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ECOLOGICAL DETERMINANTS OF
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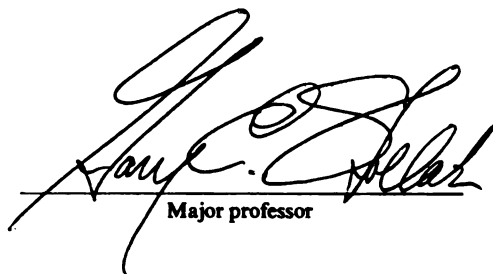
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MOTHERING IN CONTEXT:
ECOLOGICAL DETERMINANTS OF PARENT BEHAVIOR

By

Steven Alan Meyers

A DISSERTATION

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ABSTRACT

MOTHERING IN CONTEXT: ECOLOGICAL DETERMINANTS OF PARENT BEHAVIOR

By

Steven Alan Meyers

Using a community-based sample of 73 mothers and their 5- to 7-year old children, the present investigation empirically explored the ways in which selected characteristics of parents, children, and the family context related to mothers' parenting behavior. Predictor variables included mothers' retrospective attachment security, depressive symptoms, marital satisfaction, perceived social support, and perceptions of child temperamental ease. A path model, based on Belsky's (1984) process model of parenting, was tested in order to specify paths of influence among the multiple predictors of maternal authoritativeness. Relationships among these variables were also delineated a posteriori in a structural equation model.

Correlational analyses revealed that maternal authoritative behavior in a play encounter was significantly related to retrospective attachment security, perceived social support, and marital satisfaction. In a path analysis, mothers' perceptions of social support received from friends and family uniquely predicted maternal authoritativeness when other variables were controlled.

Although several predictions derived from Belsky's conceptual framework were not empirically confirmed, the adequacy of the overall measurement model was supported. The unconfirmed predictions and other unanticipated relationships reported in a posteriori analyses suggest that the ecological perspective is a useful paradigm for examining the determinants of parent behavior, but Belsky's model may be best viewed as a launching point for future investigations.

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INTRODUCTION

Characteristics of "Good Parenting"

The question of what constitutes "good parenting" has been a concern of psychologists, as well as politicians, religious leaders, and health care providers, for decades. The importance of this topic is underscored by a large body of research which has indicated that parents' behaviors are related to children's social, emotional, and cognitive development (e.g., Bornstein, 1988; Grolnick & Ryan, 1989; Koestner, Franz, & Weinberger, 1990; Ladd & Golter, 1988; Olson, Bayles, & Bates, 1986; Pratt, Kerig, Cowan, & Cowan, 1988; Roberts & Strayer, 1987).

Although dozens of child caregiver behaviors have been described and explored in psychological research, two overarching dimensions have been identified and are generally regarded as principal domains in parenting: warmth and control (Baumrind, 1973; Becker, 1964; Schaefer, 1959). Warmth refers to the parent's expression of love and nurturance towards the child. Warm parents are those who are involved, attentive child caregivers and express interest in their children's accomplishments. Warmth is further assessed by parental attunement and responsiveness to the emotional, social, and cognitive needs of children.

Control, the second overarching construct utilized in parenting research, has been operationalized as "those parental acts intended by the parent to shape the child's goal-directed activity; to modify his expression of dependent, aggressive, and playful behavior; and to promote internalization of parental standards" (Baumrind, 1973, p. 6). Optimal control strategies are neither punitive nor coercive, yet still promote child compliance. For instance, controlling parents are those who enforce their rules by using clear commands, active limit setting, and praise for prosocial behavior. In addition, control involves monitoring and structuring children's activities, as well as maintaining appropriate maturity demands (i.e., expectations for children to display age-appropriate levels of autonomous behavior).

Research has indicated that young children who display positive personal and interpersonal characteristics (e.g., social responsibility, achievement orientation, independence) frequently have parents who effectively couple both warmth and control (Baumrind, 1973, 1989). This "authoritative" parenting style involves encouraging verbal give-and-take with children, communicating and allowing discussion regarding expectations, and providing clear but flexible standards for children's behavior. In addition, such parents respect the individuality of their children and express support, concern, and care for them (Baumrind, 1989; Buri, Louiselle, Misukanus, & Mueller, 1988).

Authoritative parents are highly invested in their childrearing responsibilities and attempt to optimize child behavior by utilizing skills including persuasive communication, contingent reinforcement, active monitoring, scaffolding, and academic engagement (Baumrind, 1993).

In addition to authoritative parenting, Baumrind identified two non-optimal patterns of child caregiving. A parenting style characterized by high amounts of control, yet little warmth has been labeled "authoritarian." These parents emphasize obedience as a virtue and utilize punitive, forceful measures to obtain child compliance. Moreover, authoritarian caregivers do not encourage child independence, and are characterized by a lack of responsiveness in parent-child interactions. Boys from authoritarian households have been found to be relatively hostile, while girls have been reported to lack independence (Baumrind, 1989). In contrast, a "permissive" parenting style includes behavior which is warm, nonpunitive, and accepting, but does not exert control over children's behavior or make maturity demands. Compared with children of authoritative and authoritarian parents, children of permissive parents have been found to score lowest on measures of self-control and self-reliance (Baumrind, 1989).

Promoting Authoritative Parenting

In an effort to increase parental authoritativeness (and consequently optimize child behavior), parent educators and family therapists frequently attempt to enhance parents' abilities to exercise control over and express warmth towards children in their interventions. Therapists or family life educators who help parents develop more effective child control strategies often provide information regarding behavioral modification strategies, such as socially reinforcing positive behavior, ignoring problematic behavior, and implementing natural and logical consequences (Patterson, 1975; Popkin, 1983). More intensive child management interventions, such as relatively elaborate reward systems and behavioral contracts, are often described as well.

Communication skills training, which can enhance the expression of empathy and warmth between parents and children, complements interventions designed to address parents' child management difficulties. One example of this approach is filial therapy (Guerney, 1983; Stollak, 1987). Recommended for parents and their 3-8 year old children, filial therapy involves regularly scheduled play sessions between caregiver and child. During these sessions parents remain in close proximity to the child and reflect on the child's thoughts, feelings, and behaviors. Parents learn ways to express acceptance of the child's experiences and to set essential limits during the play encounter. Another

illustration of a child communication skills program is Parent Effectiveness Training (Gordon, 1975). In P.E.T., participants learn facilitative communication techniques including active listening, paraphrasing, and asking children open-ended questions.

Expanding the focus of interventions. Although interventions that attempt to enhance parental warmth and control generally show short term positive changes in parents' behaviors and attitudes, long term changes are not as evident when researchers conduct follow-up evaluation (Cedar & Levant, 1990; Hobbs, 1984). This lack of lasting positive outcome may suggest that many of these interventions are not sufficiently comprehensive and could benefit from a broader focus. More specifically, interventions seeking to increase parental authoritativeness and optimize child behavior may be enhanced by the systematic consideration of psychosocial variables that have been demonstrated to influence the way in which parents interact with their children (Dadds, 1987). Salzinger, Antrobus, and Glick (1980) underscore this notion and state that interventions must recognize that parenting and child behavior problems are the product of the action and interaction of many variables in the family's environment. Thus, "the long-term maintenance of children's behavioral change requires that other sources of reinforcement...be found within the adults' environment and brought to bear in

order to maintain the adult's effectiveness as a therapist" (Salzinger et al., 1980, p. 15).

Predictors of parenting and interventions. Careful contemplation of the question, "what determines how parents behave toward their children?" is likely to encourage parent educators and family therapists to develop interventions that affect parenting behavior on multiple fronts. For instance, Sheeber and Johnson (1994) acknowledged the importance of child temperament as a determinant of parenting behavior and child behavior problems in their parent education program. These investigators consequently geared their intervention towards promoting parents' understanding of temperament and enhancing the match between child characteristics and parental demands. Similarly, Azar (1989) outlined a parent education program that is responsive to the individual psychological difficulties of physically abusive parents, including their unrealistic standards of child behavior and poor anger control strategies. In addition to instruction in effective child management techniques, the intervention included: (a) cognitive restructuring that challenged parents' distorted belief systems regarding the intent and developmental appropriateness of children's behavior, (b) problem-solving skills training, and (c) stress reduction and anger control strategies.

Although there are notable exceptions (such as those described above), most interventions designed to enhance

parental authoritativeness fail to acknowledge the role played by the larger personal and interpersonal matrix within the family (Brock, Oertwein, & Coufal, 1993). In order to encourage parent educators to address the numerous psychological and social forces that influence parents' behavior, an overarching paradigm may be required.

The Conceptual Model: Ecological Theory

One theoretical framework that succinctly organizes the effects of multiple psychosocial variables on child caregiving is ecological, or contextual, theory (Belsky, 1984; Bronfenbrenner, 1977, 1979; Lerner & Lerner, 1986). Ecological theory, as delineated by Bronfenbrenner (1977, 1979), emphasizes the importance of the various settings within which children (and parent-child dyads) exist. The model's most basic unit of the analysis is the microsystem, which refers to the immediate, perceived environment of the child (e.g., home, school). The next level of generalization, the mesosystem, refers to relationships that emerge between the child's major settings (e.g., the manner in which parent-child relationships influence the child's behavior in the school setting). Microsystems and mesosystems are embedded within exosystems, which are settings that the child is not directly a part of, yet influence his or her functioning (e.g., parental work patterns). Lastly, the macrosystem refers to the overarching economic, political, cultural, and social forces

that influence individuals. Bronfenbrenner further elaborates that these systems are progressively embedded and influence each other in a reciprocal and dynamic manner.

In a series of writings, Jay Belsky (Belsky, 1981, 1984; Belsky & Isabella, 1988; Vondra & Belsky, 1993) has applied ecological theory to develop a comprehensive model of the determinants of parenting (see Figure 1).

Incorporating microsystemic and exosystemic variables into his framework, Belsky has stated that parenting behaviors are multiply determined by parent characteristics (i.e., parents' personalities and developmental histories), child characteristics, and aspects of the broader social context (e.g., marital relations, social support, occupational experiences). Furthermore, this conceptual model incorporates several bi-directional paths of influence among contemporaneous, psychosocial parenting determinants.

In addition, the process model posits: (a) the influence of parents' developmental histories on child caregiving practices is entirely mediated by parents' present personality and psychological functioning; (b) parents' psychological functioning affects parenting directly and indirectly by influencing the broader context in which parent-child relationships exist; (c) exosystemic variables, such as social support and marital relations, have both direct effects on parenting behavior and indirect effects as mediated by parents' current psychological functioning; and (d) child development is directly

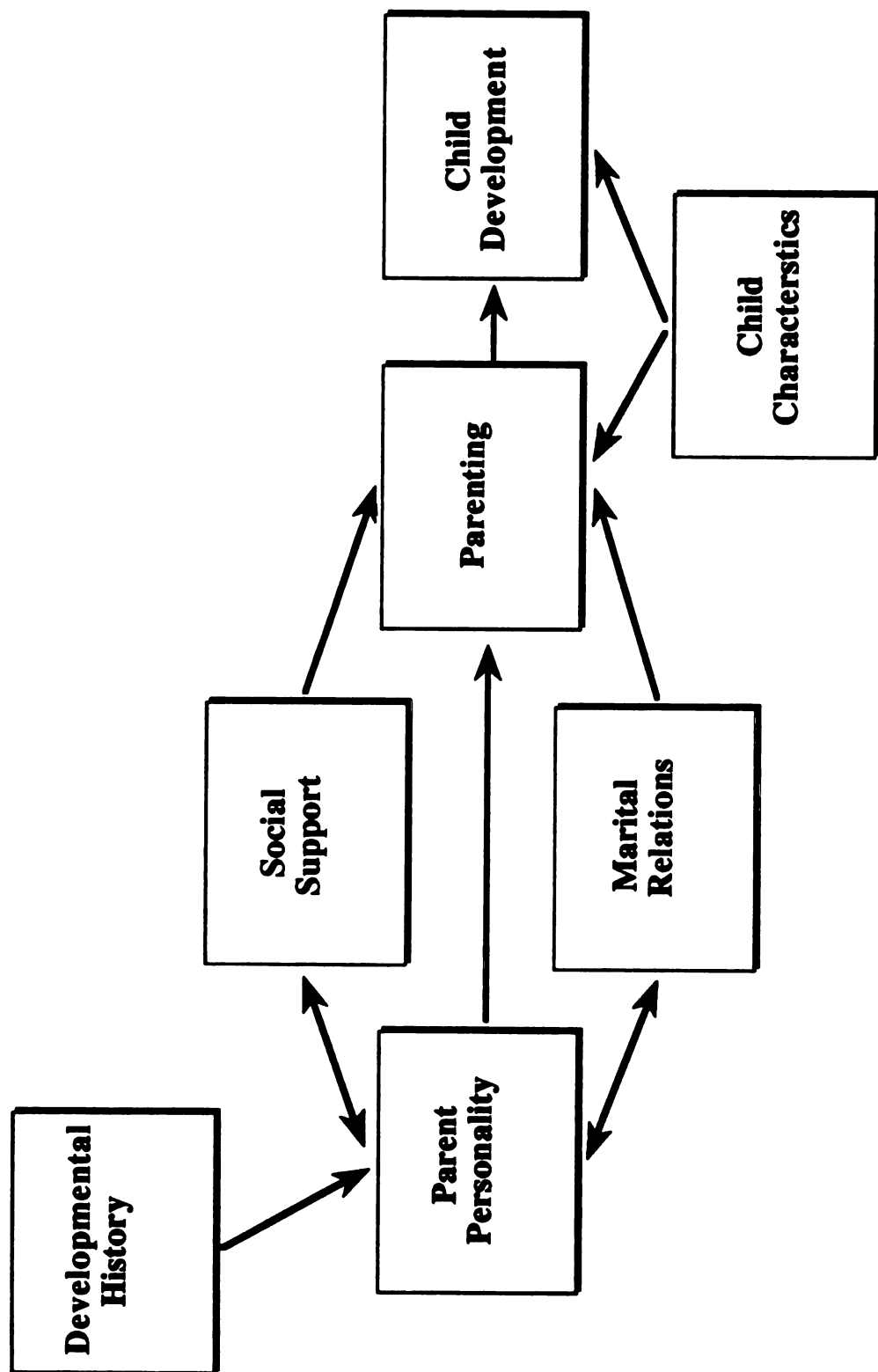


Figure 1. Belsky's (1984) conceptual model of the determinants of parenting.

determined by parenting behaviors and child characteristics, such as temperament.

