>
</tr>
<tr>
<td>never married</td>
<td>27.30</td>
</tr>
<tr>
<td>separated</td>
<td>15.90</td>
</tr>
<tr>
<td>widowed</td>
<td>2.30</td>
</tr>
<tr>
<td>divorced</td>
<td>54.50</td>
</tr>
<tr>
<td>married</td>
<td>00.00</td>
</tr>
<tr>
<td>Sex of target child</td>
<td></td>
</tr>
<tr>
<td>male</td>
<td>68.20</td>
</tr>
<tr>
<td>female</td>
<td>31.80</td>
</tr>
<tr>
<td>Sought Psych services - self</td>
<td>63.60</td>
</tr>
<tr>
<td>Sought Psych services - child</td>
<td>25.00</td>
</tr>
</tbody>
</table>
not demographic characteristics varied with mood group assignment. Three variables, socioeconomic status ($t (42) = 2.88, p<.006$), number of years a single mother ($t (42) = -3.51, p<.001$) and level of stress over the past year ($t (42) = -2.69, p<.01$), showed significant differences between the NM and DM groups. A Multivariate Analysis of Covariance (MANCOVA), using SES, number of years a single parent and year stress as covariates, was performed in order to determine whether or not these variables asserted an influence on the results obtained. Although this analysis revealed that the covariates did not alter the results from those found in the MANOVA, it is not possible to place complete confidence in the MANCOVA results because the relatively small sample size produced instability in the system (i.e., Greenhouse-Geiser correction named values that were outside of the meaningful range). Therefore, in a second attempt to determine if the mood effects detected were the result of these potentially confounding variables, separate MANOVAs were conducted using each of these variables as a between groups factor. Significant between group effects were not detected for any of these analyses, suggesting that these demographic variables did not have a significant impact on the parenting responses. It appears that maternal mood effects cannot be attributed to group differences on the demographic characteristics.
Secondary Analyses

The manipulation check. Three questions that followed each vignette served as the stress manipulation check. The first question asked mothers to indicate, on a scale from 0 to 6, the level of stress that would be evoked by the events depicted. The manipulation would be seen as successful if subjects reported that the global life events and daily hassles contexts were more stressful than the no stress condition. A one-way repeated measures analysis of variance (ANOVA) demonstrated a significant difference in response to this question across conditions ($F(2,86) = 51.3, p<.001$). Multiple comparisons confirmed that the amount of perceived stress differed between stressful conditions (GLE and DH) and no stress (NO) vignettes. No significant differences in perceived stress were detected between the GLE and DH conditions.

The second question was designed to assess the degree to which the events portrayed would be perceived as proximal in relation to the child behavior. The manipulation would be seen as successful if daily hassles were perceived to be more proximal than global life events and no stress contexts. A one-way ANOVA indicated a significant difference across conditions ($F(2,86) = 49.7, p<.001$). However, multiple comparisons revealed that this difference occurred between the stress (GLE and DH) and no stress (NO) contexts rather than between the two stress conditions. That is, stress contexts of both types were seen as having a
greater impact on daily functioning than the no stress condition.

Question three asked participants to rate the level of realism perceived to be inherent in each of the vignettes. A one-way ANOVA showed that the three conditions did not differ significantly with respect to perceived realism. Descriptively, on a scale from 0 (not at all) to 6 (very) the mean scores for GLE, DH and NO conditions were 3.1, 3.6 and 3.0, respectively.

The correlational analyses. Descriptive information was correlated with mothers' affective, behavioral and cognitive responses summed across all scenarios in order to determine which variables were associated with maternal perceptions of, and responses to, child behavior. These correlations are presented in Table 5. Of 27 correlations calculated, five were significant at the .05 level. These variables were differentially related to different domains of response. In the affective domain, severity of responses were positively related to maternal perceptions of child somatic problems on the Conners Parent Rating Scale and to the level of perceived stress in the year and month prior to questionnaire completion. No descriptive variables were significantly related to behavioral responses. Perceptions of greater deviance in the child behavior scenes were positively related to perceptions of somatic status of the
Table 5

Correlational Analysis of Descriptive Information and Maternal Responses

<table>
<thead>
<tr>
<th>Variable</th>
<th>Maternal Response</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Aff</td>
</tr>
<tr>
<td>Socioeconomic status</td>
<td>-.13</td>
</tr>
<tr>
<td>Number of children</td>
<td>-.10</td>
</tr>
<tr>
<td>Stress - past year</td>
<td>.28*</td>
</tr>
<tr>
<td>Stress - past month</td>
<td>.25*</td>
</tr>
<tr>
<td>Stress - past day</td>
<td>.15</td>
</tr>
<tr>
<td>CPRS</td>
<td></td>
</tr>
<tr>
<td>conduct problems</td>
<td>.25</td>
</tr>
<tr>
<td>somatic problems</td>
<td>.34*</td>
</tr>
<tr>
<td>inattention problems</td>
<td>.18</td>
</tr>
<tr>
<td>anxiety problems</td>
<td>.20</td>
</tr>
</tbody>
</table>

*p<.05
child and with the level of stress in the day of questionnaire completion.

