ABSTRACT

ROBINSON, GEORGE CANBY. Links Between Marital Conflict and Child Social Withdrawal: Mediating Effects of Parenting Behaviors and Moderating Effect of Parental Anxiety and Depression. (Under the direction of Mary Elizabeth Haskett.)

This study utilized a mediation/moderation mixed model to examine the direct and indirect links between marital conflict and children’s asocial and excluded behaviors as rated by teachers. The ecological validity of this study was enhanced by using independent raters of children’s behavior and direct observations of parenting behavior. The participants (n = 72) in this study were a combination of families with substantiated cases of physical abuse that were referred by a state human services agency and families recruited from the community. Participating children had a mean age of 7.3 years and ranged between 4 and 9 years old. To determine direct effects, marital conflict was assessed using a modified version of the Conflict Tactics Scales. Children’s social behaviors were measured by two subscales on the Social Behavior Scale. To calculate indirect effects mediated through parenting behavior, parents and children participated in three 10-minute vignettes that were videotaped and coded. Overall, results supported a direct effects model in which marital conflict predicted 5% of the variance in children’s asocial behavior. Asocial behaviors in the classroom were also significantly associated with peer rejection and low engagement on the playground. Although moderation of the relation between marital conflict and the three parenting behavior domains by parental anxiety, depression, and stress was not supported, substantial support was found for the negative impact of parent psychopathology and stress on parenting behavior. Prevention/intervention efforts for children and parents using a family systems perspective were emphasized.
Links Between Marital Conflict and Child Social Withdrawal:
Mediating Effects of Parenting Behaviors and
Moderating Effect of Parental Anxiety and Depression
by
George Canby Robinson
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Biography

George Canby Robinson was born in Boston Massachusetts, the son of Otis and Dorothy Robinson. After graduating from high school in 1968 he attended the University of Virginia until 1971 when he began a career as a carpenter/builder that extended until 1982. He graduated from Boston College Evening College in 1978 and after receiving a Master’s degree in Counseling from the University of Massachusetts in 1984 worked in a sheltered workshop teaching woodworking until 1985 when he moved to North Carolina. After three years of employment at the Family and Rape Crisis agency in Pittsboro, NC. teaching child abuse prevention and conducting groups for men who batter, he left the working world to raise his children and build a home for his family. He graduated with a specialist degree in school psychology from the College of William and Mary in 1993 and immediately began doctoral studies at North Carolina State University working with Mary E. Haskett. While at NCSU, he worked as a graduate student instructor in the psychology department, field tester for the Frank Porter Graham Child Development Center and in contract assessment and group facilitation. After completing a two-year part-time internship at Project Enlightenment and the Wake County public schools he is currently employed as a teacher-parent consultant at Project Enlightenment addressing the learning and behavioral needs of children from birth to age five.
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Introduction

Spurred by the phenomenon of chronically high divorce rates and the coincident discord and disruption within families, a significant body of research has begun to examine the impact of marital conflict on children (Amato & Keith, 1991; Davies & Cummings, 1994; Emery, 1982; Jaycox & Repetti, 1993; Jelienek, 1998). Emerging from this examination is an appreciation that although parental divorce is associated with increased behavior problems in children (Morrison & Coiro, 1999), the conflict between divorcing parents and indeed, among intact couples with troubled marriages may be the most salient and enduring feature in distressed families that impacts child social and emotional adjustment (Emery, 1982; Harrist & Ainsle, 1998; Katz & Gottman, 1996).

The association between marital conflict and children’s emotional and behavioral adjustment has also been well documented (e.g., Emery, 1982; Davies & Cummings, 1994; Holden, 1998). Children’s immediate responses to marital conflict might include anger, fear, sadness and efforts to intervene or withdraw (Cummings, 1998; Grych & Fincham, 1993; Laumakis, Margolin, & John, 1998). Long term adjustment difficulties might encompass increased likelihood of manifesting externalizing symptoms such as poor regulation of anger and behaviors such as aggression (Fincham & Osborne, 1993; Margolin & John, 1997; Rutter, 1994), internalizing symptoms reflected by anxiety and depression (Davies & Cummings, 1998; Fincham, Grych, & Osborne, 1994; Graham-Bermann, 1998; Laumakis, et al., 1998; McCloskey, Figuredo, & Koss, 1995) and

Given how widespread the phenomenon of marital conflict is (see Jaffe, Wolfe, & Wilson, 1990; Wolack & Finkelhor, 1998) and the documented diverse negative effects it has on many children, it is important to examine the complex interplay of factors delineating the association between marital conflict and children’s emotional and behavioral maladjustment. Although some extant research has proposed models to understand this complex interrelationship (e.g., Cummings & Davies, 1994; Grych & Fincham, 1990, 1993; Margolin & John, 1997), unique and important in this research was an examination of the effects of marital conflict on the often-neglected area of “child social adjustment.” This domain is important because effective and rewarding peer relationships are crucial to later social and emotional development (Rubin & Stewart, 1995; Stocker & Youngblade, 1999) and difficulties with peer relationships have strong predictive power for the development of subsequent psychopathology (Parker & Asher, 1987).

Within the domain of social adjustment, this study specifically focused on the phenomenon of social withdrawal or social disengagement. It is an infrequently examined domain of child-related sequelae to marital conflict, perhaps because externalizing sequelae like angry and aggressive behavior seem to demand immediate intervention (Parker & Asher, 1987; Zakriski, Jacobs, & Coie, 1997). Social withdrawal, however, is in itself predictive of the subsequent manifestation of internalizing disorders such as anxiety and depression and in older children, peer rejection (Boivin, Hymel, & Burkowski, 1997; Rubin & Stewart, 1995).
Fincham (1994) has suggested that investigations of marital conflict and child maladjustment must extend beyond elucidating relations between these constructs and proceed to examine processes underlying these relationships. A developmental psychopathology perspective also suggests the importance of examining the complex interplay between personal and environmental factors and stages of child development in the expression of behavioral maladjustment (Cicchetti & Toth, 1995).

As an ideal, such an investigation would incorporate the complex three-part ecological model proposed by Bronfenbrenner (1979) suggesting that, for example, a child’s response to marital conflict would be moderated by a complex web of multidimensional environmental influences. In this model, the macrosystem encompasses the most distal influences on the child. Included here would be societal and institutional influences such as accepted societal conventions about violence, community responses to family violence and institutionalized systems of racism and poverty (Graham-Bermann, 1998). More proximal to the child would be the immediate community influences including extended family support and extant neighborhood violence as relevant examples. Most proximal to the child’s experience is the microsystem. This level might include within family variables such as the types and frequency of violence that occurs, family roles, and individual characteristics such as psychopathology (Graham-Bermann, 1998). To encompass all of Bronfenbrenner’s (1979) levels in a single study likely would be logistically impossible. As such, the model proposed in this study focused on microsystem phenomena while acknowledging the importance of more distal societal and community influences. To begin to explore these phenomena, a discussion of the specific
mechanisms proposed to act in the relationship between exposure to marital conflict and child maladjustment follows.

*Mechanisms of Action in Linking Marital Conflict and Child Maladjustment*

To understand how exposure to marital conflict impacts child social disengagement or withdrawal, the proposed model included two potential categories of mechanisms. These mechanisms included direct effects of exposure to destructive marital conflict on children and indirect effects mediated through disturbances in parenting practices subsequent to destructive marital conflict between mothers and fathers. Direct mechanisms are discussed first.

*Direct effects and mechanisms of interaction.* Considerable research has proposed that children exposed to marital conflict exhibit emotionally aroused responses including fear, anxiety and a desire to withdraw from conflictual situations (e.g., Cummings & Davies, 1994). As a result of direct exposure to marital conflict that includes violence, for example, children may perceive themselves or a loved family member to be in physical danger. Such an experience can result in the development of Post Traumatic Stress Syndrome (PTSD) manifested by fear and anxiety, intrusive memories and avoidance of individuals or places associated with the traumatic event (Graham-Bermann, 1998; Lehmann, 1997; Pynoos & Nader, 1990; Wolak & Finkelhor, 1998). Amplifying this concept, Janoff-Bulman (1992) suggested that violent family conflict might threaten a child’s sense of the family as a safe place and consequently weaken his or her global sense of security and predictability.

The impact of highly conflictual events embedded in a more global system of coercive marital behaviors may also be amplified by the child’s previous exposure
Children might, for example, believe that conflictual verbal interchanges can evolve into physical violence based on a history of such occurrences and might therefore experience a greater degree of distress in future conflictual situations than children without a previous experiential base (Fincham et al., 1994; Laumakis et al., 1998).

Expanding on this sensitization by exposure theme, Davies and Cummings (1994) present in their emotional security hypothesis, a useful model for understanding the mechanisms by which immediate anxious responses to destructive marital conflict may be translated into long-term social adjustment difficulties. According to this hypothesis, emotional security is derived from experiences in primary relationships with parents and projected as a template into future interactions. A child develops internal representations of interpersonal relationships based on parental examples and then uses these models to evaluate future interpersonal situations (Davies & Cummings, 1994; Graham-Bermann, 1998). If a child has been exposed to marital conflict and has responded with a highly aroused sense of fear and uncertainty, he or she may translate these feelings into subsequent peer relationships, especially if the potential for conflict arises (Holden, 1998; Kashani & Allan, 1998).