This brief overview of ecological theory draws attention to potential determinants of parenting (i.e., characteristics of the parent, child, and context) and the likely patterns of interaction among these predictors. In order to empirically examine Belsky's model, a myriad of variables could be assessed and incorporated into research designs. For instance, "parent characteristics" could be operationalized by any of the following: parental age, intelligence, interpersonal sensitivity, self-esteem, psychopathology, etc. Similarly, the "social context" could be measured by the examination of the marital relationship, social network characteristics, patterns of parental employment, income level, neighborhood attributes, church/synagogue affiliation, involvement of extended family members, etc.

Of the many ecological determinants of parenting, however, a smaller subset of variables have been the focus of previous investigations. Such studies have typically utilized a univariate approach and have not examined the cumulative effects of parent, child, and contextual variables on parental behaviors or the relative effects of different factors (Webster-Stratton, 1990). As information gleaned from previous investigations can guide the construction of a multivariate measurement model for predicting parent behavior, the following sections briefly

review the relationships between parenting behaviors and retrospective attachment security, maternal depression, perceived social support, marital satisfaction, and child temperament. Each of these predictor variables was selected on the basis of their previously documented association with parental behavior and theoretical consistency with Belsky's ecological model.

Mother's Developmental History Predictor: Retrospective Attachment Security

One construct that provides a window into an individual's developmental history is retrospective attachment security. Attachment theorists have suggested that early childhood relationships influence the way in which individuals view themselves and interact with others later in life (Bowlby, 1977; 1982). Thus, a woman's childhood experiences with her parents may unconsciously shape the dynamics of her interactions with her own infant. These "ghosts in the nursery" compel mothers, to varying extents, to re-enact scenes from their own childhood in the course of child caregiving (Fraiberg, Adelson, & Shapiro, 1975). This transmission process is mediated by relationship schemata, or internal working models, that organize how relationship-relevant information is perceived, comprehended, and remembered throughout childhood and adulthood (Sroufe & Fleeson, 1986; Zeanah & Zeanah, 1989).

Assessing retrospective attachment security. One instrument used to assess parents' internal working models is the Adult Attachment Interview (AAI) designed by Mary Main and her associates (e.g., Main & Goldwyn, 1984). In the AAI, respondents are asked to describe their childhood relationships with their parents, explain how they were comforted during childhood, and are questioned about feelings of parental rejection. Respondents also reflect on the impact of these early experiences on their adult personalities and current relationships (George, Kaplan, & Main, 1985). Although designed to be administered in an interview, the AAI has been adapted to an open-ended questionnaire format that facilitates data collection by eliminating the need for transcription and the training of interviewers (Adams, 1992).

Two scoring systems have been devised for the AAI (Fremmer-Bombik, Rudolph, Veit, Schwarz, & Schwarzmeier, in preparation; Grossmann, Fremmer-Bombik, Rudolph, & Grossmann, 1988; Main & Goldwyn, 1989). Both systems broadly categorize respondents into two groups: securely and insecurely attached. Securely attached respondents readily recall and accurately describe their early childhood relationship experiences and often depict at least one parent figure as supportive. On the other hand, insecurely attached respondents often have distorted recollections of their childhood relationships (i.e., idealized or repressed memories) and frequently describe unsupportive caregivers.

Retrospective attachment security and parenting. A small number of published investigations have explicitly examined the association between retrospective attachment and child caregiving behaviors. Crowell and Feldman (1988) classified the attachment security of 64 mothers of 24- to 54-month-old children using the AAI and examined mothers' "supportive presence" (i.e., providing a secure base for exploration, being calm and enthusiastic, correctly interpreting the child's behavior) and "quality of assistance" (i.e., helping the child understand the task, providing assistance only when needed). Securely attached mothers were more supportive, helpful, and warm towards their children in a teaching task compared with insecurely attached mothers, who tended to be more confusing and controlling.

Moreover, differences in the interaction styles of mothers with secure and insecure retrospective attachments have been found to continue beyond their children's first years. In a study involving a sample of behaviorally disturbed children and their mothers, Crowell, O'Connor, Wollmers, Sprafkin, and Rao (1991) reported that mothers with secure retrospective attachments were better able to provide a supportive presence to their 5- to 11-year-old children during structured tasks than were insecurely attached mothers.

Securely attached mothers have also been shown to be more physically and emotionally involved with their infants

and children than insecurely attached mothers. Mothers with secure retrospective attachments are more adept at identifying and responding to a wider range of infant emotion (Haft & Slade, 1989), and demonstrate greater responsivity to their toddlers' emotional cues after separation (Crowell & Feldman, 1991). Similarly, Bus and van IJzendoorn (1992) asserted that securely attached mothers' are typically more involved with their young children each day, as these investigators found that securely attached mothers read to their young children more often than insecurely attached mothers.

Furthermore, researchers have examined whether retrospective attachment security is related to parents' abilities to set limits. In addition to exploring differences in parental warmth, Cohn, Cowan, Cowan, and Pearson (1992) examined whether securely and insecurely attached mothers differed in their ability to provide structure (i.e., limit setting, maturity demands, and clear communication) in a series of tasks with their preschool-aged children. Although attachment categorization was found to be unrelated to maternal warmth, analyses revealed that insecurely attached mothers provided significantly less structure for their children than did securely attached mothers. However, a statistically significant association between maternal attachment classification and maternal control abilities has not been replicated in other studies (Pratt, Cohn, Cowan, & Cowan, 1991).

Similar relationships between retrospective attachment and maternal behavior have been found with the German classification system. Grossmann, Fremmer-Bombik, Rudolph, and Grossmann (1988) reported that mothers who were categorized as securely attached using the Regensburg method (i.e., positive and non-defensive maternal attachments) tended to accept the individuality of their infants at age 12 months, showed greater sensitivity to the developmental problems and individuality of their toddlers at age 24 months, and were more willing to adjust family routines to the needs of their children. Moreover, several components of secure attachment representations (e.g., discussing attachment-relevant information, reflections on attachment experiences, recall of feelings) were positively correlated with mothers' sensitivity, cooperation, understanding, and child-centeredness during interactions with their 12- and 24-month-old children.

Mothers' Personality Predictor: Maternal Depression and Depressive Symptoms

Previous research has indicated that mothers who are clinically depressed or exhibit elevated depressive symptomatology generally display more irritability, lower rates of affective expression, and greater use of child management strategies which require less cognitive effort when interacting with their children compared to control mothers (Downey & Coyne, 1990). The relationship between

depression and non-optimal parenting has mainly been documented in investigations that have included mothers who have been clinically diagnosed with a depressive disorder after a structured psychiatric interview (i.e., major depression, intermittent depressive disorder, bipolar illness).

Several studies have characterized clinically depressed mothers as "negative" or "critical." For instance, Lovejoy (1991) reported that clinically depressed mothers were more likely to yell, ignore, tease, threaten, or give negative commands to their 3- and 4-year-olds than were nondepressed mothers in structured and unstructured interaction tasks. No significant differences were found between the two groups in terms of mothers' positive behaviors (e.g., constructive playing, talking, demonstrating physical affection). Similarly, Gordon and his associates reported that women with unipolar depression were significantly more critical of their 8- to 16-year-old children during problem-solving tasks and displayed more irritation, frustration, sarcasm, anger, and disapproval than did controls (Gordon, Burge, Hammen, Adrian, Jaenicke, & Hiroto, 1989).

Another manifestation of clinically depressed mothers' negativity is negative affect expressed during parent-child interaction. Depressed mothers exhibit higher rates of dysphoric affect (anxious/sad, downcast) and lower rates of happy affect when interacting with their children (Hops, Biglan, Sherman, Arthur, Friedman, & Osteen, 1987; Radke-

Yarrow, Nottelman, Belmont, & Welsh, 1993). In addition, depressed mothers have been found to vocalize less frequently and to respond in a slower manner when speaking to their young children in comparison to control mothers (Breznitz & Sherman, 1987).

Clinically depressed mothers appear to be less authoritative in terms of their relative deficits in communicating warmth to and exerting control over their young children. Cox, Puckering, Pound, and Mills (1987) observed depressed and nondepressed women in their homes with their 2-year-old children for several hours and analyzed maternal responsiveness and control. In comparison to the control mothers, depressed mothers were significantly more likely to ignore their children, become mentally disengaged during a joint activity, use fewer questions or explanations, use control talk, and remain unaware of their children's cues. Contrary to the investigators' initial expectations, however, depressed mothers were also more likely to be physically playful and affectionate towards their young children.

Additionally, depressed mothers experience greater difficulty than nondepressed mothers in effectively controlling their child's behavior. For instance, Goodman and Brumley (1990) reported that clinically depressed mothers are less likely to punish and discipline their young children than control mothers. Moreover, when affectively disordered mothers' control attempts are met with

resistance, they are more likely to surrender and withdraw the original demand (Kochanska, Kuczynski, Radke-Yarrow, & Welsh, 1987). Beyond avoiding confrontation with their children, clinically depressed mothers report high levels of disciplinary inconsistency relative to other mothers. Mothers with major depression have also been reported to endorse the frequent use of less effective discipline techniques, such as inducing guilt and anxiety, on self-report questionnaires. In contrast to this finding, however, mothers with current minor depression tend to discipline their children in a similar manner as nondepressed mothers, and instead differ from control mothers in terms of experiencing difficulty in facilitating separation-individuation (Susman, Trickett, Iannotti, Hollenbeck, & Zahn-Waxler, 1985).

Although numerous investigators have found associations between the severity of depressive symptoms and parenting behavior (e.g., Downey & Coyne, 1990; Kochanska et al., 1987; Susman et al., 1985), relatively few studies have explored the relationship between elevated depressive symptomatology (as opposed to clinical depression) and child caregiving. Nelson, Donenberg, and Weisz (1993) examined both self-reported maternal depressive symptomatology and parent-child interaction styles in a sample of 61 mothers and their clinic-referred children (ages 7 to 16 years). Mothers with elevated depression scale scores on the Brief Symptom Inventory were more likely to ignore, protest, or

verbally attack their children during problem-solving tasks. In addition, elevated depressive symptomatology was negatively related to mothers' communication of nurturance and trust toward their children at statistically significant levels. Other studies have similarly reported that mothers' self-reported depressive symptoms are related to parenting behavior in nonclinical samples. Stoneman, Brody, and Burke (1989) found that maternal depression was associated with the endorsement of authoritarian and anxiety-induction control strategies rather than "rational discipline strategies" for mothers and their 4- to 9-year-old girls. Likewise, self-reported depressive symptomatology was a highly significant predictor of observed aversive maternal behavior (e.g., shouting, disapproving) in a community sample (Panaccione & Wahler, 1986).

Exosystem Predictor I: Perceived Social Support

Another salient determinant of parenting behavior is social support. Social support has both a direct effect on child caregiving processes and an indirect effect by reducing the impact of stressors on maternal behavior (e.g., Simons, Lorenz, Conger, & Wu, 1992).

A recent meta-analysis of studies examining the relationship between perceived social support and maternal behavior revealed that perceptions of emotional and material support and maternal sensitivity are significantly correlated (Andreson & Telleen, 1992). For instance,

perceived support from intimate relationships (i.e., spouse or partner) is predictive of maternal affective responsiveness and tone during play interactions with infants (Crnic, Greenberg, Ragozin, Robinson, & Basham, 1983). Similarly, mothers who report receiving less material support from their families (i.e., bear greater responsibilities for household tasks, such as child care, meal preparation, etc.) have been found to be less likely to respond to their intellectually or physically handicapped toddlers in responsive or engaging ways during free play episodes (Dunst & Trivette, 1986).

In addition to distinguishing between types of social support (e.g., emotional, material, informational), investigators have examined the manner in which various sources of social support affect maternal caregiving behaviors. For example, Jennings, Stagg, and Connors (1991) differentiated between mothers' "personal" and "maternal" networks. Whereas personal support networks referred to all important people in their participants' lives, maternal support networks included only those who provided mothers assistance with their childrearing responsibilities. While characteristics of maternal networks affected the amount of warmth that mothers express towards their 4-year-old children, mothers' control strategies were related to aspects of both maternal and personal support networks.

Other investigators have reported that the relationship between social support and maternal caregiving varies as a

function of demographic variables, such as marital status or income. For example, Colletta (1979) found that the total amount of social support that low- and moderate-income mothers received was inversely related to levels of maternal restrictiveness and punitiveness; however, the relationship between social support and maternal responsiveness to child attention demands was significant only for moderate-income mothers. Similarly, Weinraub and Wolfe (1983) reported that total parenting support predicted more optimal mother-child interaction for both married and single mothers, yet a different pattern of relations emerged for these two groups. Social support correlated significantly with single mothers' use of effective child control tactics and married mothers' expression of nurturance towards their preschoolers.

Previous research has also conceptualized social support as a buffer that insulates mothers against the influence of other contextual variables which may threaten optimal parenting. Thus, the effects of macrosystem or exosystem characteristics (e.g., economic distress) may be mitigated by the support received from friends or family. Along this line, Crockenberg (1987) explored the pattern of relationships between adolescent mothers' developmental histories, perceptions of social support, and interactive behavior with their infants. Her findings indicated that social support was not significantly correlated with maternal anger and punitive control, but support instead moderated the relationship between mothers' perceptions of

their childhood relationship with their parents and their present interactions with their infants. Thus, when mothers experienced both rejection during childhood and low current support from their partners, they were more likely to demonstrate a pattern of angry and punitive parenting.

Finally, social support has been viewed as a variable that has only indirect effects on mothers' behavior with their children. Simons, Lorenz, Wu, and Conger (1993, p. 370) asserted that

...it is improbable that social network support has a direct effect on parenting. Friends and relatives, while they may occasionally help with child care, are not available in the household to provide assistance with the everyday tasks and responsibilities of parenting.

Investigators who assume such a relationship have tested models that explicitly control for the emotional well-being of the mother in the process of exploring the links between social network support and quality of parenting. In a series of recent publications, Simons and his colleagues (Simons, Beaman, Conger, & Chao, 1993; Simons, Lorenz, Wu, & Conger, 1993) calculated modest bivariate correlations between mothers' self-reported social support and a composite measure of mother-child interaction that combined parent, child, and observer ratings. Rather, the relationship between these two constructs appeared to be mediated by maternal psychological distress. Inadequate

social support was associated with higher rates of maternal depression and hostility, which in turn was related to mothers' use of ineffectual parenting practices (e.g., harsh discipline, poor monitoring, less warmth and support, less positive reinforcement) with their 7th through 9th grade children.