**The descriptive analysis of parent behavior.** In addition to reporting the degree to which they would respond behaviorally to the child behavior depicted, mothers were also asked to describe their anticipated immediate behavioral response. A list of six common parenting responses was provided and mothers were instructed to choose the one behavior that best reflected what they would do first in reaction to the child behavior. This descriptive information is summarized in Table 6.
Table 6

Descriptive Information for Behavioral Responses

<table>
<thead>
<tr>
<th>Behavioral Response</th>
<th>DH</th>
<th>GLE</th>
<th>NO</th>
</tr>
</thead>
<tbody>
<tr>
<td>not respond at all</td>
<td>2.78%</td>
<td>6.58%</td>
<td>5.48%</td>
</tr>
<tr>
<td>ignore the behavior</td>
<td>4.63</td>
<td>6.58</td>
<td>6.85</td>
</tr>
<tr>
<td>reason with the child</td>
<td>34.26</td>
<td>49.12</td>
<td>58.90</td>
</tr>
<tr>
<td>take away privileges</td>
<td>12.96</td>
<td>9.65</td>
<td>3.65</td>
</tr>
<tr>
<td>reprimand the child</td>
<td>23.15</td>
<td>16.23</td>
<td>18.72</td>
</tr>
<tr>
<td>yell at/spank the child</td>
<td>22.22</td>
<td>11.84</td>
<td>6.39</td>
</tr>
</tbody>
</table>
Discussion

The present study was designed to assess whether or not stress and mood influence mothers' affective, behavioral and/or cognitive responses to child behavior. The results obtained suggest that both life stress and maternal mood are important for understanding parental reactions. In terms of stress, mothers indicated a more severe behavioral response, and perceived the child behavior to be more upsetting, problematic and intentional, in the GLE and DH conditions than in the NO stress condition. This is consistent with previous findings that indicate that under stressful conditions mothers respond with "minimal parenting" (Zussman, 1980) and perceive child behavior to be more deviant than when the same behavior occurs in a context of low stress (Middlebrook & Forehand, 1986). Further, within stress conditions, daily hassles were associated with significantly higher scores than were global life events across the dependent measures. This finding is in keeping with the hypothesis that, although daily hassles may be perceived as relatively minor in comparison to major life stressors, these stressful events that occur on a daily, frequent basis have a greater impact on parental responses than the major, perhaps more distal, global life events.

The results indicating a main effect for stress are meaningful only if the stress manipulation was successful.
An analysis of mothers’ ratings on the first question of the manipulation check showed that the two stress conditions (GLE and DH) were perceived as significantly more stressful than the NO stress condition. However, no significant difference in perceived stress was found between the two stress contexts (GLE vs. DH). Interestingly, in the pilot study, female undergraduates had rated the GLE narratives as more stressful than the DH narratives. Based on this information from mothers and undergraduate females, it appears unlikely that daily hassles are associated with higher maternal response scores simply due to differences in the level of stress inherent in the GLE and DH descriptions. Since mothers failed to distinguish the two conditions in terms of stress level, one could argue that proximity, rather than severity, is the key distinction between these two types of stress (DeLongis et al., 1982).

In this study we attempted to test this hypothesis through the use of a second question in the manipulation check. The question, "How much would these events affect the way you went about your daily routine?" was designed to address the issue of proximity. However, no differences were detected between the two stress contexts (GLE vs. DH) on this dimension and evidence was not found to support the notion that daily hassles were perceived to be more proximal to the mother-child interaction than were global life events. In order to better understand their mechanisms of influence, further research is needed to clarify the
dimension on which the GLE and DH conditions differ. In this study, rather than dismissing the proximity hypothesis however, one could entertain other possibilities to explain the nonsignificant difference on the manipulation check question. For instance, it may be possible to attribute the failure to detect a significant difference to wording difficulties in this question. For example, many mothers noted that it was unclear from the way this question was presented whether they were being asked to comment on the life events or the child behavior described.