Exposure to marital conflict also may directly influence children’s social behavior, for example, as they model avoidant behaviors witnessed in the home. In subsequent interactions with peers, children may reproduce the behaviors they have learned through observation (Graham-Bermann, 1998; Holden, Stein, Richie, Harris, & Jouriles, 1998). Other effects of parent behavior on children’s maladjustment act more indirectly and are discussed below.
Indirect effects and mechanisms of action.  The primary indirect mechanism linking exposure to marital conflict and child maladjustment in this study was that of parenting. In adapting Bronfenbrenner’s (1979) ecological systems model to parenting behaviors and the etiology of child maltreatment, Belsky (1984) suggested a process model of parenting in which multiple influences interact. The parenting model he described is a buffered system in which child characteristics, parent characteristics and environmental conditions (within or outside of the family) combine to either generate stress (in which problems or skill deficits occur) or support (competent responding) that influence parenting behaviors. Stress in one area of the system can be ameliorated by strength or support in the other two.

Belsky (1984) suggested that personal parental characteristics might be the most salient system feature modulating the parent system. Effects of parental psychopathology might, for example, induce parenting difficulties by itself and also reduce a parent’s ability to cope with other child and environmental stressors thereby reducing parenting effectiveness. In this research, exposure to marital conflict was considered one such intra-family environmental stressor that might influence parenting. In deference to ecological validity and Belsky’s (1984) idea of the buffered family and parenting system, however, it was also proposed that personal parental characteristics such as emotional distress and parenting stress might help explain the relationship between experiences of marital conflict and parenting behaviors.

Before discussing the specific characteristics of parenting that influence child adjustment in families experiencing marital conflict, a brief preliminary discussion of
research exploring the more general relationship between these constructs will be presented. The first section of this discussion will focus on parenting styles.

Darling and Steinberg (1993) defined parenting styles as the “constellation of attitudes toward the child that are communicated to the child that……create the emotional climate in which parent’s behaviors are expressed” (p. 488). Based on the seminal work by Baumrind (1971, 1991) and Maccoby and Martin (1983), two primary orthogonal dimensions of parenting behaviors have come to be associated with distinct parenting styles and the subsequent successful socialization of children. The behavioral dimensions are demandingness (i.e., the number and kind of demands that parents would place on a child) and responsiveness/warmth referring to the contingent responses of parents to children’s behaviors. Combinations of these dimensions produce four categories or styles of parenting. Authoritative parenting is characterized as being high on both demandingness and responsiveness/warmth. Authoritarian parents are high in demandingness but low on sensitivity/warmth. Permissive parents manifest low demands but are responsive and warm whereas Neglectful parents are low on both dimensions of parenting. Limiting classification of parenting styles to variations in these two primary dimensions may be restrictive, however. Darling and Steinberg (1993) argued, for example, that other aspects of parenting such as restrictiveness, autonomy granting and/or coercion may not be accounted for by this system. Indeed, they suggest that the dimension of demandingness may take on a significantly different flavor if one defines demandingness as behavioral control or psychological control.

The greatest utility this classification system may have in understanding the association between parenting styles and children’s behaviors is in the role it plays in the
elucidation of parent’s values and goals in the process of raising their children. These values and goals are the primary determinants of the specific parenting behaviors or practices parents will choose as they socialize their children (Darling & Steinberg, 1993).

The indirect mechanism posited to affect the relation between marital conflict and child adjustment in the current study is a disruption in parent-child relationships primarily through disturbances in parenting behaviors or parenting practices (Cummings, 1998; Emery, 1982; Fauber, Forehand, Thomas, & Wierson, 1990; Graham-Bermann, 1998; Margolin & John, 1997). Although controversy remains as to the magnitude of such effects (Emery, Fincham, & Cummings, 1992; Erel & Berman, 1995; Fauber & Long, 1991), the preponderance of evidence suggests that parenting practices at least partially mediate the impact of marital conflict on children (Emery, 1982; Fincham et al., 1994; Margolin & John, 1997). Marital conflict has been associated with changes in a host of specific parenting behaviors (Cox, Paley, Paine, & Burchinal, 1999; Fauber, Forehand, McCombs Thomas, & Wierson, 1990; Jouriles & Farris, 1992; Mahoney, Boggio, & Jouriles, 1996; Rubin, Stewart, & Chen, 1995). Such experiences may affect the consistency of disciplinary practices (Jouriles & Farris, 1992), maternal warmth (Booth, Rose-Krasnor, Mekinnin, & Rubin, 1994), conflict resolution strategies (Goodman, Barfoot, Frye, & Belli, 1999), use of aggression (Margolin, John, Ghosh, & Gordis, 1996) emotional negativity, rejection and intrusion (Davies & Cummings, 1994; Margolin & John, 1997).

The impact on the child of exposure to these parenting practices may be similar to direct responses to marital conflict, that is, the development of externalizing responses such as hostility and aggression and, the specific interest of this research, internalizing
responses such as anxiety and depression (Margolin & John, 1997). To better understand how children develop internalizing responses to marital conflict as a function of parenting behavior, it is important to examine the evidence for the etiology of anxiety itself (Chorpita & Barlow, 1998; Chorpita, Brown, & Barlow, 1998; Muris & Merckelbach, 1998). Central to this research is the concept that a child’s experience of control and predictability in early parent-child interactions is an important factor in the establishment of competence and security (Chorpita & Barlow, 1998). Exposure to a series of environmental events such as marital conflict and its subsequent effects on parenting practices might foster feelings of unpredictability and loss of control in the child that may become manifest as anxiety. These feelings may also give rise to perceptual schema in the child that increase the likelihood of processing future interpersonal interactions as threatening as well (Chorpita & Barlow, 1998).

The above discussion meshes nicely with the work by Rubin and Stewart (1995) suggesting parental interactions with children emphasizing overcontrol, overprotectiveness, and intrusiveness are associated with less socially competent children (Rubin & Mills, 1993). The presence of an insensitive- negative emotional tone in the parent/child relation and power assertive behaviors also may be contributory (Obrien & Bahadur, 1998). These parental influences seem to coalesce into a climate of control and negativity that inhibits social competence and fosters socially disengaged behaviors (Gerlsma, Emmelcamp, & Arrindell, 1990). The long term impact of such disturbed interactional patterns, according to Rubin and Barlow (1995), is that behavioral inhibition derived from childhood experiences is predictive of the subsequent development of anxiety in social interactions and less competent social skills. Given the previously
mentioned theory about the formation of distressed social schema by children exposed to marital conflict, it seems likely such children would experience both anxiety and behavioral inhibition in interactions with peers.

The previous discussion has outlined a potential model in which exposure to marital conflict may influence children’s social adjustment either directly by traumatic response and social learning or indirectly arising from altered parenting practices. Because one of the specific foci of this study was on indirect mechanisms, it is important to consider possible influences on parenting behaviors that may affect child outcomes (see Figure 1).

*Moderators of Parenting Practices*

Disturbed parenting practices in families with marital conflict were proposed to mediate the relation between exposure to destructive marital conflict and the manifestation of social withdrawal or disengagement in children. Characteristics of the parents that impact parenting behaviors such as emotional distress and parenting stress, by adding depth and complexity to the proposed model, also offered broader opportunities for intervention than work with children alone. Considerable research exists delineating the impact of emotional distress and stress on parenting behaviors. Mothers experiencing anxiety, depression, and stress have been found to be generally less warm and supportive of their children, and conversely, more critical, controlling, and intrusive (Cummings, 1995, Cummings & Davies, 1994b; Downey & Coyne, 1991; Hammen, 1995; Hirshfield, Brody, Fararone, & Rosenbaum, 1997; Levendovsky & Graham-Bermann, 1996; Raver & Leadbeater, 1999; Whaley, Pinto, & Sigman, 1999).
Figure 1. Proposed mediation-moderation model for the interaction of marital conflict, parenting behavior, parent anxiety, depression, and stress, and child social adjustment.
Therefore, a second focus of this investigation was how stress and psychopathology affected the relation between marital conflict and parenting practices. Specifically, the moderational impact of maternal anxiety, depression, and perceived stress related to parenting was examined.

Baron and Kinney (1986) suggested that a moderator will affect the direction and/or degree of the relation between two variables. Moderators do not explain causation between variables. The proposition in this study was that maternal anxiety, depression, and stress would potentiate the relation between destructive marital conflict and parenting as they predict child social adjustment. That is, parents experiencing high levels of destructive marital conflict in addition to anxiety, depression, or stress would likely manifest the negative, insensitive, intrusive overprotective behaviors in parenting that may aid in the prediction of socially isolated and withdrawn behaviors in children exposed to marital conflict (Cummings & Davies, 1992).

**Purpose of Proposed Research**

This introduction has cited important research evidence delineating the impact of destructive marital conflict on children’s social and emotional disturbance. One specific manifestation of this disturbance, the little researched domain of social disengagement or withdrawal, has been shown to have important predictive value in the long-term social and emotional adjustment of children. Socially disengaged children may not manifest the dramatic externalizing aggression of under controlled victims of marital conflict but clearly require interventions focused on their needs. The purpose of this research was to elucidate a mediational-moderational model that describes some of the mechanisms in the complex interactions between individual, marital and child domains in distressed and
conflicted families and provide much needed knowledge to inform efforts at prevention and intervention with both parents and children. A more detailed examination of the literature relevant to the goals of this study will comprise the following section of this proposal.