Exosystem Predictor II: Marital Satisfaction

Most empirical data on the relationship between marital functioning and parenting behavior originate from studies that examine the effects of divorce. For example, Hetherington and her associates noted that mothers who were recently divorced were less affectionate towards and had poorer communication with their young children (aged 6-7 years) than mothers from intact marriages. Moreover, recently divorced mothers tended to inconsistently discipline their children and frequently engaged in comparatively more coercive behaviors (e.g., issuing negative commands and sanctions, opposing child requests) and fewer positive behaviors (e.g., socially rewarding the child, making affiliative overtures) than controls (Hetherington, Cox, & Cox, 1982). Such disparities between the interactive behavior of divorced and married mothers have been reported to continue to exist in an 11-year follow-up investigation (Hetherington, 1993).

Relatively fewer studies, however, have evaluated the relationship between marital satisfaction and parents'

behavior in intact families. Moreover, this literature is difficult to interpret due to inconsistent findings. Statistically significant, positive relationships have been frequently reported in studies examining the transition to parenthood, in which marital satisfaction has been associated with parental sensitivity, competence, and adjustment to the parenting role (e.g., Pedersen, 1982; Shereshefsky & Yarrow, 1973).

Similarly, positive associations have been documented between marital quality and parents' behavior towards infants and young children. Cox, Owen, Lewis, and Henderson (1989) reported that mothers who described their relationship with their husbands as close and open during interviews also displayed sensitivity and warmth towards their 3-month-old infants during play interactions. Such mothers appeared more developmentally attuned, creative, involved, and animated than mothers who described unsupportive or distant spousal relationships. Furthermore, Belsky (1979) documented a significant positive correlation between spousal harmony (as assessed in a videotaped interaction task) and mothers' cognitive stimulation of their 15-month-old infants observed in the course of natural interactions at home. Similar findings have been reported in investigations that measure marital satisfaction using self-report instruments. Jouriles, Pfiffner, and O'Leary (1988) reported that mothers' self-reported level of marital discord was positively correlated with their use of

disapproval statements directed towards their young sons (aged 18-30 months) and their inattentiveness regarding the deviant behavior of their young daughters.

Another series of investigations regarding the relationship between marital satisfaction and maternal behavior has been conducted by Rex Forehand and his colleagues. This program of research has documented associations between the two constructs in the anticipated direction, but has failed to find statistically significant results. For instance, Rickard, Forehand, Atkeson, and Lopez (1982) reported that mothers who endorsed high levels of marital satisfaction on self-report questionnaires tended to give greater amounts of positive attention to their young, clinic-referred children during play interactions than did mothers who endorsed moderate or low amounts of marital satisfaction. Similarly, Forehand has found that maritally distressed mothers tend to utilize fewer social rewards when interacting with their clinic-referred young children at home than did maritally nondistressed mothers (Brody & Forehand, 1985; Forehand & Brody, 1985). However, neither of these trends reached statistical significance.

A third group of studies has documented statistically significant, negative correlations between marital satisfaction and maternal sensitivity. Such investigators have hypothesized that mothers who are involved in unsatisfying relationships with their husbands tend to become more involved with their young children to compensate for a

less than satisfactory marriage. For example, Brody, Pillegrini, and Sigel (1986) reported that maritally distressed mothers were generally more engaged with their school-aged children during teaching interactions than were mothers who reported relatively higher levels of marital satisfaction on self-report questionnaires. Similarly, Goldberg and Easterbrooks (1984) found that mothers with higher marital adjustment scores provided less emotional support and a lower quality of assistance to their 20-month old toddlers during a puzzle problem-solving task.

Child's Personality Predictor: Perceived Child Temperament

Beyond examining the roles of parent characteristics and contextual stresses and supports as determinants of parenting, Belsky's model also underscores the importance of child characteristics. Child temperament, especially the "difficult temperament" profile, has received extensive attention as a child attribute that influences parent behavior. As explained by Thomas and Chess (1977), temperament can be broadly classified as ranging from easy to difficult. Easy children are characterized by regularity, the tendency to approach novel stimuli, high adaptability, and a generally positive, mild mood. On the other hand, children who are temperamentally difficult tend to be irregular in terms of their biological functions, frequently withdraw in response to new stimuli, are slow to adapt to change, and often express intense, negative mood.

Thomas and Chess emphasized that a child's temperament can affect parents' confidence, management styles, and level of involvement. For instance, temperamentally easy children reinforce parents in their interactions and promote greater parental engagement and prosocial responses. On the other hand, due to the challenges and frustrations associated with raising a temperamentally difficult child, parents are more likely to "pressure, appease, punish, or vacillate" in their interactions with such children (Thomas & Chess, 1977, p. 71).

Numerous studies have documented relationships between temperamental ease and parental behavior towards infants, toddlers, and young children. In a small sample of urban, African American mothers and their one-year-old children, Milliones (1978) found a significant, negative correlation between mothers' perceptions of their child's temperamental difficulty and family specialists' ratings of maternal responsiveness and involvement. Similarly, Maccoby, Snow, and Jacklin (1984) found that maternal assessments of child temperament at age 12-months were related to mothers' involvement in teaching interactions with their children at age 18-months. More specifically, mothers who characterized their 12-month-old boys as difficult to distract from unwanted activity, prone to display intense negative responses, fussy, and difficult to soothe were more likely to exert less effort (e.g., provide feedback, encouragement, demonstrations, etc.) in teaching tasks when their boys were

18-months-old. However, these investigators did not find significant relationships between: (a) maternal perceptions of child temperament assessed at age 12-months and contemporaneous maternal behavior, and (b) maternal perceptions of girls' temperament and contemporaneous maternal behavior or at age 18-months. Maccoby and her colleagues framed the relationship between temperamental difficulty and maternal behavior as a process of mutual influence, as child difficulty at 12 months was associated with diminished teaching activity at 18 months, and, conversely, mothers who exercised considerable teaching effort at age 12 months tended to have less difficult 18-month-old children.

Other longitudinal studies have linked perceptions of child temperament to parental control tactics during toddlerhood. Lee and Bates (1985) related mothers' ratings of child temperament at age 6-months to aspects of observed mother-child interaction at age 2-years and found that mothers of temperamentally easy children were less likely to experience discipline problems with their toddlers. More specifically, these mothers were less intrusive in their control attempts, provided their children with choices between several acceptable behaviors, and were less likely to engage in negative reinforcement cycles (i.e., giving in after initial resistance to child demands) than mothers of temperamentally difficult children.

Temperamental ease has been associated with maternal warmth as well as with maternal control. Mothers of temperamentally difficult preschoolers have been reported to use ineffective control strategies (e.g., controlling through guilt and anxiety) with their children, and also tended to endorse less concern and warmth towards their children on a questionnaire measure of parental behavior (Simonds & Simonds, 1981). In addition, such mothers have been independently observed as relatively more negative in affect and more nonaccepting or submissive with their children in play room interactions (Webster-Stratton & Eyberg, 1982).

Although most published reports have documented significant relationships between child temperament and maternal behavior, several investigations have failed to find such associations. Nelson and Simmerer (1984) reported no significant correlation between maternal perceptions of child temperament and self-reported parental involvement, limit setting, responsiveness, or intimacy. Similarly, Koniak-Griffin and Verzemnieks (1993) found no significant differences in maternal behavior (i.e., sensitivity to infant cues, response to distress, socio-emotional growth fostering, cognitive growth fostering) directed towards young children who were rated by their mothers as either temperamentally easy or difficult.

Contribution of the Present Study

Using a community-based sample of 73 mothers and their 5- to 7-year old children, the present investigation empirically explored the ways in which selected characteristics of parents, children, and the family context related to mothers' parenting behavior. A measurement model operationalizing Belsky's (1984) conceptual framework was developed and tested in order to verify the relationships that he has suggested (see Figure 2). Variables were selected on the basis of their consistency with the theoretical model and a previously documented association with parental behavior. These predictors included mothers' retrospective attachment security, depressive symptoms, marital satisfaction, perceived social support, and perceptions of child temperamental ease. Rather than allowing for reciprocal influences among the variables, a recursive model was tested in order to facilitate estimation and interpretation of effects (Arditti & Keith, 1993).

In contrast with previous studies that have singly examined the influence of psychosocial variables on parental behavior, the multivariate analyses of the present study allowed for the investigation of the following predictions:

1. Mothers' authoritative behavior during an observed play session will be significantly predicted by maternal perceptions of child temperament, social support, marital satisfaction, and depressive symptomatology.

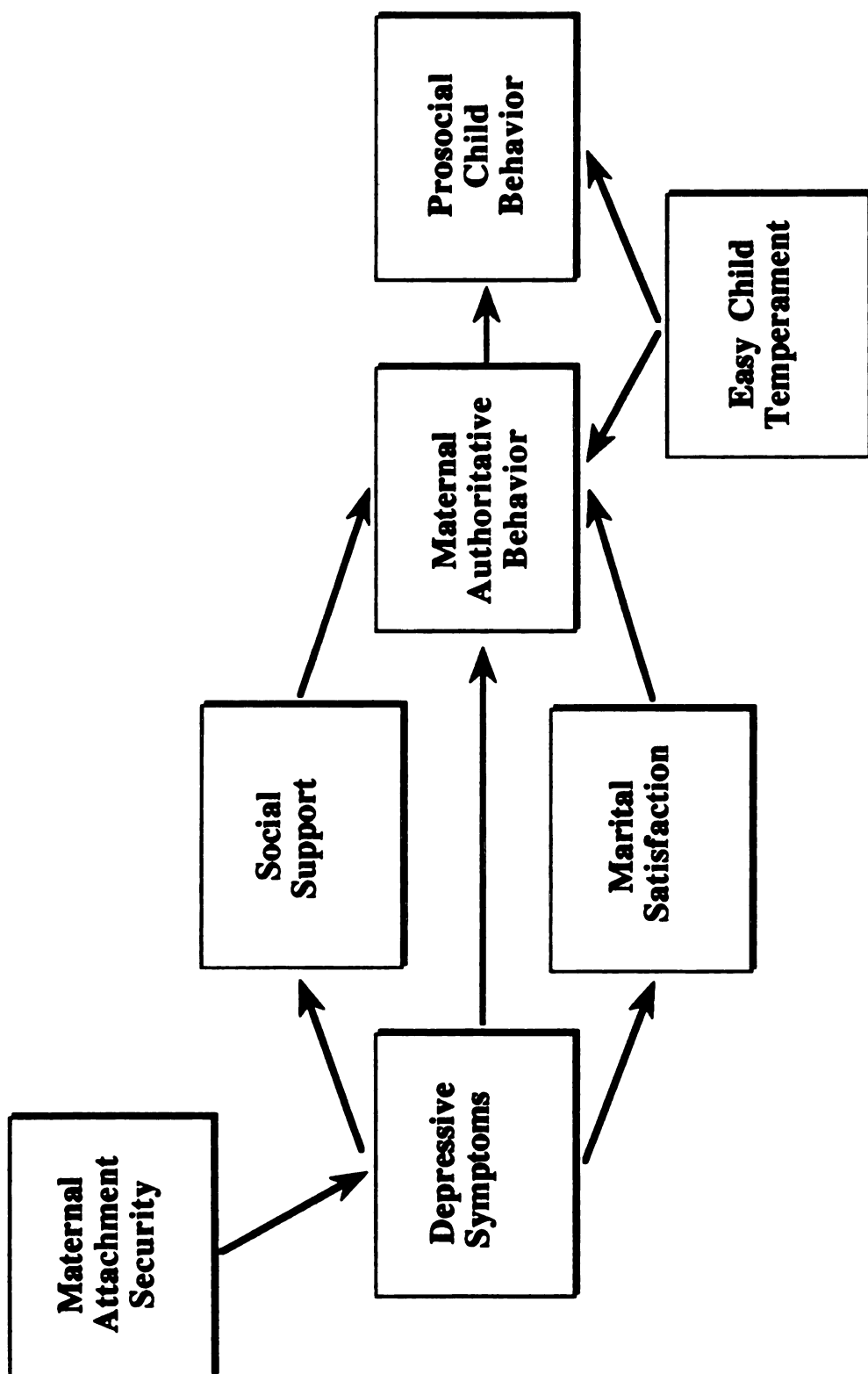


Figure 2. Measurement model predicting maternal authoritative behavior and child behavior.

2. Children's prosocial behavior during an observed play session will be significantly predicted by mothers' authoritative behavior and reports of their children's temperamental ease.

3. Mothers' depressive symptoms will significantly predict their perceptions of marital satisfaction and the social support received from friends and family.

4. The relationship between mothers' retrospective attachment security and authoritative behavior will be mediated by their level of depressive symptomatology.

5. The measurement model based on the ecological framework will demonstrate a good overall fit to the data.

In addition to specifying paths of influence among the multiple predictors of maternal authoritativeness, this inquiry extends previous research on parenting processes, as no published study has yet examined the combined effects of retrospective adult attachment security and other contextual variables in the prediction of mother-child interaction.

Moreover, because the examination of the predictors of parenting also can provide insight into strategies for enhancing family functioning, results may suggest the relative utility of contextual variables as "levers of change" for interventions. Thus, these findings may assist in the development of more comprehensive parent education curricula.

METHOD

Participants

Seventy-three mothers and their 5- to 7-year old children comprised the sample for this study (73 mothers, 73 children). Forty-five of the children were girls, 28 were boys (mean age = 75 months, range = 62 to 92 months). Participants were recruited through an advertisement distributed to children enrolled in the kindergarten and first grade classes of several school districts located in the greater Lansing area (see Appendix A). The advertisement briefly explained the goals of the study and requested that interested mothers who were presently married to the father of the target child contact the investigator. Participants were mailed a packet of questionnaires, a consent form (see Appendix B), and a postage-paid return envelope. Of the 131 mothers who received questionnaire packets, 73 completed all the necessary information, yielding a response rate of 56%. After returning the questionnaires, participants were contacted by a research assistant who scheduled a time in which mothers would be videotaped interacting with their children at home. As compensation for participation, mothers were offered either \$15.00 or admission to a single-session parent education workshop conducted by the investigator. (Ten mothers

attended the parent education workshop while the remainder elected to receive payment for their participation.)