Significant differences in responses to child behavior were also detected between groups of mothers divided on the basis of mood. This concurs with previous findings that show that mothers who feel more depressed perceive more behavior problems in their children than non-depressed mothers (Forehand et al., 1982; Griest et al., 1979; Rogers & Forehand, 1983). In this study, mothers experiencing a depressed mood at the time of questionnaire completion reported feeling more upset by the child behavior than mothers who reported a relatively nondepressed mood. In addition, although there was a trend for these groups to differ in the severity of their behavioral responses to the child behavior, no between group difference was evident on the cognitive scale assessing perceptions of child behavior. This difference across dependent measures was not predicted but is consistent with other recent findings that suggest that distorted cognitions may not be the factor mediating
between depressed mood and perceptions of child behavior (Conrad & Hammen, 1989; Johnston, Krech, Habich & McBride, 1989). Rather, it appears that mood congruent affective processing or behavioral response style may be the key factor uniting parental depressed mood and perceptions of child problems (Jouriles, Murphy & O'Leary, 1989; Kochanska, Kuczynski & Maguire, 1989).

Of particular interest in this study was the fact that results differed depending upon whether the BDI or the CES-D was used to establish mood level. Although highly correlated, these two instruments appear to measure different aspects of mood or depression. The BDI was designed for use primarily among clinically depressed individuals. In the domain of parenting research, despite the fact that mean scores seldom reach clinical levels of depression, mood has been assessed almost exclusively with use of the BDI. The present results suggest that, within such nonclinical samples, mood may be more appropriately or sensitively defined using the CES-D. This finding serves to magnify the importance of selecting measures appropriate to the sample being addressed.

In the present study, a significant stress by mood interaction was not detected. That is, ratings by depressed mood mothers were not inflated differentially across stress contexts. It was concluded that the main effects operated independently. However it is recognized that due to its analogue nature, the design may not have been sensitive
enough to detect this interaction. The use of a clinically depressed population and/or a more naturalistic stress manipulation may increase the probability of witnessing a stress by mood interaction.

The correlational analyses indicated a few significant relationships between responses on the affective, behavioral and cognitive measures and descriptive subject variables. Although these correlations were few in number and were of small to moderate magnitude, speculative interpretation may be offered. Of note is the finding that both affective and cognitive responses to the child behavior were positively correlated with reports of recent life stress. Although previous research in both normal and clinic-referred populations have demonstrated that high stress is associated with inflated perceptions of child deviance (Crnic & Greenberg, 1985; Webster-Stratton, 1988), little mention of the relationship between life stress and maternal affective response has been made in the literature. In addition, the demonstrated association between high stress and parent behavior in the lab (Weinraub & Ansul, 1984; Weinraub & Wolf, 1983; Whiting, 1968) was not observed in this correlational analysis.

The descriptive analysis conducted for the behavioral response questions asking for specific parent reactions yielded interesting results. If ranked subjectively in terms of severity, low to high, the behavioral choices read: no response, ignore the behavior, reason with the child,
take away privileges, reprimand the child, and yell at or spank the child. Based on this ranking, most of the mothers provided relatively mild suggestions for how they would respond behaviorally to the child behavior (i.e., reason with the child). In the daily hassles condition, however, more severe parent reactions were offered as a first response more frequently (i.e., yell at or spank the child). It is notable that this descriptive information is consistent with findings from the other dependent measures that show more intense reactions in the DH condition.

A limitation of the present research is its analogue nature. Although this type of study offers control over threats to internal validity, and is a necessary first step in the investigation of new lines of research, external validity is often sacrificed. The present study attempted to achieve some degree of external validity by using the responses of "real" single mothers. Further, an effort was made to create scenes of child behavior that would be deemed realistic by respondents. Both undergraduate females and the sample of single mothers rated the child behavior and stress narratives as realistic. For the mothers in this sample, the mean rating was 3.23 on a scale from 0 (not at all) to 6 (very). One facet of external validity that the present study does not address, however, is whether or not the responses provided on the questionnaires mirror actual responses to child behavior under conditions of life stress. An additional limitation is that the results are confined to
the responses of single mothers. Since these mothers likely experience unique stressors and lifestyles, the outcome should not be generalized to two-parent families without replication of the study.