**Literature Review**

To understand the complex interplay of effects of marital conflict and parenting on children’s social adjustment, research relevant to the components of the proposed mixed mediational-moderational model will be discussed. Research describing the prevalence of marital conflict and definitions of the salient constructs within it will be presented. Subsequent to this discussion, findings concerning the negative effects of destructive marital conflict on children will be discussed. This presentation will be comprised of three sections. First, a brief summary of research will be presented describing the general associations between exposure to marital violence and emotional and behavioral problems in children. Second, to acknowledge the two primary mechanisms that have been proposed in the literature as to how this association is operationalized (e.g., Cummings & Davies, 1994), more extensive subsequent sections will describe how child maladjustment can be generated by both direct and indirect effects. Direct effect mechanisms include the role of traumatic arousal subsequent to exposure to marital conflict and the part observational learning may play in the transmission of maladaptive behaviors. Indirect effects implicate disturbances in parenting practices as the mechanism by which marital conflict impacts children. Third, the effects of direct and indirect exposure to marital conflict has on children’s internalizing symptoms will be presented. Subsequent to this, the negative effect of
exposure to marital conflict on children’s social adjustment will be discussed and specific focus will be placed on evidence describing the etiology and emergence of the aspect of child social adjustment referred to as social disengagement or withdrawal. The phenomenon of social disengagement has received little attention in the literature and a discussion of research supporting the predictive importance of these behaviors for subsequent child emotional and social adjustment also will be included.

Finally, to enrich understanding of the relationship between marital conflict and parenting behaviors, literature relevant to the emotional distress and parenting stress of parents in conflictual relationships will be discussed. Research describing the influence of parental anxiety and depression, for example, also will focus on specific parenting behaviors related to these forms of distress and the impact these behaviors have on children. A brief presentation of findings about parent stress and specifically stress related to the parenting role also will be made.

*Marital Conflict*

Although marital conflict may be a widespread and perhaps necessary phenomenon as families strive to resolve inevitable disputes (Emery, 1989), marital conflict that involves verbal aggression, physical violence, and threats to leave the family is potentially very distressing for children and parents alike (e.g., Cummings & Davies, 1994a; Jaycox & Repetti, 1993, Laumakis et al., 1998). Evidence is emerging that describes the extent of marital conflict involving physical violence to which children are exposed. It is estimated, for example, that as many as 3.3 million children witness marital violence in a given year (Jaffe, Wolfe, & Wilson, 1990). National retrospective surveys conducted in the 1980s and early 1990s cited by Wolack and Finkelhor (1998)
suggest that between 11% and 16% of respondents recalled witnessing violent incidents
between their parents. More recently, Fantuzzo, Boruch, Beriama, Atkins, and Marcus
(1997) found, in an epidemiological survey of parents culled from police reports of
misdemeanor domestic violence in five major U.S. cities, direct exposure to marital
conflict exceeded 50% among children up to age 5. Even these high levels of witnessing
violence may not fully describe the extent of the problem, however. The term “exposure”
to or “experience” of marital conflict can also include children not physically present
during conflict episodes but exposed more indirectly. The child, for example, may have
overheard the conflict or inferred the conflict from alterations in parent behavior or
appearance (Holden, 1998). Research suggests that a significant portion of children in
families with violent marital conflict have been thus exposed (Hilton, 1992; Holden &

The construct of marital conflict is complex. In the broadest sense, it is a
ubiquitous phenomenon in all families as parents strive to resolve disputes about
intimacy, power, parenting and a host of other issues (Emery, 1989). As such, the
outcomes of such conflicts are not always detrimental to children. Research by
Cummings and Davies (1994) and Davies and Cummings (1994) suggests for example,
even animated marital conflicts that are brought to a resolution satisfactory to the
participants reduces the stress of child observers to angry interchanges and provides
positive models for resolving differences (Cummings, 1998). The focus of this
investigation, however, will be on conflicts that are likely to have a disturbing or
distressing impact on children. Even within the narrower domain of marital conflict that
is distressing to children, however, variability in target behavior and working definitions
has generated different labels applied to conflictual interchanges in families under study. Researchers focused in this area have labeled such behaviors, marital conflict, marital discord, marital dissatisfaction, parental acrimony, family conflict, family violence, and domestic violence among others. To avoid unnecessary definitional confusion and to encompass the variability of behavior subsumed under the above terms, the term marital conflict will be used in this research as the designated moniker to include not only the most dramatic expressions of marital conflict, physically assaultive and aggressive behaviors, but verbal disagreements and arguments as well.

Although clinical data suggest significant associations between marital conflict and child adjustment, some investigations into this phenomenon have found difficulty in validating this association empirically (Emery, 1982; Fincham, 1994). In a meta-analysis exploring this association, Reid and Crisafulli (1990) found, for example, that the mean effect size in 33 studies concerning marital discord and child behavior problems was just .16. This effect size lies between effects that would be considered small, .10 and moderate, .30. Part of the explanation for these modest findings suggest Reid and Crisafulli (1990), might have been the use of broad definitions of marital discord and child behavior problems. The authors propose therefore, that future studies need to account for the complexity within the domain of marital conflict by utilizing more specificity in defining child outcomes rather than examining general levels of adjustment (Fincham, 1994). Such was the goal of this investigation.

Effects of Marital Conflict on Children

Children are clearly distressed by exposure to marital conflict. Indeed, the negative effects of marital conflict on child adjustment remain robust after controlling for
other potentially disruptive family events such as general marital discord, unhappiness, parental separation and financial stress (Cummings & Davies, 1994a; Emery, 1982; Harrist & Ainsle, 1998; Harold & Conger, 1997; Katz & Gottman, 1996; Shaw & Emery, 1982). In an early study of this phenomenon, Shaw and Emery (1986) found that parental acrimony, a measure of cooperation and general animosity between separated parents, were independently significant predictors of children’s internalizing behaviors. Interestingly, children experiencing high parental acrimony and coincident high maternal depression manifested the greatest elevations in both internalizing and externalizing behaviors, that provided evidence of a multiple stressor effect (Hughes, 1988; Shaw & Emery, 1986).

Reflecting a similar emphasis, Jekielek (1998) found that exposure to marital conflict as well as experiencing marital dissolution (divorce or separation) were both predictive of higher levels of anxiety and depression/withdrawal than in children spared from these experiences. In that longitudinal study, interactions between conflict and disruption over time also suggested that in high conflict families, negative internalizing child outcomes were ameliorated if the parent divorced or separated. Indeed, child levels of anxiety were lower two years later than in high conflict families where the marriage remained intact.

Also, recent work by Kelig (1996) supports the association between marital conflict and child adjustment. The author recruited 273 couples to assess the validity of a newly constructed measure of marital conflict from the child’s perspective. In doing this, the participants filled out several measures of marital conflict as well as reports of their children’s adjustment. Findings across measures indicated that verbal aggression as well
as physical aggression in the marital relationship were significantly associated with both externalizing and internalizing symptoms endorsed on a checklist of children’s behaviors.

The link between marital conflict and negative emotional and behavioral outcomes for children is evident in the literature on domestic violence as well. A review of the marital violence literature by Edelson (1999) provides a useful summary of these effects. Witnessing family violence, for example, increases the likelihood of children manifesting both externalizing behaviors such as aggression and antisocial behaviors (Jouriles, Murphy, & O’Leary, 1989; Margolin, 1997; Margolin & John, 1997) and internalizing problems including anxiety and depression (Holden & Richie, 1991; McClosky, Figeredo, & Koss, 1995; O’Brien & Bahadur, 1998; Sternberg et al., 1993). Despite methodological differences, these studies of both marital conflict and family violence strongly suggest the negative impact of exposure to marital conflict on children. As such, they provide initial support for the more fine-grained investigation of the direct and indirect mechanisms potentiating the relationship between marital conflict and child maladjustment conducted in this study.

One of the concerns in examining the effects of marital conflict on children is the likely co-occurrence of different types of violence within the family (McClosky, Figeredo, & Koss, 1995; Sternberg, 1993, 1998). Straus, Gelles, and Steinmetz (1980) suggested, for example, that as many as 40% of children exposed to family violence may also be targets of physical abuse. Hughes (1988) also noted that in her sample of shelter residing children exposed to family violence, almost 60% also had been physically abused. After separating these children into “witness” and “abused-witness” groups, they were compared to a “no-violence exposure” group recruited from the community.
Analysis of behavioral and emotional problems among the groups suggested that on measures of anxiety and self-esteem, “abused witness” and “witness” group scores did not differ significantly, although both groups gave evidence of increased disturbance in comparison to the “non-violent” group. On a measure of externalizing problems, however, “abused-witness” children did show significantly higher scores than the other two groups.

The research discussed above clearly suggests that exposure to marital conflict can have a negative impact on children. One task of this research was to elucidate possible mechanisms by which this is effected. The following section will present results of studies designed to test the direct effect hypothesis of this negative impact. First will be the presentation of findings describing the effects of simulated parental anger on children’s adjustment.

**Direct Negative Effects of Marital Conflict on Children**

Children are clearly affected by exposure to parental anger. Analogue studies examining the effect of inter-parental anger on children support the distressing nature of these events, particularly for children sensitized by exposure to chronic family conflict (Cummings, 1998; Davis, Hops, Alpert, & Sheeber, 1998; El-Sheik, 1998). Simulation studies examining the effect of inter-adult anger on children, for example, have shown that children so exposed manifest emotional distress, aggression, fear and withdrawal (Adamson & Thompson, 1998; Cummings & Davies, 1994; Davies, Meyers, Cummings, & Heidel, 1999; El-Shick, 1997; Renk, Phares, & Epps, 1999). Adding complexity to this relationship, a previous history of exposure to marital conflict or conflict that is poorly
resolved in the family seems to heighten the child’s sensitivity to inter-adult anger by what is termed sensitization (Cummings, 1998; Davies & Cummings, 1994).

Sensitization also might be generalized into other relationships if the affective arousal engendered by frequent exposure to marital conflict in the family becomes the predominant mode of coping with other experiences of conflict such as between peers or with non-family adults (Davies & Cummings, 1994; Davis, Hops, Alpert, & Sheeber, 1998; El-Sheik, 1997; Laumakis, Margolin, & John, 1998). The following findings support this contention. By comparing the responses of children from low and high conflict homes to a videotaped session of inter-adult anger, El-Sheik (1997) described the latter cohort as demonstrating increased levels of angry and fearful feelings when compared with children from low conflict environments. Similarly, Cummings and colleagues (1998) exposed children from three age groups, 5-7, 10-12 and 18-21 to a series of four one-minute videotaped conflict segments to simulate histories of either destructive conflicts within the family or conflicts that were positively resolved. Interviews subsequent to the exposure revealed that, across all age groups, children previously exposed to marital conflict reported increased levels of anger, fear, and a desire to escape the situation than children exposed to conflicts that came to positive resolution.