Mothers ranged in age from 25 to 48 years (mean = 35.3 years) and in education from partial high school to graduate school (mode = 16 years). The socioeconomic status of the families was generally middle class, with a mean Nam-Powers socioeconomic index score of 74 (i.e., salesperson, technician, registered nurse, etc.). (Refer to Miller, 1991 for a description of the Nam-Powers Socioeconomic Index scale.) Ninety-five percent of mothers were Caucasian. The number of children in each family ranged from 2 to 8 (mean = 2.7). Additional information for each of the demographic variables is presented in Appendix C.

Procedure

Mothers and their children were videotaped while playing in their homes. A standard set of toys was supplied by the investigator which included foam balls, crayons and paper, play dough, puppets, figurines, Mr. Potato Head, Etch-a-Sketch, and a Lego set. Four undergraduate research assistants provided mothers with the following instructions: "I would like to have the chance to observe and videotape you and (child's name) playing and interacting with each other. Spend the next 15 minutes as you might typically do when your work is done and you have some uninterrupted free time to spend with your child. I will give you some

additional instructions after a while. Do you have any questions or concerns?"

After 15 minutes of videotaping unstructured play, the research assistant interrupted and provided the following instructions for the structured situation: "Now, I would like you to have you direct (child's name) to do three things: First, have (child's name) put all the toys away. Then, have him/her take off his shoes and socks and put them back on again. Afterwards, have (child's name) assemble this puzzle." An 18-piece interlocking puzzle was supplied by the examiner for the third task. The structured situation was terminated after the child completed the third task or 15 minutes had elapsed.

Measures

Demographic information. Mothers provided information regarding their age, marital status, nature of employment, and racial and ethnic background for themselves and for their spouses. Mothers also indicated the age, sex, and birth order of the target child. A copy of the demographics questionnaire can be found in Appendix D.

Retrospective attachment classification. Retrospective maternal attachment security was assessed through the evaluation of mothers' written responses to the open-ended questions contained in the Adult Attachment Interview (George, Kaplan, & Main, 1985). The Adult Attachment Questionnaire (AAQ: Adams, 1992) asks respondents to

describe their childhood relationships with their parents and to provide specific examples. In addition, respondents describe how they were comforted during childhood, and are questioned about separations from their parents, feelings of rejection, and threats of abandonment. The AAQ also asks respondents to comment on the impact of these early experiences on their adult personality and on current relationships with their parents and their children. A copy of the AAQ is provided in Appendix E.

The Adult Attachment Questionnaire was scored using the Regensburg Method of Analyzing the Adult Attachment Interview (Fremmer-Bombik, Rudolph, Veit, Schwarz, & Schwarzmeier, in preparation). Four main dimensions were used to assess the respondent's internal working model of attachment: (a) portrayal of each parent as supportive, (b) focus on the topic of attachment and the richness of attachment information, (c) reflections on early attachment experiences, and (d) defensiveness against the interview and present emotional relationship with parents (Grossmann, et al., 1988). A secure versus insecure retrospective attachment was computed on the basis of selected combinations of these four dimensions. Forty-one mothers (a) clearly described in retrospect a supportive relationship with one or both of their parents, (b) included numerous stories and evaluations of their childhood relationships, and (c) easily recalled their early memories. They were labeled securely attached. In contrast, 32

mothers (a) clearly described both of their parents as insensitive caregivers, (b) tended to defensively distort their childhood memories (i.e., narratives contained numerous evasive statements, blocked memories, and/or idealizations of parents), and (c) avoided reflecting upon their early experiences (i.e., relatively few evaluations, explanations, and detailed stories about their childhood relationships). They were labeled insecurely attached.

Retrospective attachment security as classified by the Regensburg Method has been associated with mothers' parenting behaviors and infant attachment categorization. Grossmann et al. (1988) reported a statistically significant correspondence between the two types of maternal attachment representations and the two patterns of infant attachment (i.e., secure retrospective maternal attachment corresponded with secure infant attachment while insecure retrospective maternal attachment corresponded with either avoidant or ambivalent infant attachment). In addition, the authors stated that mothers who readily recalled attachment-relevant information from their childhood were more likely to be sensitive and responsive towards their infants than were mothers who were unable to recollect supportive childhood memories.

For this study each AAQ protocol was scored by two graduate students in clinical psychology who were blind to all other data. In order to establish interrater reliability, 12 protocols (15%) were sampled, scored, and

rescored by both coders until the minimum level of 90% coder agreement across major attachment classifications was achieved (i.e., secure versus insecure). Intercoder agreement was computed using the following ratio: Total number of classifications on which coders agree / Sum of agreements and disagreements. Additional protocols were sampled throughout the investigation to ensure that a minimum standard of 90% agreement was retained.

Depressive symptomatology. Depressive symptomatology was assessed with the 6-item Depression scale of the Brief Symptom Inventory (BSI: Derogatis, 1993). The BSI instrument is a 53-item self-report questionnaire that assesses several psychological symptom patterns for both psychiatric and community nonpatient respondents. For the Depression scale, respondents are asked how much they have been distressed by symptoms such as "thoughts of ending your life," "feeling lonely," and "feeling hopeless about the future" during the past 7 days. Mothers responded to each item on a five-point continuum ranging from not at all (1) to extremely (5).

Derogatis (1993) observed an internal consistency coefficient of .85 for the Depression scale using a sample of 719 psychiatric outpatients. Cronbach's alpha for this scale for the present sample was .83. BSI scale scores have displayed convergent validity with the SCL-90-R and the MMPI, and the instrument has been used to assess psychological distress and symptomatology in more than 200

published reports (Derogatis, 1993). A copy of the BSI is provided in Appendix F. Items comprising the depression scale bear an asterisk.

Perceived social support. The Perceived Social Support Scale (PSS: Procidano & Heller, 1983) measures the extent to which a respondent perceives that her needs for support, information, and feedback are fulfilled by friends and family. The first 20 items of the questionnaire are completed with respect to family, and the second 20 items are answered with respect to support provided by friends. Sample items include: "My friends enjoy hearing about what I think," and "My family gives me the moral support I need." Items are answered Yes (1), No (0), or Don't know (0); possible scores range from 0 to a maximum of 40.

Whereas Procidano and Heller (1983) observed an internal reliability coefficient of .89 in their standardizing sample, Cronbach's alpha for the social support scale in the present study was .92. PSS scores have been reported to be significantly negatively correlated with psychological symptomatology (including depression). In addition, subjects' perceptions of their social support networks were found to be predictive of the amount of disclosing behavior exhibited with friends (Procidano & Heller, 1983). A copy of the PSS is provided in Appendix G.

Marital satisfaction. The Dyadic Adjustment Scale (DAS: Spanier, 1976) is a brief, 32-item scale that provides reliable and valid measures of Dyadic Consensus, Dyadic Satisfaction, Dyadic Cohesion, Affectional Expression, and a global index of Dyadic Adjustment. Sample items include: "How often do you and your mate work together on a project?" and "Do you kiss your mate?" Spanier (1976) established a Cronbach's alpha for the Dyadic Adjustment index of .96. Cronbach's alpha in the present investigation was .95. DAS scores have been found to correlate highly with other self-report marital satisfaction instruments, and have successfully discriminated between divorced and married respondents. The DAS can be found in Appendix H.

Child temperamental ease. Maternal perceptions of child temperament were assessed by an abbreviated version of the Parent Temperament Questionnaire (PTQ: Thomas & Chess, 1977). Using a 7-point scale, mothers rated the frequency of 40 behavioral items that assess five temperament dispositions (i.e., mood, intensity, rhythmicity, approach/withdrawal, and adaptability). A rating of 1 indicates that the behavior is "hardly ever" observed, while a rating of 7 suggests that the child exhibits the behavioral characteristic "almost always." A global temperament score, derived from the sum of these dimensions, provided a continuous index of the range of temperament, and varied from extremely difficult (low scores) to easy (high scores).

Internal consistency reliabilities (alpha coefficients) have been reported to range from .56 to .72 for the individual temperament scales (Sheeber & Johnson, 1992). Cronbach's coefficient alpha for the global temperament score in the present study was .76. Dimensions of temperament as assessed by the PTQ have been related to children's behavioral problems, behavioral observations of parent-child interaction, maternal distress, and quality of spousal relationships (Earls, 1981; Gordon, 1983). The PTQ can be found in Appendix I.

Observed parent and child behavior. Aspects of maternal authoritativeness and prosocial child behavior during the videotaped interaction tasks were scored with the Parent-Child Interaction Play Assessment system (P-CIPA: Smith, 1991). The P-CIPA consists of 19 scales scored along a five-point continuum, representing a low-to-high progression for the particular behavior. A copy of the P-CIPA can be found in Appendix J.

An index of maternal authoritativeness was computed by aggregating the following 10 P-CIPA scale scores that address parent behavior: positive maternal affect, amount of interfering, amount of praise during unstructured tasks, amount of praise during structured tasks, maternal attention, developmental sensitivity, maternal responsiveness to child's initiatives, mother-child involvement, clarity of commands, and mother's follow-

through with commands. Cronbach's alpha for the index in this investigation was computed to be .74.

In addition, an overall index of prosocial child behavior was computed by aggregating the following seven child-focused P-CIPA scale scores: child social responsivity, aggressiveness during unstructured tasks, aggressiveness during structured tasks, child responsiveness to mother's interaction, child responsiveness to questions, level of compliance, and level of willfulness. Cronbach's alpha for the prosocial child behavior index in the present study was .72.

Each videotaped interaction was coded by two advanced undergraduate students in psychology, both of whom were blind to all other information about the participants. Inter-rater reliability was assessed by having both coders initially score 12 mother-child play interactions. Pearson correlations were .79 for maternal authoritativeness and .81 for prosocial child behavior. These coefficients are slightly lower than those established by Smith (1991), who reported an average Pearson product-moment correlation of .83 between raters across all P-CIPA scales.

RESULTS

As recommended by Tabachnick and Fidell (1989), a square root transformation was applied to the following variables because of moderate skewness (initial absolute skewness values ranged from 0.3 to 1.9): depressive symptoms, perceived social support, marital satisfaction, easy child temperament, maternal authoritativeness, and prosocial child behavior.

Correlational Analyses

Correlations with demographic variables. No statistically significant correlations emerged between maternal age, maternal occupation, child sex, and child birth order and the psychosocial variables (i.e., retrospective attachment security, depressive symptoms, perceived social support, marital satisfaction, easy child temperament, maternal authoritativeness, and prosocial child behavior). However, level of maternal education was significantly associated with retrospective attachment security ($r = .28, p < .05$); highly educated mothers were more likely to have a positive representation of their childhood relationship with their parents than were less highly educated mothers. In addition, the occupation of participants' husbands was associated with retrospective attachment security ($r = .30, p < .05$), perceived amount of

social support ($r = .32, p < .01$), marital satisfaction ($r = .25, p < .05$), and maternal authoritativeness during the videotaped parent-child interaction sequence ($r = .32, p < .01$), thus underscoring the influence of family socioeconomic status on mothers' personal and interpersonal functioning. The relatively small number of statistically significant correlations between demographic and psychosocial variables is not surprising given the lack of variability of the demographic measures in the present sample.

Relationships among the predictors of parenting behavior. Intercorrelations among the psychosocial variables are presented in Table 1. High negative correlations were found between mothers' perceptions of their present social relationships (i.e., social support from friends and family, marital satisfaction) and self-reported feelings of depression. Women endorsing a greater number of depressive symptoms were less satisfied with their marriages, and felt that they did not receive the support that they need from friends and family.

Few statistically significant associations were found between retrospective attachment security and mothers' perceptions of their present interpersonal and personal functioning. While retrospective attachment was predicted to be associated with depressive symptomatology in the conceptual model, there was no empirical correlation. Instead, a statistically significant correlation emerged

Table 1

Correlations Among Study Variables

Variable	1	2	3	4	5	6
1. Retrospective attachment security	--					
2. Depressive symptoms	-.07	--				
3. Social support	.37**	-.51**	--			
4. Marital satisfaction	-.07	-.52**	.42**	--		
5. Easy child temperament	.13	-.29*	.17	.16	--	
6. Maternal authoritativeness	.27*	-.17	.42**	.24*	.23	--
7. Prosocial child behavior	.12	-.12	.20	.00	.19	.33**

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

between retrospective attachment and perceived social support ($r = .37, p < .01$). Similarly, although no association between mothers' perceptions of child temperament and depressive symptoms was initially hypothesized, a significant, negative correlation was found.

Relationships between contextual psychosocial variables and outcome measures. Correlational analyses revealed that maternal authoritative behavior was related to retrospective attachment security, perceived social support, and marital satisfaction at statistically significant levels. Although depressive symptomatology and easy child temperament were associated with maternal authoritativeness in the predicted directions, these findings did not achieve significance. In addition, prosocial child behavior during the parent-child interaction task was only significantly correlated with maternal authoritativeness ($r = .33, p < .01$).

Path Analysis

A path analysis was conducted in order to empirically examine the accuracy of the measurement model derived from Belsky's conceptual model of parenting (see Figure 2). This path diagram is presented Figure 3. Numbers shown are standardized regression coefficients (β 's), darkened lines represent pathways that are statistically significant at the .01 level, and dashed lines indicate hypothesized paths that did not reach statistical significance ($p > .05$).