Any discussion of implications regarding this study must be undertaken with the above limitations in mind. However, two contributions to the literature are worthy of note. First, this study provides support for the importance of contextual variables in parenting. Using the present experimental design, causality cannot be implied in the case of mood. However, no other demographic variable measured appeared to account for between group differences. Also, the results are consistent with the model suggesting that parental mood exerts an influence on reactions to child behavior. This conclusion is consistent with other studies that suggest that mood is causally related to maternal reactions to child behavior (Zekoski, O'Hara & Wills, 1987). It is therefore recommended that clinicians assess parent mood and consider mood management as a possible adjunct to behavioral parent training in that this component may offer a useful approach for changing affective and behavioral response to child behavior. Since stress is manipulated in this analogue study, it is possible to note causality. That is, the results of this investigation indicate that stress influences maternal response to child behavior. This implies that by changing environmental stress mothers' responses may also be altered. Further, since negative
correlations between these variables and success in parent training have already been established (Griest & Forehand, 1982; Packard, Horn, Ialongo & Greenberg, 1987, Webster-Stratton, 1985), recommendations for clinical practice may be forwarded. The incorporation of a stress management component into behavioral parent training programs appears warranted.

Secondly, the present study introduces to the parenting domain the idea that stress should be considered as a multi-level construct (i.e., GLE and DH levels), as it is in the area of stress and coping (DeLongis et al., 1982; Kanner et al., 1981). Further, the results are consistent with the idea that daily hassles have a significant effect on maternal functioning. This may have implications for applied contexts. For instance, in terms of assessment, the results suggest that it may be wise to include a measure such as The Hassles Scale (DeLongis, Folkman & Lazarus, 1988) in assessment packages used for parents seeking help with child management. This would facilitate the identification of parents who are experiencing high levels of daily stress and would thereby indicate when a treatment program that includes a daily hassles management component might be beneficial. However, more research in the area of contextual variables of parenting is necessary before changes in service delivery can be confidently implemented.

Empirical progressions from the present study should proceed in three main directions. First, external validity
concerns should be addressed through attempts to increase the realism of the stress manipulation and the stimulus materials. This might be achieved through the use of videotaped vignettes, child confederates, "real" children or actual task demands. A second and related suggestion for future research involves exploring whether or not the parental reactions provided in response to the manipulation are reflective and/or predictive of actual parent affect, behavior and cognition. Observational or correlational designs would best facilitate this kind of research. Finally, variables that will further our understanding of parenting, such as ethnicity, might replace depressed mood as the between subjects variable in this design.

In sum, this study demonstrated that life stress exerts an impact on maternal reactions to child behavior. More specifically, a differential effect of daily hassles and global life events was detected. Consistent with prior research, mood also played a role, but, interestingly, only when the community-derived CES-D is used to define the construct. Such information is helpful in improving our understanding of the part played by these personological and environmental variables in the mother-child interaction.
References


Appendix B

General Information Sheet

Mother’s Age:

Mother’s Occupation:

Highest Level of Education received:

Marital History: never married __
separated __
widowed __
divorced __
moved __

Number of Children: .

Age(s) and sex(es) of Children:

Number of Years as a single parent:

Have you ever sought psychological help for your child or for your own personal problems? If yes, please describe briefly.

__________________________________________

__________________________________________

Thank you.
Appendix C

Beck Depression Inventory

Please read each item carefully all the way through and then choose the answer that fits you best at the present time. There are no right or wrong answers. Please answer as honestly as you can. Your responses are strictly confidential. Circle your answer for each item. Thank you for your cooperation and help.

1. (0) I do not feel sad.
   (1) I feel blue or sad.
   (2a) I am blue or sad all the time and I can't snap out of it.
   (2b) I am so sad or unhappy that it is very painful.
   (3) I am so sad or unhappy that I can't stand it.

2. (0) I am not particularly pessimistic or discouraged about the future.
   (1) I feel discouraged about the future.
   (2a) I feel I have nothing to look forward to.
   (2b) I feel that I won't ever get over my troubles.
   (3) I feel that the future is hopeless and that things cannot improve.

3. (0) I do not feel like a failure.
   (1) I feel I have failed more than the average person.
   (2a) I feel I have accomplished very little that is worthwhile or that means anything.
   (2b) As I look back on my life all I can see is a lot of failure.
   (3) I feel I am a complete failure as a person.

4. (0) I am not particularly dissatisfied.
   (1a) I feel bored most of the time.
   (1b) I don't enjoy things the way I used to.
   (2) I don't get satisfaction out of anything anymore.
   (3) I am dissatisfied with everything.

5. (0) I don’t feel particularly guilty.
   (1) I feel bad or unworthy a good part of the time.
   (2a) I feel quite guilty.
   (2b) I feel bad or unworthy practically all the time now.
   (3) I feel as though I am very bad or worthless.

6. (0) I don’t feel I am being punished.
   (1) I have a feeling that something bad may happen to me.
   (2) I feel I am being punished or will be punished.
   (3a) I feel I deserve to be punished.
   (3b) I want to be punished.
7. (0) I don't feel disappointed in myself.
   (1a) I am disappointed in myself.
   (1b) I don't like myself.
   (2) I am disgusted with myself.
   (3) I hate myself.