In addition to the effects of sensitization to marital violence on children’s emotional well being, the intensity of marital conflict is also relevant to children’s adjustment (Cummings, 1998; Grych & Fincham, 1990; Laumakis et al., 1998; O’Hearn, Margolin, & John, 1997). Laumakis et al. (1998), for example, explored different aspects or “conditions” of simulated marital conflict that were the most distressing to children.
and the effects of this distress on children’s reactions and coping strategies. Findings revealed that children expressed a significantly higher frequency of negative reactions to threats of divorce and physical aggression than to “angry argument conditions” which in turn, were significantly more distressing than the “no conflict” condition. Similar results were indicated in children’s cognitive evaluations of the conflict with the “assault” condition evaluated most negatively and the remaining “angry conflict” conditions eliciting more negative evaluations about outcome than “conflict with positive affect” and “no conflict” scenarios. This was particularly significant for children with a history of exposure to marital conflict. The studies described above provide support for the contention that exposure to marital conflict has a negative impact on children, at least in simulation conditions. In the following section, findings from studies examining the effects of actual exposure to destructive marital conflict will be discussed.

In the most dramatic instances, experiencing a single extremely traumatic event, like very violent interchanges between parents or the murder or sexual assault of one parent by the other may have a significant negative impact on the child. Pynoos and Nader (1993) delineated child reactions to such events as examples of post traumatic stress reactions (PTSD) that intertwine with grief responses to parental loss to inhibit emotional coping. Indeed, the phenomenon of flashbacks or re-experiencing the event in question increases the likelihood of anxiety about parent welfare, anger, thoughts of revenge, and avoidance of situations that may show indicators of similar violence.

Lehmann (1997) explored the potential PTSD reactions of 84 shelter residing children exposed to marital violence. Children were divided into PTSD and non-PTSD groups based on a structured interview. Of the children interviewed, 56% met the DSM-
IV criteria for PTSD. The author also constructed regression analyses to predict PTSD symptoms in all participating children. Included as predictor variables were assault characteristics such as the duration and intensity of the witnessed violence, and child related attributions about the assault. This latter block of variables was comprised of child reports of personal vulnerability, perceptions of the world as dangerous and expressions of self-blame and guilt for the assault. Assault variables accounted for approximately 16% of the variance in PTSD symptoms. Negative attributions by the children accounted for an additional 54% of the variance, suggesting that these latter predictors were more salient to emotional distress. Thus, exposure to family violence may also have significant effects on children’s cognitions, which in themselves can cause distress. Findings in this study did not establish a causal relation between violence exposure and PTSD nor was an assessment made of other traumatic experiences such as sexual abuse to which a child might have been exposed.

Rossman (1998) specifically addressed potential processes by which exposure to violent marital conflict may potentiate generalized stress reactions. She suggested the importance of the cognitive schemas children in violent families develop to understand their environment. Although these schemas might be of immediate use in coping with unpredictable violent events in the family, they ultimately may prove maladaptive in the larger social world. The process unfolds when cognition and emotion intertwine to produce physiologic arousal (i.e., increased heart rate and production of neurotransmitters) that also may contribute to the manifestation of PTSD-like symptoms. The impact of such a process may negatively affect normal child development by reducing the desire to explore the environment and impairing the ability to form
predictable and stable bonds with significant adults. In exploring these contentions, Rossman’s (1998) comparison of four groups of children exposed to differing levels and types of violence and a non-violent control group suggested that the children exposed to violent marital conflict had higher reported levels of PTSD symptoms than did children from non-violent environments. These children also manifested poorer function on two cognitive measures of receptive language and perspective taking than those from the community sample. The diminished cognitive function, however, was not associated with the development of PTSD symptoms.

Results from the research discussed above suggest that exposure to marital conflict can negatively affect children in a number of ways. Aggressive or anxious emotional responses to conflict may be generalized to other interpersonal interactions and internalizing and externalizing symptoms in both young children and adolescents also seem to persist over time. Children also can form aggressive or anxious/depressed templates through which they act to try and establish broader social relationships especially with peers (see Rubin, Stewart, & Chen, 1995). Children’s cognitive ability to process interpersonal information also may be affected. These negative influences clearly justified the inclusion of direct influences into the model proposed in this study.

Discussion of the direct mechanism, however, is not the whole picture. Indeed, substantial evidence exists in the literature suggesting that an additional productive approach to understanding the etiology of children’s emotional and social maladjustment subsequent to exposure to marital conflict is found by examining an indirect model of transmission mediated through negative alterations in parenting practices (Cummings,

*Indirect Effects of Marital Conflict on Child Maladjustment*

Although the previous section presents findings and potential mechanisms supporting the negative impact of direct exposure to marital conflict on social adjustment, an indirect pathway mediated by parenting behaviors may also have explanatory power. Understanding the impact of this indirect pathway has both important heuristic value and also might provide opportunities to target intervention efforts towards both parents and children to ameliorate the negative effect of marital conflict on parenting and subsequently on children’s adjustment.

A number of studies have demonstrated that parenting behaviors may be negatively affected by the presence of marital conflict. These behaviors can include diminished emotional availability to or emotional negativity toward children (Erel & Berman, 1995), impaired child management procedures including inconsistent discipline, power assertion, control, hostility, and neglect (Anderson & Cramer-Benjamin, 1999; Cummings & Davies, 1994; Harold & Conger, 1997; Obrien & Bahadur, 1998). Parental cooperation in managing children’s behavior also may be diminished (Katz & Gottman, 1996). The indirect hypothesis suggests that it is these altered parenting behaviors that are primarily related to child emotional and social maladjustment in children (e.g., Emery, 1982; Erel & Burman, 1995; Margolin & John, 1997).

Two areas of controversy exist about the indirect role parenting has on the relation between marital discord and child adjustment (e.g., Emery et al., 1992; Erel & Burman, 1995; Fauber & Long, 1991; Margolin, John, Ghoush, & Gordis, 1996). The
The first area of disagreement, concerning questions about the nature of the impact that marital conflict has in parenting behaviors, will be briefly discussed in the subsequent section. The second area of controversy concerns the degree to which disturbed parenting practices mediate the relation between marital conflict and child maladjustment. Discussion of this controversy occurs at the conclusion of the following section and acts as a summary of both direct and indirect effect models.

The “spillover” hypothesis: Marital conflict negatively affects parenting. The first area of controversy in the literature relates to the nature of the impact marital conflict has on parenting behaviors. There exist two competing hypotheses as to how this is effected: the “spillover” hypothesis and the “compensatory” hypothesis. The “spillover” hypothesis (e.g., Kitzman, 2000) suggests that difficulties in the marital dyad will negatively affect parent-child interactions. This contention encompasses four proposed mechanisms as described by Erel and Burman (1995). In the first, parents who are experiencing conflict may focus on child misbehavior as a way of avoiding dealing with the primary problems in their marriage. This phenomenon is akin to the idea of “scapegoating” in the family therapy literature. The second mechanism, drawn from the social learning approach, suggests that children may model inappropriate and ineffective conflict resolution strategies they observe practiced by their parents (Davies, Hops, Alpert, & Scheeber, 1998). Third, marital conflict may preclude the parents from consistently managing their children’s behavior. Finally, the fourth mechanism suggests that stress experienced by the parents in conflictual marriages as well as challenging child rearing situations may inhibit parental resources to be a sensitive and supportive parent (Erel & Burman, 1995).
The “compensatory” hypothesis, on the other hand, suggests that the relationship between marital conflict and diminished parenting behaviors is not consistently positive (Erel & Burman, 1995). The proposition is made, for example, that as one of the parents perceives the disturbance and distrust in the marital dyad, he or she may form a closer relationship with the child, perhaps to meet parental needs for intimacy. This strengthened parent-child relationship may then provide a supportive buffering relationship for the child (Erel & Burman, 1995; Holden, Stein, Richie, Harris, & Jouriles, 1998; Katz & Gottman, 1996; Kolbo et al., 1996).

Although the compensatory hypothesis has received some support in the literature (see Holden et al., 1998) the preponderance of the literature suggests that the “spillover” hypothesis has more explanatory power in describing the relation between destructive marital conflict and child adjustment (Erel & Burman, 1995). This conclusion is supported by an important meta-analysis conducted by Erel and Burman (1995) of the relationships between marital functioning and parenting. Following the procedures for meta-analysis, the authors calculated mean weighted effect sizes for the 68 included studies and found a moderate relation of .46 between marital quality and the quality of parent-child relationships. Controlling for the quality of the studies by including investigations with independent ratings of behaviors and between-subjects designs still yielded positive effects, although to a smaller degree, .27. These findings suggested strong support for the “spillover” hypothesis and no support for the “compensatory” alternative. Thus, as the authors noted, in conflictual marriages there is a good likelihood that the troubled dyadic relationship will negatively impact parenting behaviors.
In a more specific investigation of the impact of chronic marital conflict on parenting behavior with infants, Owen and Cox (1997) found that marital conflict was negatively correlated to positive parenting behaviors and attitudes. Ratings of videotaped parent-child interactions suggested experiences of marital conflict reduced parent sensitivity, warmth and active interaction with children. Parent attitudes such as “delight in the baby “acceptance” and empathy were also negatively affected. The authors suggested that such disturbances in parenting might have deleteriously affected the formation of secure attachment between parents and children.