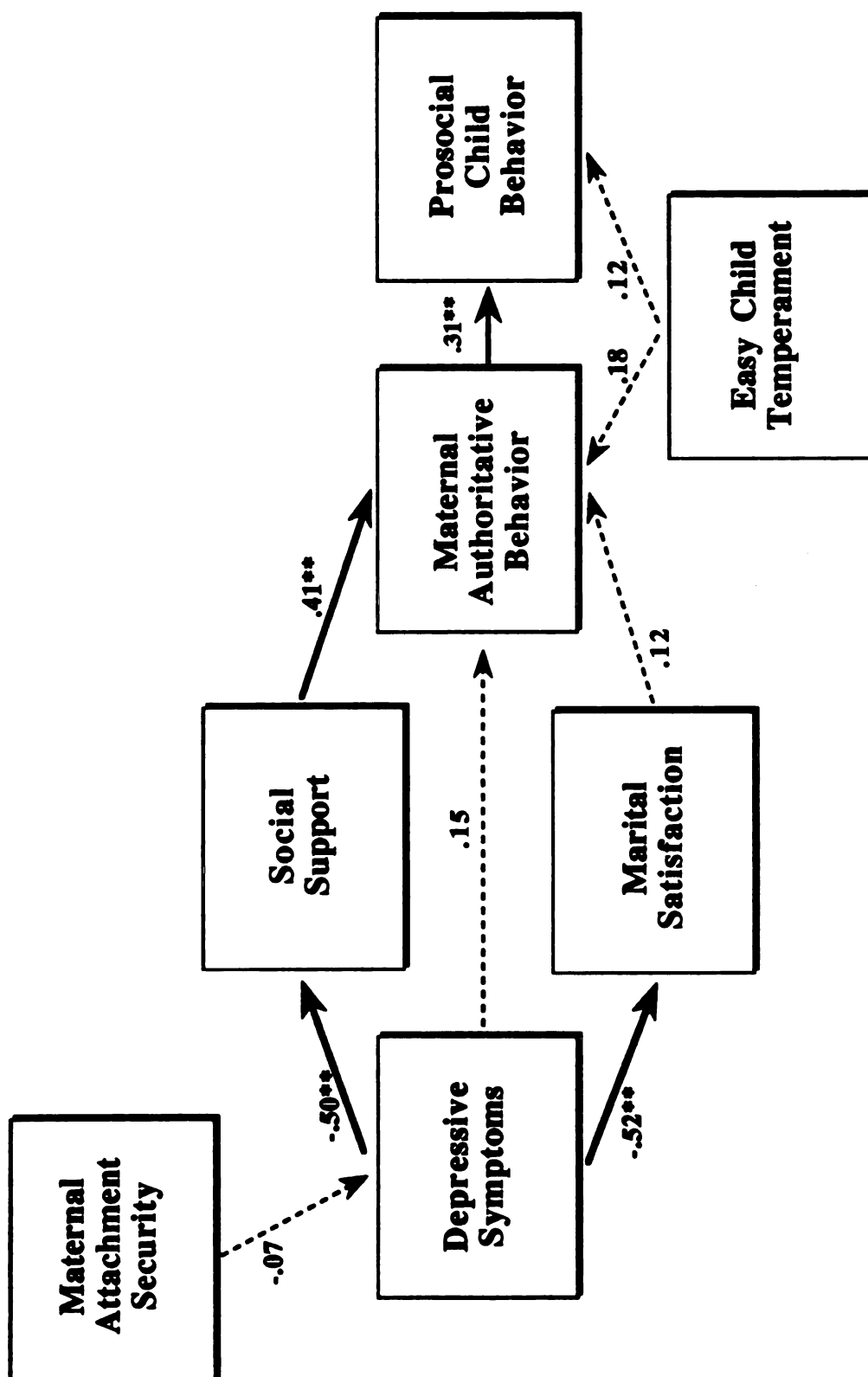


Figure 3. Path model predicting maternal authoritative behavior and child behavior.

Note. Dashed lines represent pathways that did not reach statistical significance. $^{**} p < .01$.

Although depressive symptoms, social support, marital satisfaction, and child temperament were each expected to have a significant, direct effect on maternal authoritativeness, mothers' perceptions of social support was the only variable with a statistically significant influence (Adjusted R square = .17, F = 4.68, p < .01 for the regression equation predicting maternal authoritativeness). Thus, mothers who reported that they received higher levels of support from their friends and family were more likely to effectively control and express warmth towards their young children. In addition, maternal authoritativeness was the only variable that directly influenced child behavior during the videotaped play encounter (Adjusted R square = .10, F = 5.00, p < .01 for the regression equation predicting prosocial child behavior).

Consistent with Belsky's model, depressive symptomatology predicted two exosystem variables at statistically significant levels: depressive symptoms negatively affected perceptions of social support and marital satisfaction. Other predictions advanced in the measurement model, however, were not empirically confirmed. Retrospective maternal attachment security was unrelated to maternal reports of depressive symptomatology. Similarly, perceived child temperamental ease was not predictive of either maternal authoritativeness or prosocial child behavior at statistically significant levels.

In order to assess the overall goodness of fit of the overidentified path model delineated in Figure 3, the generalized squared multiple correlation of the saturated model was compared with the generalized squared multiple correlation of the overidentified model. This ratio, when evaluated in light of the number of subjects in the sample and the number of path coefficients hypothesized to be equal to zero, was then tested for significance as a chi-square statistic (Pedhazur, 1982). A nonsignificant chi-square implies that the hypothesized model is not rejected and therefore fits the data. For the present model, $\chi^2(12, N = 73) = 10.98$, $p > .50$, indicating a good fit to the data.

Power analyses were conducted to verify the adequacy of the sample size, the magnitude of effect sizes, and the probability of Type II error. A moderate sample effect size was calculated ($ES = .30$) for the multiple regression analysis predicting maternal authoritativeness (Cohen, 1992). Power was .95, indicating a sufficient number of subjects for the analysis (The conventional power level proposed by Cohen & Cohen, 1983 for general use is .80). In addition, a medium sample effect size was calculated ($ES = .15$) for the multiple regression analysis predicting prosocial child behavior (Cohen, 1992). Power was .80, indicating a sufficient number of subjects for this analysis as well (Cohen & Cohen, 1983).

Structural Equation Model

Although Belsky's model provided a satisfactory fit to the data, path analysis may similarly support other plausible models. The exploration of alternatives is additionally warranted in this instance as: (a) the variance explained in the model was .627, suggesting that better models may exist, and (b) several pathways of the conceptual model were not empirically confirmed.

One approach that can be used to complement a priori hypothesis testing procedures is theory trimming. In theory trimming, a saturated (or fully recursive) model is computed and all statistically insignificant paths are then deleted (Pedhazur, 1982). The post-hoc structural equation diagram presented in Figure 4 was calculated by estimating all paths in the causal order advanced by Belsky. Paths were deleted from the diagram if the p -value was less than .05.

In order to identify the relative importance of the psychosocial variables in explaining observed maternal behavior, a standard multiple regression was performed with maternal authoritativeness as the criterion variable and retrospective attachment security, perceived social support, marital satisfaction, depressive symptomatology, and ease of child temperament as predictor variables. Similar to the a priori path model, maternal perceptions of social support was the only statistically significant predictor of mothers' child caregiving behaviors ($\beta = .34, p < .01$). Thus, although maternal authoritativeness was significantly

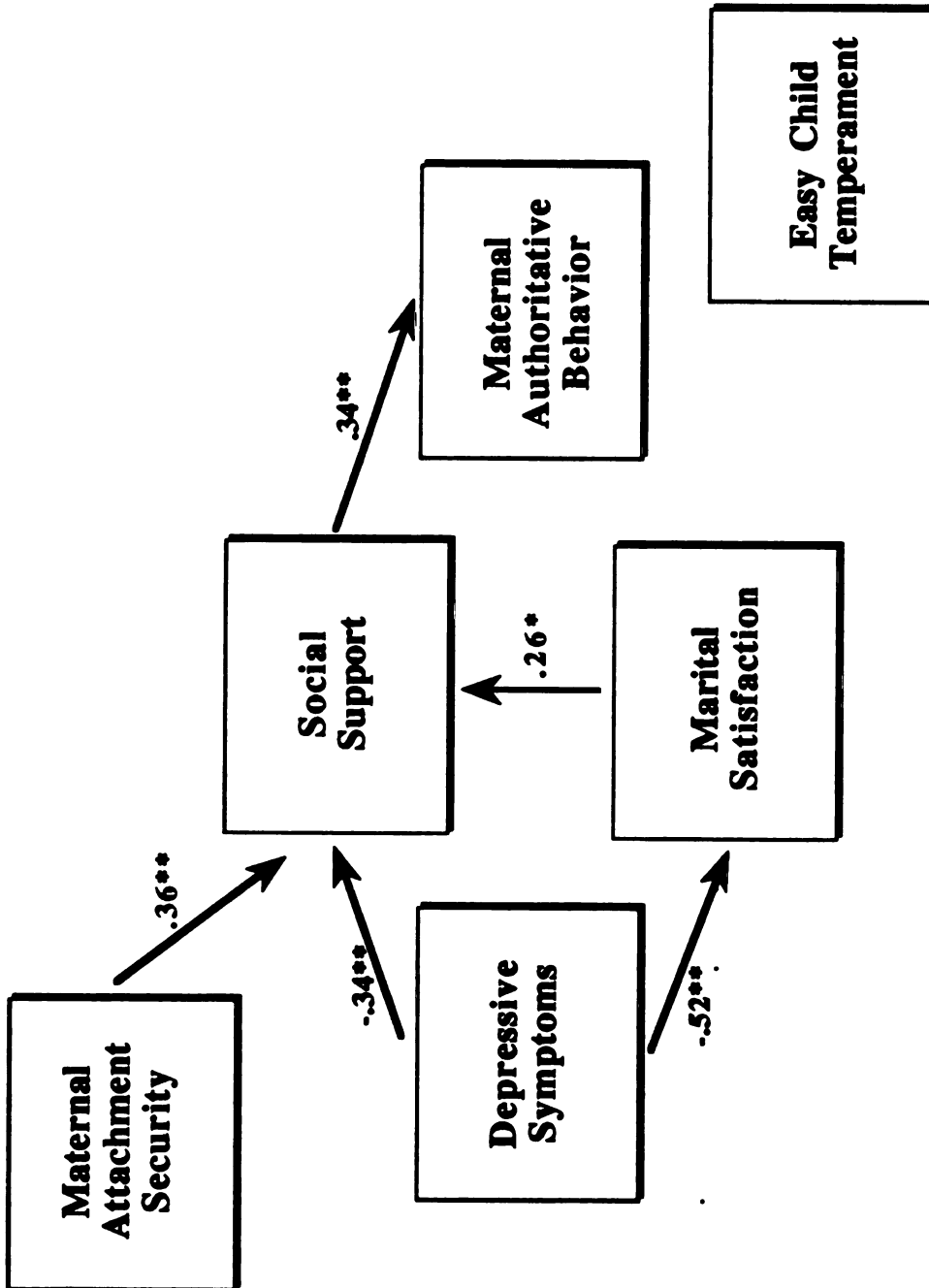


Figure 4. Structural equation model predicting maternal authoritative behavior.

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

correlated with mothers' retrospective attachment security and marital satisfaction, a substantial portion of the variance associated with these correlations was accounted for when the relationship between maternal authoritativeness and perceived social support was evaluated. In total, 23% (17% adjusted) of the variability in mothers' authoritative behavior was predicted by the scores of the five psychosocial variables.

Additional regression equations were computed in order to establish the predictive relationships among the five psychosocial variables. Similar to the a priori model, depressive symptoms significantly influenced levels of perceived social support and marital satisfaction. However, the structural equation model differed from previous analyses in two ways: both maternal attachment security and marital satisfaction had statistically significant direct effects on perceived social support in the empirically-guided model. All regression equations that were used to compute the structural equation model are presented in Table 2.

In addition, post-hoc analyses indicated that social support mediated the relationship between aspects of mothers' developmental histories and childrearing behavior. Mothers with secure attachment representations were more likely to have supportive present relationships with friends and family, which, in turn, further enhanced their child caregiving behaviors. Moreover, retrospective attachment

Table 2

Summary of Simultaneous Regression Analyses for the Structural Equation Model

Variable	B	SE B	β
Maternal authoritativeness			
Easy child temperament	.16	.11	.16
Social support	.20	.08	.34**
Marital satisfaction	.07	.06	.16
Depressive symptoms	.22	.21	.14
Retrospective attachment security	.21	.18	.14
R square			.23
Adjusted R square			.17
Easy child temperament			
Social support	-.02	.09	-.04
Marital adjustment	.02	.06	.05
Depressive symptoms	-.42	.22	-.27
Retrospective attachment security	.19	.19	.13
R square			.10
Adjusted R square			.04
Social support			
Marital satisfaction	.20	.08	.26*
Depressive symptoms	-.92	.29	-.34**
Retrospective attachment security	.93	.24	.36**
R square			.42
Adjusted R square			.39
Marital satisfaction			
Depressive symptomatology	-1.83	.36	-.52**
Retrospective attachment security	.34	.34	.10
R square			.28
Adjusted R square			.26
Depressive symptomatology			
Retrospective attachment security	-.07	.11	-.07
R square			.00
Adjusted R square			.00

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

security emerged as a significant predictor of maternal authoritativeness when its direct and indirect effects were evaluated together (direct effect, $\beta = .14$; indirect effect, $\beta = .12$; total effect, $\beta = .26$, $p < .05$).

DISCUSSION

The present investigation examined ways in which selected characteristics of mothers, children, and the family context related to maternal child caregiving behavior. Five predictor variables were chosen on the basis of their theoretical consistency with ecological theory and empirical findings from previous investigations. A path model, based on Belsky's (1984) non-empirical process model of parenting, was tested in order to delineate paths of influence among the multiple predictors of maternal authoritativeness. Relationships among these variables were also delineated a posteriori in a structural equation model. Although causal assumptions were made in path analysis and structural equation modeling, the data used in these analyses were cross-sectional. Results, therefore, document associations between the variables rather than patterns of cause and effect. In addition, it is important to note that several constructs assessed in the present study were measured by self-report instruments. Conclusions, therefore, frequently refer to mothers' perceptions of psychosocial phenomena rather than outsiders' ratings.

In general, findings from this investigation provide partial support for Belsky's conceptual model of the determinants of parenting behaviors. Although Belsky predicted that mothers' child caregiving behaviors would be

shaped by child characteristics, maternal characteristics, and aspects of the social context, more modest relationships were reported. Maternal authoritativeness was significantly correlated with mothers' retrospective attachment security, perceived social support, and marital satisfaction. Results further indicated that mothers' perceptions of social support had the greatest direct effect on their interactions with their young children when other variables were controlled. Mothers who felt that their needs for support, information, and feedback were fulfilled by friends and family were more likely to communicate a high level of warmth and effective control towards their young children. The remaining psychosocial variables assessed in this study had relatively small and statistically insignificant direct effects on maternal authoritativeness when perceived social support was controlled.