8. (0) I don't feel I am any worse than anyone else.
   (1) I am very critical of myself for my weaknesses or mistakes.
   (2a) I blame myself for everything that goes wrong.
   (2b) I feel I have many bad faults.

9. (0) I don't have any thoughts of harming myself.
   (1) I have thoughts of harming myself but I would not carry them out.
   (2a) I feel I would be better off dead.
   (2b) I have definite plans about committing suicide.
   (2c) I feel my family would be better off if I were dead.
   (3) I would kill myself if I could.

10. (0) I don't cry any more than usual.
    (1) I cry more now than I used to.
    (2) I cry all the time now. I can't stop it.
    (3) I used to be able to cry but now I can't cry at all even though I want to.

11. (0) I am no more irritated now than I ever was.
    (1) I get annoyed or irritated more easily than I used to.
    (2) I feel irritated all the time.
    (3) I don't get irritated at all at the things that used to irritate me.

12. (0) I have not lost interest in other people.
    (1) I am less interested in other people now than I used to be.
    (2) I have lost most of my interest in other people and have little feeling for them.
    (3) I have lost all my interest in other people and don't care about them at all.

13. (0) I make decisions about as well as ever.
    (1) I am less sure of myself now and try to put off making decisions.
    (2) I can't make decisions any more without help.
    (3) I can't make any decisions at all any more.

14. (0) I don't feel I look any worse than I used to.
    (1) I am worried that I am looking old or unattractive.
    (2) I feel that there are permanent changes in my appearance and they make me look unattractive.
    (3) I feel that I am ugly or repulsive looking.
15. (0) I can work about as well as before.
   (1a) It takes extra effort to get started at doing something.
   (1b) I don’t work as well as I used to.
   (2) I have to push myself very hard to do anything.
   (3) I can’t do any work at all.

16. (0) I can sleep as well as usual.
   (1) I wake up more tired in the morning than I used to.
   (2) I wake up 1-2 hours earlier than usual and find it hard to get back to sleep.
   (3) I wake up early every day and can’t get more than 5 hours sleep.

17. (0) I don’t get any more tired than usual.
   (1) I get tired more easily than I used to.
   (2) I get tired from doing anything.
   (3) I get too tired to do anything.

18. (0) My appetite is no worse than usual.
   (1) My appetite is not as good as it used to be.
   (2) My appetite is much worse now.
   (3) I have no appetite at all any more.

19. (0) I haven’t lost much weight, if any, lately.
   (1) I have lost more than 5 pounds.
   (2) I have lost more than 10 pounds.
   (3) I have lost more than 15 pounds.

20. (0) I am no more concerned about my health than usual.
   (1) I am concerned about aches and pains or upset stomach or constipation or other unpleasant feelings in my body.
   (2) I am so concerned with how I feel or what I feel that it’s hard to think of much else.
   (3) I am completely absorbed in what I feel.

21. (0) I have not noticed any recent changes in my interest in sex.
   (1) I am less interested in sex than I used to be.
   (2) I am much less interested in sex now.
   (3) I have lost interest in sex completely.
Appendix D

CES-D

Using the scale below, indicate the number which best describes how often you felt or behaved this way—DURING THE PAST WEEK.

1 = Rarely or none of the time (less than 1 day)
2 = Some or a little of the time (1-2 days)
3 = Occasionally or a moderate amount of time (3-4 days)
4 = Most or all of the time (5-7 days)

DURING THE PAST WEEK:

1. I was bothered by things that usually don’t bother me.
2. I did not feel like eating; my appetite was poor.
3. I felt that I could not shake off the blues even with help from my family or friends.
4. I felt that I was just as good as other people.
5. I had trouble keeping my mind on what I was doing.
6. I felt depressed.
7. I felt that everything I did was an effort.
8. I felt hopeful about the future.
9. I thought my life had been a failure.
10. I felt fearful.
11. My sleep was restless.
12. I was happy.
13. I talked less than usual.
15. People were unfriendly.
16. I enjoyed life.
17. I had crying spells.
18. I felt sad.
19. I felt that people disliked me.
20. I could not get "going".
Appendix E

Conners Parent Rating Scale

Please answer all questions. Beside each item below, indicate the degree of the problem by a check mark.