These negative affects appear salient to older children as well. Harrist and Ainslie (1998), employing a sample of 5 year old children, found moderate positive correlations between marital discord (verbal disagreements and non-consensus) and child social withdrawal. This relation, furthermore, was partially mediated by the quality of parent-child relationships. This study, however, did not include any assessment of overt physical violence, the presence of which may have facilitated the establishment of strong direct links between the variables under study.

The relationship between marital conflict and disturbances in parenting practices was also revealed in work by Kitzman (2000) and Jouriles and Farris (1992). These two studies employed experimental designs to test the relationship of conflictual parent interactions on subsequent parent-child interactions. In both cases, disruptions in parenting were evident. In the Jouriles and Farris (1992) study, parents who engaged in conflictual discussions with their spouse tended to engage their children in lower levels of conversation during a clean-up task and fathers were found to issue more “confusing” commands when compared to fathers assigned to non-conflictual discussions. Using a
similar experimental methodology, results from the Kitzmann (2000) study suggested that following conflictual discussions with spouses, fathers demonstrated less support and/or engagement with sons in play interactions.

Although both of these studies supported the concept of “spillover” from marital conflict to disruptions in parenting, the effects were short lived, dissipating in a second observed parent-child interaction. This dissipation is not surprising given the brief conflict engaged in by the parents. The participating couples were not referred for marital distress and therefore would likely not exhibit the chronic conflict characterized by such couples (Cummings & Davies, 1994). Indeed, as Kitzman (2000) noted, couples with histories of marital conflict demonstrated higher levels of negative responding to children in the laboratory interactions than couples without such a history.

Two of the contentions within the “spillover” hypothesis also are supported in work by Katz and Gottman (1996) that delineated the link between characteristics of distressed marriages and specific parenting behaviors by fathers and mothers. Experiences of marital hostility (primarily characterized as contempt and belligerence between husband and wife), for example, were significantly positively related to fathers’ intrusiveness with children and negatively related to involvement for fathers. For mothers, experiences of husband withdrawal (anger and unresponsiveness in discussions) were positively related to intrusiveness and criticism with children and negatively related to positive interactions with children. These patterns of criticism, intrusiveness and rejection also were predictive of teacher ratings of children’s internalizing behaviors (Katz & Gottman, 1995, 1996). Marital hostility also affected what Katz and Gottman (1996) termed co-parenting behaviors which were derived by calculating differences in
positive involvement between mothers and fathers, placing the couple’s interactions on a cooperative/competitive continuum and determining levels of involvement and disagreement in interactions with children. Results from this study indicated that marital hostility, as previously defined, was significantly related to high levels of disagreements about parenting and with low levels of interaction, responsiveness and cooperation in parenting decisions.

Interestingly, marital hostility and withdrawal from the partner by both mothers and fathers also was associated with the establishment of higher levels of positive individual involvement with children. Thus it appeared in this instance, that as the marriage dyad experienced discord and reduced communication and cooperation, the individual parents tended to establish stronger bonds with their children. There is some doubt, however, that the structure of this altered relationship (akin to triangulation, as termed by the family therapy literature) is truly positive for the child and it also may come at the expense of an increasingly negative relationship with the other parent (Erel & Burman, 1995; Holden et al., 1998; Katz & Gottman, 1995).

The nature of maternal conflict also may affect the capacity of parents to provide buffering positive relationships with their children. Recent work by Levendosky and Graham-Bermann (2000) indicated maternal experiences of physical and psychological abuse were negatively related to observed maternal warmth in parent-child interactions and positively associated with child depression and antisocial behavior. The authors suggested that women exposed to chronic abusive relationships might have lost the emotional resources to provide the warmth and support that might protect their children from the dyadic conflict.
Even for parents who are able to foster a positive parent-child relationship, exposure to marital conflict might still be deleterious for the child. Specifically addressing the buffering quality of positive parent–child relationships, work by Lutzke, Wolchich, and Braver (1996) suggested that the quality of parenting from both the child’s and mother’s perspective did not act as a moderator or buffer between marital conflict and children’s adjustment. High quality parenting did not appear to ameliorate the impact of marital conflict on children. Perhaps, as the authors noted, the positive relationship between mother and child only buffers the child from specific stresses related to that relationship but does not address child concerns about the potential for divorce and family dissolution and an increasingly distant or conflictual relationship with the father.

Thus, despite continued discussion about the relation between marital conflict and parenting behaviors, the preponderance of the literature suggests that the “spillover” hypothesis has more explanatory power about the relationship between marital conflict and parenting behavior than does the “compensatory.” Clear evidence exists that marital conflict affects maternal and paternal behaviors and child adjustment both in terms of diminished warmth and support for the child and in increased hostility and control. This research is important as it provides explanatory evidence supporting the indirect path connecting destructive marital conflict and child maladjustment and thus opportunities to provide ecologically valid interventions for both parents and children.

Despite the demonstrated negative effects of both direct and indirect pathways between marital conflict and child maladjustment, questions remain about the balance and proportion of action these mechanisms have in the transmission of distress. These questions are be addressed in the following discussion.
The strength of parenting as a mediator. The second controversy about the association between destructive marital conflict, parenting, and child maladjustment concerns the strength of the mediating role of parenting. On one hand for example, Fauber and Long (1991) presented an argument for the unalloyed role of parenting in the development of child emotional and behavioral difficulties. Conversely, and by way of response, Emery, Fincham, and Cummings (1992) argued that clear evidence exists for the direct effects of exposure to marital conflict (see previous discussion) and that from a clinical perspective reducing the scope of etiological possibilities may limit treatment options. The authors urged the adoption of a wholistic approach in which parenting difficulties were seen in context of personal characteristics of both parents and children. The influence of parental psychopathology as an intra-personal influence on parenting is an example of this complexity. To accommodate these arguments, this dissertation tested a model that explored both direct effects of marital conflict on child adjustment and indirect effects in a mixed model combining the influences of both pathways. Research supporting this complex relationship is discussed below.

In a recent attempt to explore the relation between direct, indirect, and combined effects of marital conflict on children, Margolin and John (1997) recruited a sample of 180 8 to 12 year old children residing with intact families. Assessments of marital aggression, child’s perceptions of positive and power assertive parenting, and child internalizing and externalizing symptoms were conducted by self-report in a laboratory setting. Subscale scores drawn from these measures were used as manifest variables to construct a five latent variable path analytic model. Three iterations of the five variable model were tested separately for boys and girls: (a) an assessment of only direct effects
of marital conflict with child anxiety-depression and child hostility, (b) an indirect model in which parents’ power assertive and positive parenting behaviors were used as mediators between marital aggression and child outcomes and (c) a full model in which both direct and indirect effects were combined.

Results of the path analyses suggested that, for girls, marital aggression had direct effects on girl’s hostility and anxiety-depression with approximately equal strength. Second, marital aggression also had a direct impact on children’s perceptions of parenting, with a stronger negative effect on positive parenting that in predicting hostile parenting behaviors. Third, when the full model, including both direct and indirect effects was analyzed, both direct and indirect effects were observed. In terms of the mediating effects of parenting behaviors on child outcomes, the direct effects of marital aggression on children were significantly reduced (but not to zero) suggesting at least partial mediation.

For boys, the picture was somewhat different. In the direct effects model, marital aggression strongly predicted parent’s power assertive behaviors and, in terms of child adjustment, both child internalizing and externalizing outcomes. The direct effect of marital aggression on positive parenting behaviors was negligible, however.

In terms of indirect effects of parenting on child adjustment, both power assertive and positive parenting strongly predicted both internalizing and externalizing sequelae for boys. In the full mixed effects model, combining both direct and indirect effects, mediation by hostile parenting was evident as the direct effects of marital aggression on child outcomes was significantly reduced but not eliminated. Positive parenting could not be considered a mediator because it was not significantly related to marital aggression.
and did not, therefore, meet the criteria for mediation (Baron & Kinney, 1986). Despite the presence of such methodological weaknesses as an exclusive reliance on self-report inventories, the importance of this research is that both direct and indirect effects were shown to have explanatory power in describing child outcomes. It therefore provided a conceptual template for the present study. To overcome the limitations of relying exclusively on self-reports used in the Margolin and John (1997) investigation, the current study employed the observation of parent-child interactions to assess parenting behaviors. Second, children’s social behaviors were assessed both by teacher report and observations of play behaviors on a school playground.

The presence of direct and indirect effects also was evident in work by Webster-Stratton and Hammond (1999) that examined the relations between marital conflict, parenting style, and child conduct problems. The authors found direct paths between negative parental conflict management style (low confidence in one’s ability to solve problems and poor conflict resolution skills) and children’s ineffective conflict management skills. This finding appears to support the notion that child behavior may be influenced by observational learning.

Results from that study also suggested an indirect linkage between independent and dependent variables partially mediated through disturbed parenting practices. Specifically, mothers’ and fathers’ parenting behaviors, reflected by low positive affect, high negative affect, and critical discipline were predictive of behavior problems in children. Additionally, mothers’ sense of powerlessness, as measured by a sense of self-efficacy in problem solving, predicted children’s difficulties in their own interactions.
with peers and parents. Again, this study suggested the importance of using a mixed
effects model as proposed in this research.

In sum, substantial evidence exists demonstrating the negative influence of both
direct effects of exposure to marital conflict on children via traumatic arousal and
modeling and indirect effects mediated by alterations in parenting practices. The next
step in this current study was to explore how direct or indirect exposure to marital
conflict can facilitate the development of internalizing sequelae in children. Establishing
this link is important because children who experience internalizing difficulties such as
anxiety and depression by either pathway tend to withdraw from conflict situations and
thus might experience difficulty in establishing and maintaining effective and rewarding
social relationships. As an introduction to this process, a closer examination of the effects
of marital conflict on children’s internalizing distress is presented in the following
section.