This pattern of results is inconsistent with Belsky's conceptual framework in two ways. As stated above, Belsky theorized that parenting is determined by several variables, not just one. Second, Belsky argued that among the multiple determinants of parenting, maternal characteristics (including mothers' psychological distress) would have the greatest influence in shaping parent-child interactions.

Although Belsky's conceptual hierarchy of influence was not supported by the present study, the findings are consistent with those of previous investigations. For instance, Hannan and Luster (1991) reported that the

presence of a spouse was the most significant determinant of the quality of the home environment that adolescent mothers provided for their infants. These investigators, however, also found that maternal characteristics (i.e., intelligence) and child temperament were significantly predictive of scores on the HOME inventory. Similarly, Belsky's own research has not supported the primacy of maternal psychological functioning as a predictor of mother-child relations. Belsky and Isabella (1988) were unable to establish empirically the relative importance of maternal characteristics (i.e., personality), child characteristics (i.e., temperament), and aspects of the social context (i.e., marital satisfaction) in the prediction of secure infant attachment.

With respect to the second hypothesis, maternal authoritativeness did positively predict prosocial child behavior during the structured and unstructured play interaction tasks. Optimal maternal child caregiving (i.e., mothers' positive affect, unintrusive involvement, attention, responsiveness, sensitivity, use of praise and effective commands) promoted positive child behaviors, such as social responsivity, cooperation, and compliance. In contrast with Belsky's framework, child temperamental ease did not have a significant direct effect on observed child behavior when maternal authoritativeness was controlled.

With regard to the third hypothesis, this investigation supported the notion that "more often than not, bad things

(or good things) go together when it comes to influences on parenting" (Vondra & Belsky, 1993, p. 2). Maternal and contextual child caregiving predictors were frequently found to be intercorrelated at statistically significant levels. Furthermore, depressive symptomatology significantly influenced mothers' perceptions of marital satisfaction and social support. Thus, mothers with subclinical depression tended to report having less satisfying marriages and receiving less support from friends and family members. However, contrary to the prediction advanced in the fourth hypothesis, maternal depressive symptoms did not mediate the relationship between retrospective maternal attachment and authoritative child caregiving behaviors. Results indicated that maternal attachment security was unrelated to self-reported depressive symptoms.

On the other hand, post-hoc analyses demonstrated that social support did mediate the relationship between retrospective attachment security and maternal authoritativeness. Mothers who retrospectively reported supportive relationships with their parents during childhood were more likely to receive current support from their friends and family. Greater amounts of social support were, in turn, related to effective child caregiving behaviors.

Several interpretations are possible for this unexpected finding. First, there may be a temporal consistency in the relationships that mothers have with their own parents. Parents who were described by mothers as

being insensitive or unavailable caregivers during childhood may continue to be uninvolved and unsupportive in their present lives. Second, mothers who do not currently receive social support from their families-of-origin may, in attempt to establish cognitive consistency, tend to report this as having been the case during childhood as well (Crockenberg, 1987). A third interpretation draws upon the writings of attachment theorists who have suggested that early childhood relationships influence individuals' later capacity to make affectional bonds (Bowlby, 1977). Mental representations that originate from childhood interactions serve as the basis for relationship schemata which organize individuals' feelings, needs, expectations, and attitudes (Sroufe & Fleeson, 1986). Thus, children who are securely attached to their parents tend to develop positive personal and interpersonal qualities (e.g., Sroufe, Egeland, & Kreutzer, 1990; Sroufe & Fleeson, 1988; Sroufe, Fox, & Pancake, 1983), and are likely to possess the ability to establish healthy and supportive relationships later in life. However, children who received insensitive caregiving may suffer from broad impairments that affect the development of interpersonal skills and may have later difficulty initiating and maintaining supportive relationships with friends and family during adulthood.

Several investigations have supported the notion that a secure attachment during childhood increases the likelihood of successfully engaging in satisfying adult interpersonal

relationships (Parker, Barrett, & Hickie, 1992). Using the Parental Bonding Instrument, a Likert-style self-report questionnaire that retrospectively measures levels of parental warmth and overprotectiveness, adults' perceptions of parental warmth have been positively correlated with perceived social support (Flaherty & Richman, 1986; Parker & Barnett, 1988). Similarly, college undergraduates' Adult Attachment Interview classifications have been related to levels of perceived social support. Undergraduates with secure retrospective attachments were more likely to describe their family as currently supportive in comparison to those individuals with insecure, dismissing attachments (Kobak & Sceery, 1988). Social support has also been shown to moderate the relationship between mothers' developmental histories and parenting behaviors. In these investigations, current spousal/partner support buffered the effects of mothers' negative childhood experiences on their interactions with toddlers and preschool-aged children (Belsky, Youngblade, & Pensky, 1989; Crockenberg, 1987).

In summary, even though several predictions derived from Belsky's conceptual framework were not empirically confirmed in the present study, the adequacy of the overall measurement model was supported. However, these unconfirmed predictions and other unanticipated relationships reported in a posteriori analyses may suggest that while the ecological perspective is a useful paradigm for examining

the determinants of parent behavior, Belsky's model may be best viewed as a launching point for future investigations.

Limitations and Future Directions

Although the sample size was large enough to support the conclusions advanced in the present study, the assessment of a greater number of participants from more diverse backgrounds would permit greater generalizability of the findings. More specifically, because nearly all participants in this investigation were married, Caucasian women from middle or upper-middle class backgrounds, it remains unclear whether these results would be replicated in more heterogeneous samples. Rather than statistically controlling for racial and ethnic background, socioeconomic status, and marital status, future studies should explicitly acknowledge the importance of macrosystem variables on parenting processes and incorporate the appropriate samples and measures into experimental designs (Bronfenbrenner, 1977). Future research must not only address differences in the caregiving styles between diverse groups of parents (e.g., Bartz & Levine, 1978; Reis, Barbera-Stein, & Bennett, 1986), but also should determine the relative importance of the psychosocial determinants of parenting styles in non-white, middle class populations. For instance, is social support the most important determinant of adolescent African American mothers' child caregiving behaviors? Does socioeconomic status or marital status moderate the

relationship between mothers' developmental histories and authoritative parenting?

In addition to limitations stemming from the relative homogeneity of the participants, the present investigation did not examine the effects of the child's sex on maternal caregiving behavior. As parents' interaction styles have been found to differ with respect to sons and daughters (e.g., Maccoby & Jacklin, 1974), it would be important to assess whether child sex interacts with contextual variables in the prediction of child caregiving behavior. Similarly, conclusions drawn from this investigation are most applicable for mothers of young children. It remains to be demonstrated whether the same pattern of results would be replicated using a sample of parents and their infants or adolescents.

Future studies can also address the ecological context of parenting in families with clinic-referred children. Because participants were recruited from the community rather than mental health care settings, most mothers reported relatively high levels of marital satisfaction and perceived social support, and also endorsed relatively low levels of depressive symptomatology. In addition, the distributions of the outcome variables (maternal authoritativeness and prosocial child behavior) were characterized by a positive skew and a restricted range. Such research might have greater applicability for

comprehensive intervention services designed for seriously distressed parents and families.

Additionally, because the process of fathering may not be synonymous with mothering, further investigations on predictors of parenting should include fathers (e.g., Volling & Belsky, 1991). It is conceivable that the antecedents and correlates of paternal behavior would differ from maternal behavior, as previous studies have reported that fathers' child caregiving styles are markedly different than mothers'. Whereas mothers' interactions with young children have been characterized by relatively greater amounts of emotional expression, affection, and involvement, fathers have been found to engage with their young children in relatively higher levels of vigorous motion play, outdoor games (e.g., sports activities), and leisure activities (Belsky, Gilstrap, & Rovine, 1984; Radin, 1986; Russell & Russell, 1987).

Finally, this study does not resolve patterns of cause and effect. It should be emphasized that only unidirectional relationships were explored in the analyses. It is likely that bidirectional relationships between the variables do exist, but the direction of the specific pathways in the measurement model was selected because of theoretical interest. Other configurations of the variables may be empirically supported as well. Additionally, as constructs in this study were measured simultaneously, longitudinal investigations would be needed to disentangle

patterns of causality in these relationships. Whichever particular paths may emerge from future research, the present study shows the value of conceptualizing parenting processes within an ecological framework.

Clinical Implications

Clinical intervention from an ecological perspective connotes a particular way of conceptualizing the psychological difficulties of children, parents, and families, rather than the use of specific therapeutic techniques (Fine, 1985). In general, "deviant behavior" is viewed as the product of complex, circular interactions between the child and the broader context (Minuchin, 1985). Therefore, ecological interventions tend to be eclectic and address multiple systems (Swap, 1984). Treatment is often preceded by the assessment of each system level (e.g., individual, dyadic, family, extended family, social networks, community, cultural) to determine possible relevance to the problem situation (Jasnoski, 1984; Stachowiak & Briggs, 1984). Interventions may target several domains and can involve coordination with other service providers (e.g., physicians, teachers, social workers).

Ecological theory urges parent educators to abandon the notion of a generic intervention program and instead advocates for an ideographic approach to curriculum development. Comprehensive programs carefully consider the

microsystem, exosystem, and macrosystem characteristics of individual participants and conceptualize caregiving skills within a contextual framework. Because mothers, and fathers, of differing backgrounds approach parent training programs with different caregiving agendas (Ogbu, 1981), educators must display greater cultural sensitivity and flexibility when designing curricula. This implies an individualized assessment to determine participants' needs and their personal and interpersonal functioning using unbiased strategies.

Moreover, while most parent education programs are characterized by an exclusive focus on child communication skills and/or behavior management strategies, contextually guided programs may further assist participants by broadening the scope of issues addressed. In order to promote enduring and significant changes in child caregivers' behaviors, parent education programs must address those influences which promote or maintain nonoptimal parenting. This expanded mission implies that issues such as marital communication or social support received by participants become well represented in parent education curricula. One strategy for accomplishing this goal is to allow parents to select from various course alternatives so that participants may tailor program offerings to meet their needs (Meyers, 1993). In addition, elective seminars may be offered that focus on especially salient topics for particular social/structural groups. For

example, Myers and his colleagues described a parent training program designed especially for inner-city African American families that contrasts traditional and modern black discipline and incorporates messages of self-pride throughout the curriculum (Myers et al., 1992). In addition, these courses could be complemented by services provided by other professionals with whom parent educators may choose to affiliate to better serve their clients (e.g., childbirth educators, pediatricians, vocational counselors).

Parent education programs informed by ecological theory can effectively address many of the psychosocial variables that were found to relate significantly with authoritative maternal behavior in the present study. For instance, family life educators can enhance maternal social support by (a) empathically listening to clients' concerns; (b) allowing participants to discuss and share their frustrations about child caregiving; (c) fostering a "buddy system" in which parents call one another on a regular basis or during times of acute stress at home; (d) explicitly discussing the importance of social support for effective parenting; and (e) directing parents to appropriate support groups in the community.

As marital satisfaction was also related to authoritative child caregiving, the enhancement of marital functioning may improve the quality of parent-child relationships (Floyd, Markman, Kelly, Blumberg, & Stanley, in press). Although marital skills training has become

increasingly popular during the past fifteen years (Brock, 1993), it has seldom been offered in conjunction with parent training. Comprehensive parent education programs may provide participants with the opportunity to enhance their couple communication skills, including behavioral specification, reflective listening, paraphrasing, empathic responding, problem solving, and nonverbal expression (Bornstein & Bornstein, 1986; Guerney, 1983). These skills may also be utilized when parents discuss child discipline, differences in parenting styles, or the division of family responsibilities (Hawkins & Roberts, 1992).

Few clinical interventions with parents have focused on the importance of retrospective adult attachment. One notable exception is the STEEP Project designed by Erickson, Korfmacher, and Egeland (1992). One underlying goal of this program is to address mothers' feelings, attitudes, and representations of the parent-child relationship.

Therapists attempt to educate mothers about how their early childhood experiences can influence the ways in which they raise their own children. Through demonstrations, discussion, and participatory activities, group leaders encourage participants to examine memories from their own childhood and foster parents' ability to take the perspective of their young children. One such activity involves having parents observe videotapes of themselves interacting with their young children with the therapist. Other exercises include asking mothers to "talk for" their

infants (i.e., providing a description and emotional rationale for the infant's physical gestures and emotional expressions) or to write fictitious letters to themselves from their babies (see also Carter, Osofsky, & Hann, 1991).

APPENDICES

APPENDIX A

Introductory Letter to Mothers

Dear Parent,

We would like to inform you of an opportunity for mothers of children who are in kindergarten classes in your school district to participate in a research study. Mothers who decide to participate in this study will receive free admission to a Parenting Skills Workshop or \$15.00 for their time and efforts.

We are social scientists at Michigan State University who are studying characteristics of families in the greater Lansing area. Participation in our study involves completing several questionnaires and to be videotaped while playing with your child in your home. Your responses to the questionnaires are confidential and the names of all participants in this study remain anonymous. Participation is limited to mothers who are currently married to the father of their kindergarten-aged child.

If you are interested in participating please call 517-342-9963 within the next week. An answering machine is available to receive your call on a 24-hour basis. Please leave a message with your name, address, and telephone number so that we can mail you a questionnaire packet. After you complete the questionnaires and return them to us in an enclosed, self-addressed stamped envelope, we will call you to schedule a convenient time so that we can visit your home to videotape you and your child playing together for approximately 30 minutes.

As a token of appreciation for your time and efforts, you will receive free admission to a half-day Parenting Skills Workshop that will help you enhance your relationship with your child. Alternatively, you can decide to receive \$15.00 in cash for your participation.

If you have any questions about this study or would like to participate, please call 517-342-9963 and leave a message. Your participation will be greatly appreciated.

Sincerely,

**Steven Meyers, M.A.
Instructor of Psychology**

**Gary Stollak, Ph.D.
Professor of Psychology**

APPENDIX B

Research Consent Form

1. I have freely consented to participate in a scientific study being conducted by Steven Meyers, M.A., under the supervision of Dr. Gary Stollak, Professor of Psychology, at Michigan State University.
2. The nature of the study has been explained to me and I understand what my participation will involve.
3. I understand that by participating in this study I am entitled to participate in a Parenting Skills Workshop at no charge or to receive \$15.00 as compensation.
4. I understand that I am free not to participate at all, not to answer certain questions, and/or to discontinue my participation in the study at any time without penalty.
5. I understand that the results of the study will be held in strict confidence and I will remain anonymous in any report of the research findings. Within these restrictions, results of the study will be made available to me at my request.
6. I understand that if there are any questions or concerns that arise as a result of my participation in this study, that I can contact Steven Meyers at (517) 342-9963.