<table>
<thead>
<tr>
<th>not at</th>
<th>just a</th>
<th>pretty</th>
<th>very</th>
</tr>
</thead>
<tbody>
<tr>
<td>all</td>
<td>little</td>
<td>much</td>
<td>much</td>
</tr>
</tbody>
</table>

Picks at things (nails, fingers, hair, clothing).
Sassy to grown-ups.
Problems with making or keeping friends.
Excitable, impulsive.
Wants to run things.
Sucks or chews (thumb; clothing; blankets).
Cries easily or often.
Carries a chip on his shoulder.
Daydreams.
Difficulty in learning.
Restless in the "squirmy" sense.
Fearful (of new situations; new people or places; going to school).
Restless, always up and on the go.
Destructive.
Tells lies or stories that aren’t true.
Shy.
Gets into more trouble than others same age.
Speaks differently from others same age (baby talk; stuttering; hard to understand).
Denies mistakes or blames others.
Quarrelsome.
Pouts and sulks.
Steals.
Disobedient or obeys resentfully.
Worries more than other (about being alone; illness or death).
Fails to finish things.
Feelings easily hurt.
Bullies others.
Unable to stop a repetitive activity.
Cruel.
Childish or immature (wants help he shouldn’t need; clings; needs constant reassurance).
Distractibility or attention span a problem.
Headaches.
Mood changes quickly and drastically.
Doesn't like or doesn't follow rules or restrictions.
Fights constantly.
Doesn't get along well with brothers or sisters.
Easily frustrated in efforts.
Disturbs other children.
Basically an unhappy child.
Problems with eating (poor appetite; up between bites).
Stomach aches.
Problems with sleep (can't fall asleep; up too early; up in the night).
Other aches and pains.
Vomiting or nausea.
Feel cheated in family circle.
Boasts and brags.
Lets self be pushed around.
Bowel problems (frequently loose; irregular habits; constipation)
Appendix F

Life Stress Index

Life stress might be defined as bad things that happen in your life or as how stressed you feel because of these bad things in your life. Reflect on the past year, month and day. Circle the number that best represents how much life stress you have experienced over each of these periods.

Life stress experienced,

a) over the past year:

<table>
<thead>
<tr>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>none</td>
<td>some</td>
<td>lots</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

b) over the past month:

<table>
<thead>
<tr>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>none</td>
<td>some</td>
<td>lots</td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

c) today:

<table>
<thead>
<tr>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>none</td>
<td>some</td>
<td>lots</td>
<td></td>
<td></td>
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</tbody>
</table>

Thank you.
Appendix G

Instructions for completing the mother reaction section

On the next pages you will find 12 descriptions of situations involving mothers and children. You are asked to imagine that you are the mother, and ______________ is the child, in each description. Your task is to rate how you would respond to this behavior. Although some of the situations may not be typical of your family, please stretch your imagination and try to put yourself in the situation. Indicate your responses, with an X, on the scales provided. There are no right or wrong answers. Please be as honest as you can in indicating your reactions.
Appendix H

Global Life Event Context

SITUATION # 1

Over the past year your grandmother fell and broke her hip, your dog was hit by a car and killed instantly, the lunchtime exercise class you regularly attended at work was cancelled, you had to borrow $5000 for a downpayment on a car, and you ate a lot of fast food and ended up gaining several extra pounds.

Today you went through your usual routine and ran a few errands. Things went along okay. Nothing out of the ordinary happened.

Later on the same day, your child pulls the cookie jar off of the shelf and breaks it. She yells for you to come and clean up the broken pieces.

SITUATION # 2

Over the past year your nephew died in a freak car accident, your parents moved to another city so your family got together less than usual, you were forced to put in longer hours at work, your bank foreclosed on a loan because they didn’t receive the payment you sent, your neighbourhood got really rundown.

Today things went along as usual. Nothing out of the ordinary happened as you went through your daily routine. It was just the same as any other average day.

Later on the same day, you tell your child to play in an adjacent room while you entertain a few friends. One of your guests comments on her noisy play.
SITUATION #3

Over the past year you received your divorce papers in the mail, you stopped going for your regular swim because the pool was closed for major repairs, your office at work was moved to a damp basement with no windows, you had to borrow $2500 from your parents to pay for new furniture, you fell down the stairs, twisted your ankle, and had to use crutches for some time.

Today was just like any other day. You woke up, ran a few errands, and went through the usual daily routine. Things went along okay. Nothing unusual happened.

Later on the same day, you are looking forward to a quiet leisurely dinner. Throughout the meal your child squirms in her chair and barely touches the food on her plate.

SITUATION # 4

Over the past year your sister had to make a decision about having an abortion, you went out less because your favourite girlfriend moved away, you had a series of disagreements with your supervisor at work and it almost cost you your job, you had money problems because your landlord decided to raise the monthly rent, and you went through a period in which you felt tired all the time and slept much more than usual.