Marital Conflict and Internalizing Symptoms

The link between direct and indirect exposure to marital conflict and both
externalizing and internalizing adjustment problems in many children has been clearly
established. Because the scientific literature suggests that internalizing symptoms in
children might be significantly related to subsequent social withdrawal or disengagement
by children, the intent of this next section of the paper is to more completely explore the
link between exposure to marital conflict and such internalizing symptoms as sadness and
anxiety (Rubin, Stewart, & Chen, 1995). Although few studies have as yet specifically
examined this linkage, some evidence for this relationship lies in more general findings
of child maladjustment subsequent to exposure to marital conflict.
Within the literature on children’s exposure to simulated inter-adult anger, for example, Cummings and Davies (1994) cited a plethora of research summarizing children’s responses to adult anger derived from observational studies, child self-reports, and measurement of children’s physiological responses. Observational studies have revealed for example, that children frequently respond to simulated inter-adult anger by crying, covering their ears, attempting to leave the room and making verbal comments indicating distress and anxiety (e.g., Cummings Ballard, El-Sheik, & Lake 1991; Cummings & Davies, 1994; El-Sheik, Ballard, & Cummings, 1994).

Research using child self-report of feelings about exposure to adults engaged in angry interchanges reveals similar findings. El-Sheik and Cheskin (1995), for example, exposed 64 7-10 year old children to videotaped angry adult–adult interactions involving a range of verbally and physically hostile behaviors. These latter behaviors might have consisted of threats to hit or a clenched fist. Children were asked how they felt during the episodes and how strongly they felt that way which provided an assessment of both the type and intensity of emotional responses. In responding to this scenario, 30.5% of children reported feeling sad, with a mean intensity (on a 0-4 scale, with 0 indicating no response) of 2.44. Similarly, 21.1% of the children felt scared, with a mean intensity of 1.17. Child responses to scenarios of angry interchanges accompanied by a physically hostile component revealed similar levels of distress, with a slightly higher intensity of feeling, 2.6 and 1.36 respectively.

Studies using measures of the child’s physiologic responses to simulated inter-adult anger also reveal some evidence for autonomic arousal including elevated heart rate, increased blood pressure and skin conductance indicative of distress and anxiety
These phenomena are in evidence even at an early age. El-Sheik, Cummings, and Goetch (1989) for example, found that among preschoolers, responses to angry adult interchanges suggested significant increases in heart rate, systolic blood pressure, and a trend toward increases in diastolic blood pressure compared with baseline measurements.

Although the anger simulation studies lend support to the idea that exposure to inter-adult conflict is distressing to children, Cummings and Davies (1994) suggested that the use of actors and simulated arguments to assess the impact of angry interchanges in children may limit generalizability to more naturalistic encounters within the actual family system. Children might, in fact, be more distressed when exposed to these interchanges compared to simulated events because of the perceived potential for family dissolution and possibility of direct physical harm to themselves (Laumakis, et al., 1998; O'Brien, Margolin, & John, 1999). Indeed, O'Brien and colleagues (1999) found that when parents recruited from the community kept a record of their children’s responses to actual conflict situations, a significant proportion of the children appeared either sad and frightened or left the room. The authors hypothesized that this latter response might have been a strategy to avoid the distress of their parent verbal or physical conflicts.

Work by Hughes and Luke (1998) also supports the link between exposure to family violence and internalizing symptoms in some children. The authors used cluster analysis to form groups of shelter residing children based on responses to exposure to marital violence. Among the five groups formed to delineate behavioral and emotional maladjustment, the “high general distress group” and “depressed group” manifested moderate to high levels of anxiety and depression. These findings support the link
between exposure to marital conflict and children’s internalizing symptoms of distress, at least for some significant portion of children so exposed.

The relationship between exposure to marital conflict and internalizing symptoms of maladjustment is evident in older children as well. Harold and Conger (1997), for example, conducted a three-year longitudinal study of such effects among 370 children with a mean age of 12.7 years. This study adopted the sensitization model suggested by Davies and Cummings (1994) in which the occurrence of marital conflict over time heightens the child’s perception of parental anger especially as directed toward them.

Data were collected over a period of two weeks each year of the study by self-report questionnaire, interview and videotaped observation of family interactions. Marital conflict (the frequency of negative verbal interchanges between the parents and levels of hostility between the parents and children) and child perceptions of marital conflict were measured by questionnaire. These measures were then subsumed into latent variables to test a model in which adolescent perceptions of parental conflict and perceived hostility toward them predicted later maladjustment.

Results supported the model. Specifically, at time one (the initial assessment period) marital conflict as measured by parent self-report and observation, was related to adolescent internalizing symptoms measured concurrently but not to adolescent externalizing symptoms. The adolescent’s perception of the frequency of marital conflict also was a significant predictor of internalizing symptoms at time 2, suggesting that this awareness tended to heighten the child’s distress as measured over time.

The studies discussed above strongly suggest that some of the responses children manifest in response to parental conflict are fear, sadness, and avoidance of conflictual
situations. These fearful and avoidant behaviors are substantiated by findings documenting children’s autonomic arousal to parental anger and these effects may persist in time after exposure to conflict has ended. The implications of these responses for this study are substantial. The traumatic arousal and sensitization hypotheses suggest, for example, that it is possible for children with exposure to either very intense episodes of marital conflict and/or less intense but more chronic conflict patterns between their parents to respond in ways similar to their parents in subsequent conflict situations with adults and peers. These avoidant responses can then deprive children of developmentally important peer relationships. Also, the negative effects destructive marital conflict can have on parenting might inhibit children’s ability to form effective social relationships by reducing warmth and support, restricting opportunities for exploration and modeling ineffective conflict resolution strategies. Such avoidance also can have a self-fulfilling component as children with poor peer relationships are at risk for a host of subsequent emotional disorders (Parker & Asher, 1987; Rubin & Barlow, 1995).

The Direct and Indirect Effects of Destructive Marital Conflict on Child Social Adjustment

In keeping with the contention of this study that marital violence has both direct effects on children via traumatic arousal and the modeling of ineffective interpersonal interactions and indirect effects transmitted through alterations in parenting practices, the discussion of the impact of marital conflict on children’s social adjustment is similarly bifurcated.

Investigation of both the direct and indirect negative impact of marital conflict on children’s social adjustment is important because of the crucial role that social
relationships play in children’s social, emotional and even cognitive development. Collins, Harris, and Susman (1995), for example, suggested that one of the primary developmental tasks encountered by children as they reach middle childhood is the expansion of their social world. Theorists like Sullivan and Piaget have also noted the importance of social influences at this time. Sullivan (1954), for example, cited the importance of forming a close relationship with a same sex peer as a precursor to the ability to create intimate relationships as an adolescent and adult. Piaget (1928) noted that the ability to take the perspective of another develops during early childhood within the context of interpersonal relationships influenced by argument, discussion and compromise. These interactions allow the child to develop a sense of interpersonal reciprocity and ultimately, social knowledge (Hartup, 1992).

In characterizing a general relation between exposure to conflict and problematic social adjustment of children, early research efforts tended to produce mixed results (Kolbo et al., 1996). Evidence supporting decreased social competence in children exposed to destructive marital conflict was evident in some research (e.g., Jaffee, Wolfe, Wilson, & Zak, 1985) while no differences in social competence were found in other studies (e.g., Hughes, Parkinson, & Vargo, 1989). More recent work, however, supports the positive relation between exposure to violence and social difficulties for children (Anderson & Cramer-Benjamin, 1999). Jaffe, Wolfe, and Wilson (1990) cited research in which children, observed in shelters for battered women, tended to be isolated and withdrawn from peers. Similar findings were reported by Moore and Peppler (1998) in which mothers residing in shelters described their children as exhibiting significantly
poorer social competence in comparison with children from two-parent non-violent families.

Because marital conflict and family violence research addressing the relation between internalizing symptoms in children and an impaired ability to form social relationships is so sparse, with about 40% of studies reviewed by Fantuzzo and Lundquist (1989) assessing the domain, some illumination may be provided by examining research in other domains within the literature. With reference to the discussion of the relation between marital conflict and children’s internalizing symptoms presented in the previous section, epidemiological data within the general population of children helps elucidate relations between depression, anxiety, and social impairment. Ialongo and colleagues (1996) gathered self-report inventories from 1,197 urban dwelling first grade children concerning anxious and depressive symptoms the children were experiencing. On the basis of these self-reports, children were classified into groups characterized as either anxious, depressed, both or neither.

Results from these self-reports were then compared, alone and in combination, with teacher reports of classroom social adaptation and peer nominations about likability, participation in play, and shyness. Results from this study suggested that, in comparison with non-distressed children, depressed boys showed significant levels of teacher-rated shy behaviors and peer-rated low levels of likability. Similarly, boys classified as anxious also manifested significant levels of teacher-rated shyness and peer-related shyness. Boys fitting the co-morbid classification (depressed and anxious) manifested even higher levels of these behaviors than boys with a single diagnosis. For girls, the only significant social impairments were for individuals classified as co-morbid. They
manifested significantly higher levels of shyness as rated by teachers than did girls in a comparison group but there were no differences in peer ratings.

The relation between depression and social competence was broadened in work by Levendosky, Okun, and Parker (1996) to include child self-perceptions of social adjustment as well as those of teachers and parents. In a comparison study of maltreated and non-maltreated children that also measured symptoms of depression, results suggested depression was a better predictor of social competence than maltreatment status alone. Depression was also a significant predictor of social problem solving ability as assessed by the number of socially competent solutions generated in response to problem scenarios.