Signed: _____ Date: _____

APPENDIX C

Demographic Characteristics of the Sample

<u>Characteristic</u>	<u>Frequency</u>
Child's sex	
Female	45
Male	28
Child's age (months)	
60-64	5
65-69	22
70-74	11
75-79	10
80-84	14
85-89	7
90-94	4
Number of siblings	
0	0
1	37
2	25
3	8
4 or more	3
Birth order of target child	
First born	31
Second born	26
Third born	12
Forth born or greater	4
Mother's age (in years)	
25-29	9
30-34	22
35-39	30
40-44	11
45-49	1
Mother's education (highest level completed)	
Less than 7th grade	0
Partial high school	2
High school	5
Partial college	21
College	26
Graduate school	19

<u>Characteristic</u>	<u>Frequency</u>
Mother's occupation (Nam-Powers Index)	
0	24
1-19	1
20-39	4
40-59	12
60-79	20
80-100	12
Mother's ethnic or racial background	
Caucasian	69
African American	1
Hispanic American	0
Asian American	0
Native American	1
Foreign	2
Father's age (in years)	
25-29	4
30-34	20
35-39	28
40-44	14
45-49	7
Father's education (highest level completed)	
Less than 7th grade	1
Partial high school	1
High school	5
Partial college	17
College	27
Graduate school	22
Father's occupation (Nam-Powers Index)	
0	5
1-19	1
20-39	2
40-59	12
60-79	22
80-100	31
Father's ethnic or racial background	
Caucasian	65
African American	2
Hispanic American	2
Asian American	1
Native American	1
Foreign	2

APPENDIX D

Demographics Questionnaire

Please answer all questions in this packet directly on these sheets in the spaces indicated below.

Please answer questions 1 to 4 about your kindergarten-aged child.

1. Is this child a boy or a girl? _____
2. How many months old is this child? _____
3. How many brothers and sisters does he or she have? _____
4. Is he or she the oldest child, second oldest, third oldest, etc.? _____

Questions 5 to 9 refer to yourself.

5. How old are you? _____
6. What is your marital status? _____
7. What is your occupation? _____
8. Circle the highest level of education that you have obtained.
 - a. Less than seventh grade
 - b. Junior high school (9th grade)
 - c. Partial high school (10th or 11th grade)
 - d. High school graduate
 - e. Partial college (at least one year) or specialized training
 - f. Standard college or university graduation
 - g. Graduate/professional training

9. Please indicate your predominant ethnic background

- | | |
|---------------------------------|--------------------|
| a. White, non-Hispanic American | d. Asian American |
| b. African American | e. Native American |
| c. Hispanic American | f. Foreign |

Questions 10 to 13 refer to your husband.

10. How old is your husband? _____

11. What is his occupation? _____

12. Circle the highest level of education that he has obtained.

- a. Less than seventh grade
- b. Junior high school (9th grade)
- c. Partial high school (10th or 11th grade)
- d. High school graduate
- e. Partial college (at least one year) or specialized training
- f. Standard college or university graduation
- g. Graduate/professional training

13. Please indicate his predominant ethnic background

- | | |
|---------------------------------|--------------------|
| a. White, non-Hispanic American | d. Asian American |
| b. African American | e. Native American |
| c. Hispanic American | f. Foreign |

APPENDIX E

Adult Attachment Questionnaire

DIRECTIONS: The following questions are designed to improve our understanding of how parents feel that their own childhood experiences have affected them as parents and as people. These questions concern your childhood relationships with your parents (or parental figures), and most will ask about your early relationships with your family and what you think about the ways these relationships might have affected you. The questions are generally about your childhood, but a few are about your later years and what is going on right now.

To get yourself in the right frame of mind, take a few minutes to think about yourself as a child. Try to imagine the house(s) you lived in and the school(s) you attended. Can you get an image of the physical surroundings, or a mental picture of the neighborhood? Try to remember what your parents and siblings looked like and how they behaved. Try to imagine yourself as far back in time as you can.

It is very important that you answer the questions in as much detail as possible. In fact, it may be easiest for you to give **specific examples** of situations or circumstances when filling out the questionnaire. Please be as specific as you can when recalling an event (e.g., referring to what was done, what was said, how people reacted, etc.).

Remember, there are no right or wrong answers. The questions are designed to gather information regarding your early relationships with your family. Let yourself be as relaxed as possible so that you may feel free to write down whatever comes to mind. Please do not be concerned with spelling, punctuation, and/or grammar, but rather answer the questions in as much detail/content as possible. (You may use the backs of pages or additional pages if you wish, but please label these clearly.)

The questions are designed to be answered in order. Please do not look ahead in the questionnaire. Start with Question 1 and when you have **answered the question as fully as possible** proceed to Question 2. Once a question has been completed, please do not go back and change the answer. Finally, please use a pen and not a pencil.

1. **What is your earliest childhood memory? (This may or may not involve your parents). Please try to be as specific as possible.**

2. **Starting from as far back as you can remember, please describe your relationships with both of your parents. (Again, try to provide specific examples).**

3. If you had to choose four adjectives that reflect your childhood relationship with your mother, which four would you choose?

4. Now, for each adjective say why you think that particular adjective is a good descriptor of your childhood relationship with your mother. Why did you choose that adjective? (Try to give a specific example of a time when she did nor said a certain thing or acted in a particular way. Remember that detail is important).

First adjective:

Second adjective

Third adjective:

Fourth adjective:

5. If you had to pick four adjectives to describe the most important emotional reactions you had to your mother (the most important ways she made you feel or affected your feelings), which four would you choose?

6. If you had to choose four adjectives that reflect your childhood relationship with your father, which four would you choose?

7. Now for each adjective, please describe why you think that particular adjective is a good descriptor of your childhood relationship with your father. Why did you choose that adjective? (Please give a specific example of a time when he did or said a certain thing or acted in a particular way. Remember that detail is important.

First adjective:

Second adjective

Third adjective:

Fourth adjective:

8. If you had to pick four adjectives to describe the most important emotional reactions you had to your father (the most important ways he made you feel or affected your feelings), which four would you choose?

9. During your childhood, it is very likely that you felt closer to either your mother or your father. To which parent did you feel the closest to and why? Why wasn't there this feeling with the other parent?

The next three questions relate to how you got comforted as a child. Searching back in your memory as far as you can, please describe in detail what you would typically do if you were in need of comforting. For each question, please say whether you would tell anyone, and if you did, whom did you tell, and how would that person typically respond (e.g., hold you, talk to you, tell you a joke, play a game, ignore you, tease you, etc.)?

- 10a. When you were emotionally upset as a child what would you do? Where there typical events or things that made you emotionally upset (e.g., hurt feelings, disappointments, bad dreams, being scared, problems with friends, etc.)? Please describe a specific incident or example that you remember. If you did turn to your parents when you were upset, how did they respond?

- 10b. What would happen when you were physically hurt or injured? Please describe a specific example (e.g., What happened? Did you tell anyone? Whom did you tell? How did they respond)?
- 10c. Finally, what would happen when you ill as a child? Again, please provide a specific example. How did your parents respond?

11. Please describe the first time you remember being separated from your parents. How old were you? What was the reason for the separation? How did they respond? How did you feel about it at the time? Are there any other separations that stand out in your mind?
12. Did you ever feel rejected as a child? Looking back on it now, you may realize it was not really rejection but as a child, do you remember feeling rejected? How often did you feel rejected? What were the circumstances? How old were you and what did you do?

13. When you were a child, were your parents ever threatening to you in any way -- maybe because they were angry, or for discipline, or maybe just jokingly? For example, did your parents ever threaten to hurt you, to leave you, or send you away?

Did they ever call you names and/or say that you were a bad child? Did this happen frequently?

14. How did you go about getting attention as a child? How did you get your parents to respond and/or attend to you and your needs? Please provide a specific example.

- 15. Did your parents take an interest in your activities and accomplishments? How much importance was placed on your activities and achievements?**

Did your parents seem to take more of an interest in your activities and accomplishments than in your emotional needs or was there a balance between the two?

- 16. At this point, you have probably shared a lot of childhood memories regarding your relationships with your parents. In your opinion, why did your parents behave the way they did toward you when you were a child?**

17. **What effect, if any, did your early experiences and relationships with your parents have on your adult personality?**

On your adult relationships with friends and lovers?

18. **What effect, if any, did your early experiences and relationships with your parents have on your relationship(s) with your child(ren)?**

19. Have there been many changes in your relationships with your parents since childhood?

In what ways have these relationships changed over the years?

In what ways have they remained the same?

20. Describe your current relationship with each of your parents. What is the relationship like for you now as an adult?

21. For the most of us, there were some aspects of our childhood relationships with our parents that were, to varying degrees, troublesome, conflictual and/or problematic. Do these issues remain unresolved and still active? Or, have these troublesome aspects of you childhood relationships with your parents been resolved and/or put to rest?

Please describe in detail the process of how you have dealt with these troublesome or problematic aspects of your childhood relationships with your parents.

22. Is there any particular thing which you feel you have learned above all from your own childhood experiences?

What would you hope your child might have learned (or will learn) from his/her experience of being parented?

23. How do you respond now, in terms of feelings, when you separate from your own child?

The next four questions relate to loss of a parent or a significant other. If this does not pertain to you, please skip to question 25.

- 24a. Did you experience the loss of a parent or other close loved one (sibling or close family member) while you were a young child?

Please describe the circumstances (e.g., How old were you? How did the death occur? How did you respond? Did you attend the funeral?)

24b. Have your feelings regarding this death changed much over time? If so, please state how.

24c. Have you had any other important losses in your adulthood? If so, please describe using the same questions as in number 24a.

24d. How have these losses affected your adult personality? Do they affect your approach to your own child?

25. Is there anything else you would like to add?

If for any reason you feel upset or unsettled and would like to talk about your reactions to these questions, please feel free to call me at (517) 342-9963. Please leave your name and phone number and I will return your call as soon as possible.

I would like to thank you for your time and thoughtful effort in completing these questionnaires. Through the contribution of individuals like your self, who share part of their personal experiences, we are able to gain a greater understanding of family relationships and the impact they have on our lives. Thank you.

APPENDIX F

Brief Symptom Inventory

INSTRUCTIONS: Following is a list of problems people sometimes have. Please read each one carefully, and using the key below, please indicate on the answer sheet **HOW MUCH THAT PROBLEM HAS DISTRESSED OR BOTHERED YOU DURING THE PAST 7 DAYS INCLUDING TODAY.**

- 1 = Not at all
- 2 = A little bit
- 3 = Moderately
- 4 = Quite a bit
- 5 = Extremely

HOW MUCH WERE YOU DISTRESSED BY:

1. Nervousness or shakiness inside
2. Faintness or dizziness
3. The idea that someone else can control your thoughts
4. Feeling others are to blame for most of your troubles
5. Trouble remembering things
6. Feeling easily annoyed or irritated
7. Pains in heart or chest
8. Feeling afraid in open spaces or on the streets
- *9. Thoughts of ending your life
10. Feeling that most people cannot be trusted
11. Poor appetite
12. Suddenly scared for no reason
13. Temper outbursts that you could not control
14. Feeling lonely even when you are with people
15. Feeling blocked in getting things done
- *16. Feeling lonely
- *17. Feeling blue
- *18. Feeling no interest in things
19. Feeling fearful
20. Your feelings being easily hurt
21. Feeling that people are unfriendly or dislike you
22. Feeling inferior to others
23. Nausea or upset stomach
24. Feeling that you are watched or talked about by others
25. Trouble falling asleep
26. Having to check and double-check what you do
27. Difficulty making decisions
28. Feeling afraid to travel on buses, subways, or trains
29. Trouble getting your breath
30. Hot or cold spells
31. Having to avoid certain things, places, or activities because they frighten you

- 32. Your mind going blank
- 33. Numbness or tingling in parts of your body
- 34. The idea that you should be punished for your sins
- *35. Feeling hopeless about the future
- 36. Trouble concentrating
- 37. Feeling weak in parts of your body
- 38. Feeling tense or keyed up
- 39. Thoughts of death or dying
- 40. Having urges to beat, injure, or harm someone
- 41. Having urges to break or smash things
- 42. Feeling very self-conscious with others
- 43. Feeling uneasy in crowds, such as shopping or at a movie
- 44. Never feeling close to another person
- 45. Spells of terror or panic
- 46. Getting into frequent arguments
- 47. Feeling nervous when you are left alone
- 48. Others not giving you proper credit for your achievements
- 49. Feeling so restless you couldn't sit still
- *50. Feelings of worthlessness
- 51. Feeling that people will take advantage of you if you let them
- 52. Feelings of guilt
- 53. The idea that something is wrong with your mind

APPENDIX G

Perceived Social Support Scales

DIRECTIONS: Answer questions 1 to 40 using the scale below:

- | | YES | NO | DON'T
KNOW |
|-----|---|----|---------------|
| | 1 | 2 | 3 |
| 1. | My <u>friends</u> give me the moral support I need. | | |
| 2. | Most other people are closer to their friends than I am. | | |
| 3. | My friends enjoy hearing about what I think. | | |
| 4. | Certain friends come to me when they have problems or need advice. | | |
| 5. | I rely on my friends for emotional support. | | |
| 6. | If I felt that one or more of my friends were upset with me, I'd just keep it to myself. | | |
| 7. | I feel that I'm on the fringe in my circle of friends. | | |
| 8. | There is a friend I could go to if I were just feeling down, without feeling funny about it later. | | |
| 9. | My friends and I are very open about what we think about things. | | |
| 10. | My friends are sensitive to my personal needs. | | |
| 11. | My friends come to me for emotional support. | | |
| 12. | My friends are good at helping me solve problems. | | |
| 13. | I have a deep sharing relationship with a number of friends. | | |
| 14. | My friends get good ideas about how to do things or make things from me. | | |
| 15. | When I confide in friends, it makes me feel uncomfortable. | | |
| 16. | My friends seek me out for companionship. | | |
| 17. | I think that my friends feel that I'm good at helping them solve problems. | | |
| 18. | I don't have a relationship with a friend that is as intimate as other people's relationships with friends. | | |

19. I've recently gotten a good idea about how to do something from a friend.
20. I wish my friends were much different.
21. My family gives me the moral support I need.
22. I get good ideas about how to do things or make things from my family.
23. Most other people are closer to their family than I am.
24. When I confide in the members of my family who are closest to me, I get the idea that it makes them uncomfortable.
25. My family enjoys hearing about what I think.
26. Members of my family share many of my interests.
27. Certain members of my family come to me when they have problems or need advice.
28. I rely on my family for emotional support.
29. There is a member of my family I could go to if I were just feeling down, without feeling funny about it later.
30. My family and I are very open about what we think about things.
31. My family is sensitive to my personal needs.
32. Members of my family come to me for emotional support.
33. Members of my family are good at helping me solve problems.
34. I have a deep sharing relationship with a number of members of my family.
35. Members of my family get good ideas about how to do things or make things from me.
36. When I confide in members of my family, it makes me uncomfortable.
37. Members of my family seek me out for companionship.
38. I think that my family feels that I'm good at helping them solve problems.
39. I don't have a relationship with a member of my family that is as close as other people's relationships with family members.
40. I wish my family were much different.