Today things went along okay. Things were neither really good nor really bad. You went through the same routine that you do every other day. Nothing out of the ordinary happened.

Later on the same day, while you are entertaining guests, your child comes to you a second time to ask what time dinner will be served. You know the meal won’t be ready for at least another half hour.
Appendix I

Daily Hassles Context

SITUATION # 5

Over the past year nothing major happened in your life. You were still at the same job, and, other than a few minor complaints, your health was good. Your social life was about the same as always. The past year has been very similar to other years.

Today your parents called to complain that they don’t see enough of you, you didn’t have time for your usual morning walk, you were given an unrealistic amount of work to do on your job, you found out that a summer course you were interested in costs more than you wanted to pay, and you burned a meal because the timer on the stove didn’t work.

Later on the same day, you tell your child to come and clean up the toys she left on the kitchen floor. She yells from the TV room, "In a minute!"

SITUATION # 6

Over the past year nothing out of the ordinary happened in your life. You stayed at the same job, made about the same amount of money and went out with the same friends as usual. Your health was generally good. The past year has been very similar to other years.

Today your neighbours played their stereo much too loud, you got a parking ticket even though you were in your regular space, some of your fellow workers went out for lunch but neglected to invite you along, you lost a $20 bill while you were shopping, and your car started making strange noises.

Later on the same day, your child comes home from school in a very grumpy mood. You notice a bruise on her face and ask her what happened. She says, "Oh, nothing".
SITUATION #7

Over the past year things have gone along just like any other year. You stayed with the same job and went out with the same group of friends. Everyone in your family has been quite healthy. Nothing major happened in your life.

Today your sister called to say she couldn’t do you the favour she had promised, you had to attend a social gathering honouring a co-worker that you dislike, you were assigned a tedious project at work, you went to a travel agent to book a trip but found that the vacation you had in mind costs more than you want to spend, you felt like you were coming down with a cold.

Later on the same day, your child comes in for dinner still wearing her good dress that’s only for school. You notice a patch of dirt on the sleeve.

SITUATION # 8

Over the past year you held the same position at work, had only a few minor ailments, and went out about the same amount as always. Your money situation was about the same as in other years. Nothing major happened in your life.

Today your brother called you and was upset about a broken relationship, you missed a meeting of your church group that you wanted to attend, your supervisor yelled at you in front of your co-workers, you had to return some of your groceries to the shelves because you lent some of your coupons to a friend, and your hairdryer exploded and the outlet in front of the bathroom mirror no longer works.

Later on the same day, you stumble over your child’s toys in the hallway. A half hour earlier you told her to put her toys away and now she is watching television.
Appendix J

No Stress Context

SITUATION # 9

Over the past year things stayed pretty much the same as in other years. You stayed at the same job and visited with the same friends. Your health was generally good. Nothing major happened in your life.

Today you went through the same routine as most other days. Everything went okay. Nothing out of the ordinary came up. Things were neither really good nor really bad.

Later on the same day, your child has a snack at the kitchen table and starts playing with her glass of milk. She knocks the glass over, spilling milk on the table and floor.

SITUATION # 10

Over the past year things have gone along as always. Your health was generally good, you went out as much as usual and you stayed with your same job. The past year has been very similar to other years.

Today you went through your daily routine and ran a few errands. There were no unexpected events. Things were pretty much like any other day.

Later on the same day, when it's time for your child to take her cough syrup, she jumps off her chair and runs down the hall away from you and the medicine.
SITUATION # 11

Over the past year you went through no major changes. You were still at the same job, made about the same amount of money and kept the same friends. Other than a few minor complaints, your health was good. It was an average year.

Today things went fairly smoothly. You did the same things you do everyday and nothing out of the ordinary happened. You didn’t get any good news but nothing bad came up either.

Later on the same day, you decide it’s time to trim your child’s hair. You weren’t happy with the barber last time so you decide to try it yourself. Your child keeps insisting that he wants the barber to do it.

SITUATION # 12

Over the past year you have done the same things you have done most other years. You kept the same job and visited with the same friends. Your health, and the health of those around you, was generally good. It was a typical year.

Today nothing out of the ordinary occurred. You went through your daily routine without any unexpected happenings. It was a pretty average day.