One approach to understanding how children’s anxiety and depression might impact social adjustment lies in the concept of social competence. Katz and McClellan (1997) suggested that social competence is a multi-faceted phenomenon allowing a person to “use environmental and personal resources … to make possible satisfying and competent participation in and contributions to the groups, communities, and societies to which one belongs … and that socially competent children are those able to engage in satisfying interactions and activities with adults and peers” (p. 1). Such satisfying interactions are facilitated by the child’s ability to comprehend social norms and customs within peer groups, an ability to communicate, compromise, assert preferences, and accurately understand the emotions and behaviors of others. Specific social skills also interact with these forms of social knowledge to allow the child to successfully enter social groups and maintain relationships in them (Katz & McClellan, 1997). One critical skill that comprises social competence is the ability of a child to regulate his or her
emotions. Emotional regulation allows the individual to cope with frustration, anger and anxiety in such a way to reduce emotional and physiological arousal and allow for acquisition of social knowledge and social skills (Gottman & Katz, 1989; Katz & Gottman, 1995; Katz & McClellan, 1997).

The interaction between emotional regulation, social knowledge and social skills, and social competence also provides a useful framework to understand the direct impact of marital conflict on children’s social competence and social adjustment. There have been two primary etiologic pathways used to explain this interaction (Cummings & Davies, 1994; Graham-Bermann, 1998; Katz & Gottman, 1993, 1995). The first of these pathways, as discussed in a previous section of this literature review, characterizes the direct impact of exposure to marital conflict as one of traumatic arousal. Traumatic arousal after exposure to family violence can generate anxiety and potentially more severe PTSD symptoms in children and might engender a difficulty with emotional regulation in broad areas of the child’s social world (Graham-Bermann, 1998; Laumakis et al., 1998). This difficulty might be especially salient in the face of inevitable conflicts with peers and adults and result in a desire to avoid the persons and places associated with such disturbing events. Such a process also might be exacerbated by the tendency of marital conflict to be a chronic pattern of interaction within the family rather than a single isolated event (Cummings & Davies, 1994; Graham-Bermann, 1998).

Support for the relationship between emotional regulation and social competence comes from the work by Fabes and colleagues (1999), in which well-adjusted socially competent peer experiences were related to a child’s ability to regulate affect and inhibit particularly negative emotions in interpersonal interactions. The relation between
regulation and social competence was thought to be moderated by the level of intensity of the interaction (with low intensity interactions requiring little regulation, for example) and mediated by the level of negative affect generated by the interaction (high negative arousal interferes with socially competent behavioral expressions).

Results from data analysis supported the authors’ hypotheses. The intensity of interpersonal interactions moderated both the child’s levels of negative emotional responding and ability to produce socially competent solutions to interpersonal problems. This study concluded that, in peer interactions, the higher the level of negative affect generated the less likely positive competent responses could occur. Therefore, in families where the children are exposed to marital conflict, emotional arousal generated by chronic angry and perhaps violent interchanges may well leave the child with reduced resources to cope with conflictual situations with peers. This relationship may be especially strong if such interactions result in high negative reactivity to conflict as well negative cognitive appraisals of such situations based on conflict exposure history (Cummings & Davies, 1994; Grych & Fincham, 1990).

The second proposed pathway used to explain the direct impact of exposure to marital conflict on children’s social adjustment is encompassed by social learning theory (Bandura, 1986). This formulation has been primarily applied to the learning of aggressive externalizing behaviors through vicarious reinforcement in which children learn behaviors through observation of aggressive parental models within the family (Patterson, 1982; Widom, 1989). Although the literature contains no published studies to support this contention, Graham-Bermann (1998) suggested that children exposed to a family environment of marital coercion and conflict may imitate social interactional
relationships that resemble responses of the victim. In short, some children may adopt the submissive, anxious and self-blaming responses to conflicts typically associated with the internalizing symptoms.

*Marital Conflict, Disturbances in Parenting, and Child Social Adjustment*

As a precursor to the following section describing the negative impact disturbances in parenting have on child social adjustment, a brief discussion of the theoretical bases for child social development is required. Developmental theory suggests that parents provide needed skills and support for children to expand and explore their social world (Rubin, Stewart, & Chen, 1995). Indeed, relationships formed with parents can provide the template for subsequent interactions with other adults and peers (Bornstein, 1995) and form what are termed “inner working models” of interpersonal interactions (Rubin et al., 1995). Disturbances in parent-child relationships can disrupt children’s social development by creating interpersonal insecurity or by reducing opportunities for interaction by restricting exploration. An example of this process was provided by Booth and colleagues (1994) who found that the observed quality of parent-child attachment at age 4 was a significant predictor of both observed child internalizing difficulties and reduced social engagement with peers four years later.

A number of factors may influence the parent-child relationship, including parent and child characteristics and environmental stresses. Among these are parental psychopathology including depression (e.g., Downey & Coyne, 1990) and marital conflict (Emery, 1982, Harrist & Ainslie, 1998; Wilson & Gottman, 1995). In assessing the role of destructive marital conflict on parenting and children’s sibling and peer relationships, for example, Stocker and Youngblade (1999) found clear associations
between experiences of marital conflict and parental hostility towards children for both mothers and fathers. These disturbed parenting behaviors were associated with impairments in the children’s sibling and peer relationships. Maternal hostility toward the children, for example, mediated the impact of marital conflict and sibling conflict. Paternal hostility toward the children mediated the relationship between marital conflict and problematic peer relationships. The indirect mechanisms elucidated in that study clearly demonstrated a process by which marital conflict spills over into parent–child relations and affects children’s social adjustment.

Further support for this link is found in the work of Gottman and Katz (1989, 1995). Research with 4-5 year old children in a sample recruited from the community suggested that exposure to marital conflict negatively affected children’s social relationships in two ways. First, the authors found that these children tended to have difficulty regulating emotions and chose, as a result, play behaviors with low levels of interactions (more solitary play) with peers perhaps in an attempt to maintain harmonious relationships. Second, couples experiencing marital conflict tended to manifest cold, unresponsive and hostile parenting behaviors with poor limit setting. Children from these families were observed to play with best peer friends at lower levels of interaction than did children from non-conflictual families. Child behaviors also tended to persist over time (Gottman & Katz, 1995). One of the weaknesses of Gottman and Katz (1995) studies, however, is the methodology used to assess evidence of social maladjustment. In all cases children’s social behaviors were measured by parent report or laboratory observation of peer dyads. In contrast, one of the significant strengths of the current study was that children’s social behaviors were rated outside the home where more
naturalistic interactions might be expected. Teachers were asked to rate child social behaviors in the classroom and children were also observed during unstructured playtime on the school playground.

The findings presented above support the contention of this research that the link between marital conflict and children’s social maladjustment is at least partially mediated by parenting behaviors. Previous sections of this review have established important linkages between exposure to marital conflict and deleterious outcomes for many children expressed through internalizing symptoms and difficulties with social adjustment. What remains is the key task of establishing a conceptual link between children’s internalizing symptoms and the phenomenon of social withdrawal or disengagement. This next section examines this link by initially defining and discussing social withdrawal or disengagement, and then suggesting that social withdrawal or disengagement may be one outcome arising from the development of specific internalizing symptoms of anxiety and consequent behavioral inhibition.

**The Relationship Between Marital Conflict, Parenting, and Social Withdrawal**

Within the domain of social adjustment, this investigation focused on one manifestation of interpersonal difficulty subsequent to exposure to marital conflict termed social withdrawal or disengagement. The importance of investigating this phenomenon is underscored by the presence of social withdrawal as a part of several categories of psychopathology in children (Rubin & Assemendorf, 1993; Rubin, Stewart, & Chen, 1995). Manifestations of socially withdrawn behaviors, for example, are predictive of negative emotional and educational outcomes including both anxiety and depressive disorders and poor adaptation to school (Bolvin, Hymel, & Burkowski, 1995; Cicchetti &
Toth, 1995; Rubin & Stewart, 1995). Emerging evidence also describes the enduring negative impact of these socially disengaged or socially withdrawn behaviors in peer relationships (Hymel, Rubin, Rowden, & Lemare, 1990; Little & Garber, 1995; Rubin, Chen, McDougall, Bowker, & Mckinnin, 1995).

Social withdrawal or disengagement is in itself a complex phenomenon. By definition, social disengagement or withdrawal as delineated by Rubin and Stewart (1995), is suggestive of “a consistent (across time and setting) display of solitary behavior with familiar and/unfamiliar peers” (p. 280). These behaviors might develop, however, by different pathways (Harrist, Zaia, Bates, Dodge, & Pettit, 1997; Rubin, 1993). Solitary behavior might be, for example, a result of low motivation for making social contacts (Rubin, 1993). Children so observed might be more object rather than person oriented and choose individual or parallel play much in the fashion of very young children. A second cluster of children might be interested in social engagement but are socially isolated by peers because of poorly developed social skills such as limited ability to manage conflict (Harrist et al., 1997; Rubin, 1993). Finally, a third cohort of children, termed passive-anxious by Rubin and Mills (1988), may wish to engage with peers but may feel inhibited in doing so. This avoidant behavior may be considered the result of fearful inhibition and anxious anticipation of rejection or of sad and depressed affect and coincident timidity (Harrist et al., 1997). Despite this complexity, Rubin and Barlow (1995) noted that whatever the ultimate etiology of the observed behaviors, these socially withdrawn children are limited in their ability to form effective relationships. Given that this research focused on the internalizing difficulties experienced by children exposed to marital conflict and the role that direct exposure and, more importantly, parenting
behaviors have on their development, a discussion about the development of inhibited, timid and anxious orientations in children is presented below.