APPENDIX H

Dyadic Adjustment Scale

Most people have disagreements in their relationships. Please indicate on the computer answer sheet the approximate extent of agreement or disagreement between you and your partner for each item on the following list. Answer questions 1-15 using the following key:

- 1 = Always disagree
- 2 = Almost always disagree
- 3 = Frequently disagree
- 4 = Occasionally disagree
- 5 = Almost always agree
- 6 = Always agree

1. Handling family finances
2. Matters of recreation
3. Religious matters
4. Demonstrations of affection
5. Friends
6. Sex relations
7. Conventionality (correct or proper behavior)
8. Philosophy of life
9. Ways of dealing with parents or in-laws
10. Aims, goals, and things believed important
11. Amount of time spent together
12. Making major decisions
13. Household tasks
14. Leisure time interests and activities
15. Career decisions

Answer questions 16-22 using the following key:

- 1 = All of the time
- 2 = Most of the time
- 3 = More often than not
- 4 = Occasionally
- 5 = Rarely
- 6 = Never

16. How often do you discuss or have you considered divorce, separation, or terminating your relationship?
17. How often do you or your mate leave the house after a fight?
18. In general, how often do you think that things between you and your partner are going well?
19. Do you confide in your mate?
20. Do you ever regret that you married? (or lived together)

21. How often do you and your partner quarrel?
 22. How often do you and your mate "get on each other's nerves?"
 23. Do you kiss your mate?

1=Never	4=Almost every day
2=Rarely	5=Every day
3=Occasionally	

24. Do you and your mate engage in outside interests together?

1=Never	4=Almost every day
2=Rarely	5=Every day
3=Occasionally	

For questions 25-28, how often would you say the following events occur between you and your mate?

1 = Never
 2 = Less than once a month
 3 = Once or twice a month
 4 = Once or twice a week
 5 = Once or twice a day
 6 = More often

25. Have a stimulating exchange of ideas
 26. Laugh together
 27. Calmly discuss something
 28. Work together on a project

These are some things about which couples sometimes agree and sometimes disagree. Indicate if either item below caused differences of opinions or were problems in your relationship during the past few weeks.

29. Being too tired for sex 1=Yes 2=No
 30. Not showing love 1=Yes 2=No

31. Which best describes the degree of happiness, all things considered, of your relationship.

1 = Extremely unhappy
 2 = Fairly unhappy
 3 = A little happy
 4 = Happy
 5 = Very happy
 6 = Extremely happy
 7 = Perfect

32. Which of the following statements best describes how you feel about the future of your relationship?

6=I want desperately for my relationship to succeed, and *would go to almost any length* to see that it does.

5=I want very much for my relationship to succeed, and *will do all I can* to see that it does.

4=I want very much for my relationship to succeed, and *will do my fair share* to see that it does.

3=It would be nice if my relationship succeeded, but *I can't do much more than I am doing* now to help it succeed.

2=It would be nice if it succeeded, but I *refuse to do any more than I am doing* now to keep the relationship going.

1=My relationship can never succeed, and *there is not more that I can do* to keep the relationship going.

APPENDIX I**Parent Temperament Questionnaire**

Instructions: The following questions gather information on the way your child behaves in different situations of everyday life. Each statement asks you to judge whether that behavior occurs *hardly ever, infrequently, once in a while, sometimes, often, very often* or *almost always*.

Answer questions 1 to 40 using the scale below:

- 1 = Hardly ever
- 2 = Infrequently
- 3 = Once in a while
- 4 = Sometimes
- 5 = Often
- 6 = Very often
- 7 = Almost always

1. My child seems to be having a good time when he/she is with other children.
2. My child is shy with adults he/she does not know.
3. My child has a bowel movement at about the same time every day.
4. My child now eats food that she/he used to dislike.
5. My child shows strong enthusiasm for food he/she likes, or shows strong dislike for food he/she does not like.
6. When first meeting new children, my child is bashful.
7. My child asks for or takes a snack at approximately the same time every day.
8. My child is happy and pleased when telling about something that has happened during the day.
9. My child is at ease within a few visits when visiting at someone else's home.
10. My child may throw items down, cry, yell, or slam the door, etc., when upset or annoyed with a task.
11. My child enjoys going shopping with me.
12. After my child is put to bed at night it takes about the same length of time each night for him/her to fall asleep.
13. My child likes to try new foods.

14. If my child resists some procedures, such as having his/her hair cut, brushed, or washed, he/she will continue to resist it for at least several months.
15. When taken away from an activity that my child really enjoys, he/she protests only mildly, with a little bit of fussing or some whining.
16. When playing with other children, my child argues with them.
17. When in the park, at a party, or visiting, my child will go up to strange children and will join in their play.
18. My child sleeps more one night and less during another night, rather than the same number of hours each night.
19. If my child is shy with a strange adult he/she quickly (within a half-hour or so) gets over this.
20. When scolded or reprimanded, my child reacts mildly, by whining or complaining rather than strongly with crying or screaming.
21. My child gets hungry at different times each day.
22. When away from home with parents, my child has a problem (even after a few nights) with falling asleep in a new bed.
23. My child looks forward to going to school.
24. When the family takes a trip, my child immediately makes him/herself at home in the new surroundings.
25. When I go shopping with my child and I do not buy candy, toys or clothing that my child wants, he/she cries and yells.
26. My child is immediately friendly with and approaches unknown adults who visit our home.
27. My child eats a lot one day and very little the next day, rather than the same amount each day.
28. My child gets noticeably upset if a favorite toy or game is broken.
29. In a new situation, such as a nursery, day care center, or school, my child remains uncomfortable even after a few days.
30. When my child objects to wearing certain clothing, he/she argues loudly, yells, or cries.
31. My child wakes himself/herself up at the same time each morning on weekends and holidays.
32. My child complains to me about other children if anything goes wrong.

33. **When there is a change in daily routine, such as not being able to go to school, or a change of usual daily activities, etc., my child goes along with the new routine easily.**
34. **My child complains quietly when another child takes his/her toy away.**
35. **The first time my child is left in a new situation without me (such as school, nursery, music lesson, camp), he/she gets upset.**
36. **My child becomes easily upset when he/she loses a game.**
37. **My child would rather wear familiar clothes than new clothes.**
38. **My child has difficulty in adjusting to the rules of another household if they are different from those at home.**
39. **My child seems to take things matter-of-factly. He/she accepts events in stride without getting very excited.**
40. **If meals are delayed for an hour or more, my child easily waits without seeming to mind.**

APPENDIX J**Parent-Child Interaction Play Assessment****Unstructured Play****1. Mother's Affect**

- A. Affect typically negative in interaction with child
- B. No affect observed from mother
- C. Some degree of enjoyment shown
- D. Moderate degree of enjoyment shown in play with child
- E. Mother openly showed pleasure in play with child

2. Mother's Intrusiveness/Interfering

- A. Mother continually (i.e., almost all of the time) structured child's play and other activities by asking questions, and giving commands
- B. Mother fairly intrusive, gave commands, led play, and asked questions about 50% of the time
- C. Mother was intrusive in terms of frequently asking questions about 25% of the time, but also allowed child to lead play
- D. Mother did not intrude into child's play
- E. Mother was not intrusive and was able to follow and nondirectively facilitate child's play (e.g., models activity)

3. Mother's Praise

- A. No praise, mostly negative statements
- B. No praise observed
- C. Some praise observed, only in response to tasks completed
- D. Moderate praise observed, in response to completed tasks and attempts to complete
- E. High amount of praise, both contingent on completed behaviors and on attempts or effort

4. Mother's Attention

- A. Mother ignored all (nearly 100%) of child's behaviors
- B. Mother ignored about 75% of child's behaviors
- C. Mother ignored about 50% of child's behaviors
- D. Mother ignored about 25% of child's behaviors
- E. Mother ignored about 0% of child's behaviors

5. Mother's Developmental Sensitivity

- A. About 100% of this mother's interactions over-and/or underestimated the child's developmental level
- B. About 75% of this mother's interactions over-and/or underestimated the child's developmental level
- C. About 50% of this mother's interactions over-and/or underestimated the child's developmental level
- D. About 25% of this mother's interactions over-and/or underestimated the child's developmental level
- E. All of the mother's interactions were appropriate to the child's developmental level

6. Mother's Responsiveness to Child's Initiatives

- A. The mother did not respond to any of the child's questions or social invitations
- B. The mother responded to about 25% of the child's questions or social invitations
- C. The mother responded to half of the child's questions or social invitations
- D. The mother responded to about 75% of the child's questions or social invitations
- E. The mother responded to all of the child's questions or social invitations

7. Mother-Child Involvement

- A. Mother was physically and/or verbally involved with the child 0% of the time
- B. Mother was physically and/or verbally involved with the child 25% of the time
- C. Mother was physically and/or verbally involved with the child 50% of the time
- D. Mother was physically and/or verbally involved with the child 75% of the time
- E. Mother was physically and/or verbally involved with the child 100% of the time

8. Child's Social Responsivity

- A. The child responded in a friendly, social, and inviting manner with the mother 0% of the time
- B. The child responded in a friendly, social, and inviting manner with the mother 25% of the time
- C. The child responded in a friendly, social, and inviting manner with the mother 50% of the time
- D. The child responded in a friendly, social, and inviting manner with the mother 75% of the time
- E. The child responded in a friendly, social, and inviting manner with the mother 100% of the time

9. Child's Attention to Activities

- A. Child typically stayed at each activity for 1 minute or less
- B. Child usually stayed with an activity for 1 or 2 minutes
- C. Child could typically engage in some tasks for about 2-3 minutes after initial exploring
- D. Child could typically engage in most tasks for about 5 minutes
- E. Child showed a sustained and absorbed interest in most activities for more than 5 minutes

10. Child's Aggressiveness

- A. Child was argumentative, destructive, and/or aggressive all of the time
- B. Child was argumentative, destructive, and/or aggressive about 75% of the time
- C. Child was argumentative, destructive, and/or aggressive 50% of the time
- D. Child was argumentative, destructive, and/or aggressive 25% of the time
- E. Child was never argumentative, destructive, and/or aggressive

11. Child's Responsiveness to Mother's Interaction

- A. The child did not respond to any of the mother's attempts to engage him/her in an activity
- B. The child responded about 25% of the time to the mother's attempts to engage him/her in an activity
- C. The child responded 50% of the time to the mother's attempts to engage him/her in an activity
- D. The child responded about 75% of the time to the mother's attempts to engage him/her in an activity
- E. The child responded all of the time to the mother's attempts to engage him/her in an activity

12. Child's Responsiveness to Questions

- A. The child did not respond to any of the mother's questions
- B. The child responded to about 25% of the mother's questions
- C. The child responded to half of the mother's questions
- D. The child responded to about 75% of the mother's questions
- E. The child responded to all of the mother's questions

Structured Play**13. Clarity of Commands**

- A. Commands usually lacked sensitivity to child's developmental level and were stated as questions rather than as direct imperatives
- B. 50% of commands were insensitive to child's developmental level and were in question form
- C. Commands were at times given in question form (e.g., "Will you pick up the toys?"), but were sensitive to the child's understanding level
- D. 75% of commands were usually clear to child and were direct
- E. Commands were always (i.e., 100%) stated clearly and directly (regardless of child's compliance)

14. Mother's Follow-through with Commands

- A. Overly harsh methods used to facilitate compliance
- B. No effort made to facilitate child's compliance to commands
- C. Only repetition of commands or pleading was used
- D. Physical and verbal prompts used to facilitate compliance
- E. Modeling and/or positive means used initially, though firmness was displayed when necessary

15. Mother's Praise

- A. Mother appropriately praised child 0% of the time
- B. Mother appropriately praised child 25% of the time
- C. Mother appropriately praised child 50% of the time
- D. Mother appropriately praised child 75% of the time
- E. Mother appropriately praised child 100% of the time

16. Punishment Level

- A. Physical punishment used
- B. Verbal punishment frequently used, including threats (e.g., "you are not going to be able to have your candy if you don't..." "Bad boy...") and yelling
- C. Time-out behavioral responses were used
- D. Withdrawal of attention usually used for child's noncompliance
- E. No punishment used

17. Child's Compliance

- A. Child never complied to a task
- B. Child was usually inappropriate (e.g., had tantrums) but eventually complied
- C. Child demanded a great deal of prompting to achieve compliance
- D. Child usually complied to tasks (i.e., more than half of the time without prompts)
- E. Child always complied to tasks without additional prompts after a warning

18. Child's Willfulness

- A. Child responded negatively, and child openly refused all of the parent's commands nearly all of the time
- B. Child responded negatively, and child openly refused to follow about 75% of the commands given
- C. Child responded negatively, and child openly refused to follow about 50% of the commands given
- D. Child responded negatively to about 25% of commands
- E. Child complied with all directives without negativism or challenge

19. Child's Aggressiveness

- A. Child was argumentative, destructive, and/or aggressive all of the time
- B. Child was argumentative, destructive, and/or aggressive about 75% of the time
- C. Child was argumentative, destructive, and/or aggressive about 50% of the time
- D. Child was argumentative, destructive, and/or aggressive about 25% of the time
- E. Child was never argumentative, destructive, and/or aggressive

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