Later on the same day, you are busy in the kitchen and have two piles of dishes in your hands when you turn to see your child’s pet mouse scurrying across the floor. It startles you and you almost drop the dishes.
Appendix K

Mother Reaction Scales

IMAGINE THAT YOU ARE THE MOTHER, AND IS THE CHILD, IN THE DESCRIPTION. PLEASE ANSWER THE FOLLOWING QUESTIONS BY CIRCLING THE NUMBER THAT BEST REFLECTS HOW YOU WOULD RESPOND TO THE CHILD BEHAVIOR. THERE ARE NO RIGHT OR WRONG ANSWERS.

a) HOW UPSETTING WOULD YOU FIND THIS CHILD BEHAVIOR?

<table>
<thead>
<tr>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>not upsetting</td>
<td>somewhat upsetting</td>
<td>very upsetting</td>
<td></td>
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</tbody>
</table>

b) HOW LONG WOULD YOUR MOOD BE AFFECTED BY THIS BEHAVIOR?

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<tr>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
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</tr>
</thead>
<tbody>
<tr>
<td>not affected</td>
<td>affected for an hour</td>
<td>affected for more than a day</td>
<td></td>
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</tbody>
</table>

c) HOW LIKELY WOULD YOU BE TO DISCIPLINE YOUR CHILD FOR THIS BEHAVIOR?

<table>
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<tr>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>unlikely</td>
<td>maybe</td>
<td>very</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>to respond</td>
<td>respond</td>
<td>likely to respond</td>
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</table>

d) HOW INTENSE WOULD YOUR RESPONSE TO THIS CHILD BEHAVIOR BE?

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<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>no response</td>
<td>moderate response</td>
<td>intense response</td>
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</tbody>
</table>
e) **WHICH ONE OF THE FOLLOWING THINGS WOULD YOU DO FIRST IN RESPONSE TO THIS CHILD BEHAVIOR?**

<table>
<thead>
<tr>
<th>Option</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>send the child to his room or take away privilege</td>
<td></td>
<td></td>
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<tr>
<td>not respond at all</td>
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<tr>
<td>ignore the behavior</td>
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<tr>
<td>yell at or spank the child</td>
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<tr>
<td>reason with the child</td>
<td></td>
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<tr>
<td>reprimand the child</td>
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<tr>
<td>other</td>
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</table>

f) **HOW MUCH OF A PROBLEM DO YOU THINK THIS CHILD BEHAVIOR IS?**

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<tr>
<th>Level</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>not a problem</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>somewhat of a problem</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a big problem</td>
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<td></td>
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</tr>
</tbody>
</table>

g) **HOW MUCH DO YOU THINK THE CHILD ACTED THIS WAY ON PURPOSE?**

<table>
<thead>
<tr>
<th>Level</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>not on purpose</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>somewhat on purpose</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>very much on purpose</td>
<td></td>
<td></td>
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</tbody>
</table>
Appendix L

Stress Manipulation Check

Think back to the description of the year, and of the day, prior to the child behavior. With this in mind, please answer the following questions by circling a number on the scale.

How much stress would you feel if the things described in the situation actually happened to you?

0 1 2 3 4 5 6
none some lots

How much would these events affect the way you went about your daily routine?

0 1 2 3 4 5 6
not at somewhat lots all

How likely are such events to happen in your life?

0 1 2 3 4 5 6
not at somewhat very likely
likely
Appendix M

Recent Stress Index

While you were filling out the forms, did anything happen to increase your feelings of stress (eg., your child started to cry, you got a disturbing phone call etc.)? If yes, please describe the event briefly and show how stressful it was on the scale provided.

No __

Yes (Please describe the event)

________________________________________________________________________

________________________________________________________________________

0 1 2 3 4 5 6
not at all somewhat stressful very stressful

Thank you.
Appendix N

Pilot Study

A) For each description of child behavior you read, please indicate on the answer form provided:

a) how stressful you found the child behavior to be:

  none  some  lots

b) how much you think the child acted deliberately to annoy his mother:

  not  somewhat  definitely
deliberate  deliberate  deliberate

c) how sure you are about this rating (b):

  very  fairly  not
sure  sure  sure

d) how much of a problem you think this child’s behavior is:

  not a  somewhat  very
problem  problematic  problematic
B) For each description of life events, please indicate on the answer form provided:

a) how much stress you would feel if these things actually happened to you:

<table>
<thead>
<tr>
<th>no stress</th>
<th>some stress</th>
<th>a lot of stress</th>
</tr>
</thead>
</table>

b) how negative you found the life events to be:

<table>
<thead>
<tr>
<th>very positive</th>
<th>neutral</th>
<th>very negative</th>
</tr>
</thead>
</table>

c) how likely it is that these events would happen in real life:

<table>
<thead>
<tr>
<th>not at all likely</th>
<th>somewhat likely</th>
<th>very likely</th>
</tr>
</thead>
</table>