Elucidation of mechanisms relating to the focus of this study, the development of social disengagement or withdrawal as a behavioral expression of anxiety, can be viewed as a confluence of three lines of research. The first of these is Davies and Cummings (1994) emotional security hypothesis, a useful model for understanding the mechanisms of transition from a child’s immediate response to marital conflict to their long-term adjustment. Emotional security is derived from experience, primarily in relationships with parents and projected as a template into future interactions. Specifically, a child develops internal representations of interpersonal relationships based on parental examples and then uses these models to evaluate future interpersonal situations (Davies, & Cummings, 1994; Graham-Bermann, 1998). Parenting behaviors that are associated with negative marital conflict situations include emotional negativity towards children, rejection and intrusion. These parenting behaviors are also associated with the formation of distorted interpersonal models and are indicated in the prediction of subsequent dysphoria and social withdrawal in children (Davies & Cummings, 1994). Harrist and Ainslie (1998) in support of this contention, found that child interpersonal awareness (characterized as the ability to identify and appropriately label emotions) was an important mediating variable in the development of socially withdrawn behaviors in families experiencing marital conflict. Key to this process is the concept of emotional regulation previously discussed. The impact of exposure to marital conflict may facilitate the perception of conflictual situations as threatening and provide the child with models of conflict resolution that are highly aversive. Indeed, the child may find
difficulty in regulating their own affect in future potentially conflictual situations with peers.

The second strand of research comes from literature examining the etiology of anxiety (Chorpita & Barlow, 1998; Chorpita, Brown, & Barlow, 1998; Dadds, Barrett, Rapee, & Ryan, 1996; LaFreniere & Dumas, 1992; Muris & Merckelbach, 1998). Central to that research is the concept that a child’s experience of control and predictability in early parent-child interactions is an important factor in the establishment of competence and security (Chorpita & Barlow, 1998). Two factors discussed by the authors may have an important impact on this process. First, if a child is exposed to a series of environmental events such as destructive marital conflict, fostering feelings of unpredictability and loss of control, this exposure might subsequently give rise to a tendency to perceive future experiences in a similar fashion (Chorpita & Barlow, 1998). This notion is akin to the Cummings and Davies (1994) emotional security hypothesis in which heightened emotional arousal was implicated as a mechanism in facilitating deficits in social–cognitive information processing and in trauma (Graham-Bermann, 1998; Harrist & Ainslie, 1998). Second, parenting practices may amplify this perception. Chorpita & Barlow (1998) suggested two dimensions of parent behavioral interactions with children that might specifically foster the development of anxiety: (a) insensitive, cold, and non-contingent responses, (Fincham, Grych, & Osborne, 1994) and (b) overprotective-intrusive responses (Rubin & Stewart, 1995). The first of these parenting behaviors might limit the child’s experience of being able to control reinforcement in his or her environment and thus reduce perceived control over environmental events. The second set of behaviors, intrusive control or overprotectiveness, tend to discourage

The development of anxiety in children may be facilitated by parents who model ineffective conflict resolution styles to interpersonal conflict by using avoidant resolution strategies. Building on their previous work (Barrett, Rapee, Dadds, & Ryan, 1996), Dadds and colleagues (1996) suggested a family process model in which the conflict resolution strategies of clinic referred children diagnosed with anxiety and aggression were compared with those of a non-clinic control group. Results suggested that anxious children, when compared to the other two groups, generated more avoidant solutions to interpersonal problems and were less likely to propose prosocial resolutions. In terms of interactions with their children, parents of anxious children appeared more likely to facilitate the choice of avoidant strategies rather than either prosocial or aggressive resolutions. Indeed, parents of anxious children tended to listen more frequently to and respond to children’s proposals of avoidant behaviors rather than alternatives.

The findings discussed above mesh nicely with the third strand of work by Rubin and Stewart (1995) that suggested parental interactions with children emphasizing overcontrol, overprotectiveness and intrusiveness are associated with less socially competent children. The presence of an insensitive-negative emotional tone in the parent-child relation and power assertive behaviors also may be contributory (O’Brien & Bahadur, 1998). These parental influences seem to coalesce into a climate of control and negativity that inhibits social competence and fosters socially disengaged behaviors (Gerlsma, Emmelcamp, & Arrindell, 1990). Rubin and Barlow (1995) also suggested a
mechanism by which behavioral inhibition derived from childhood experiences is associated with the development of anxiety in social interactions and less competent social skills. Given the previously mentioned theory about the formation of distressed social schema by children exposed to marital conflict, it seems likely such children would experience both affective anxiety and behavioral inhibition in interactions with peers.

To summarize the research discussed up to this point, marital conflict has been shown to be both directly and indirectly associated with negative child outcomes, specifically internalizing disorders such as anxiety and depression and ultimately child social withdrawal or disengagement. As such, a mixed-mediational model was proposed in this study to explain these associations (see Fig. 1). This study, however, also sought to enrich the proposed model by exploring certain intra-personal aspects of the parents that were proposed to moderate the relation between marital conflict and parenting behaviors. These aspects included parental psychopathology (i.e., anxiety and depression) and parenting stress. The following section presents a rationale for the inclusion of these moderators.

*Linking Marital Conflict, Maternal Distress and Parenting Behavior*

For many women, exposure to marital conflict can promote feelings of significant distress and stress (Hughes, 1997; Kemp, 1998). In a recent review, for example, Cascardi, O’Leary, and Schlee (1999) found that exposure to marital discord, verbal/psychological abuse, and/or physical violence was associated with rates of PTSD (including anxiety) ranging from 31% to 84% and rates of depression ranging from 38% to 83%. Adjoining their review, the authors also assessed the marital correlates of PTSD and depressive disorders among 92 victimized women recruited from the community.
Results suggested that the intensity of marital conflict (including physical aggression) predicted both PTSD and depression. In this sample, for example, about 30% of the women experienced the cluster of symptoms consistent with PTSD although higher proportions endorsed the experience of at least one symptom. In terms of depression, approximately 32% of the women met the diagnostic criteria for Major Depression, but again, much higher percentages experienced some distress with over 65% experiencing at least five symptoms. Given the high percentage of negative responses to marital conflict by many women, it is important to assess what impact the presence or absence of such distress might have on parenting behaviors that are important pathways affecting the social adjustment children. The following sections present, therefore, brief discussions about the impact of parental anxiety, depression, and stress on parenting behaviors.

*The role of parental anxiety in fostering social withdrawal in children.* Given the established link between exposure to marital conflict and anxiety in women, one further step in elucidating mechanisms by which parenting behaviors might foster the development of social disengagement in children is to examine if parents who experience anxiety manifest parenting behaviors that might negatively impact children’s social development. Clearly, information about how parental anxiety can affect parenting behavior and ultimately, children, offers opportunities for multiple interventions into the family system. Not only can children’s socially disengaged behavior be ameliorated but parent characteristics and parenting behaviors can be targeted.

The relationship between anxiety and parenting behavior was addressed by Hirshfield, Biedermen, Brody, Faraone, and Rosenbaum, (1997) whose work suggested that mothers with identified anxiety disorders expressed more criticism to their children
than did normal controls. Mothers of anxious children also appeared to be less warm, less able to allow autonomy in their children and were more critical than were non-anxious control mothers (Whaley, Pinto, & Sigman, 1999). These findings are supported by additional research suggesting that parents experiencing specific types of anxious phobic disorders exhibited less affectionate and more controlling parenting practices (Gerslma et al., 1990; Muris & Merckelbach, 1998) and a greater likelihood to warn children of potential dangers in the environment (Muris & Merckelbach, 1998).

Mothers, therefore, who experience understandable anxiety in the presence of marital conflict can facilitate child social disengagement in two ways. One, the child may observe avoidant and fearful responses by parents to conflictual situations, subsequently internalize and then reproduce these responses in their own interactions with peers and other adults. Second, parental behaviors such as restrictiveness/control, interpersonal coldness and insensitivity can foster a climate in which children feel insecure and anxious in novel interpersonal situations and manifest reduced initiative in managing conflicts with peers (Rubin & Mills, 1993).

In applying these findings to the current research project, it appears that the co-incident presence of maternal anxiety within conflicted families might be an emotional mechanism that can potentiate the negative effects of exposure to destructive marital conflict for children and facilitate the development of social withdrawal or disengagement. Conversely, if parents involved in conflictual marriages respond to this stress without altered parenting behaviors and thus provide a warm and supportive environment for their children, effects of exposure to marital conflict may be ameliorated.
These potential relationships were assessed in this study by evaluating parental anxiety as a moderator of the relationship between marital conflict and parenting behaviors.

The role of parental depression in fostering child social withdrawal. There appears to be a clear link between a family environment of marital conflict and risk for maternal depression (Bond & McMahon, 1984; Cummings, 1993; Fincham & Osborn, 1993; Shaw & Emery, 1987; Shiner & Morgenstein, 1998). Evidence cited by Anderson, Beach, and Kaslow (1998) suggested, for example, that women in discordant marriages may be from 10 to 25 times more likely to experience major depression than mothers in more positive marital circumstances. Within such marriages, spousal anger, arguing, coldness, and violence are closely linked with this vulnerability and the link is stronger for women than for men (Fincham, Beech, Harold, & Osborne, 1997).

Considerable research also has delineated the relationship between maternal depression and parenting behaviors (Cummings, 1995; Cummings & Davies, 1994). Maternal depression, for example, has been associated with parenting impairments such as reduced affection for children (Gelfland & Teti, 1990), insensitive parenting (Cummings & Davies, 1994) and greater control as compared with non-clinic control parents (Cummings, 1995; Gerlsma et al., 1990). Research cited in reviews by Hammen (1995) and Goodman and Gottlieb (1999) indicates a consistent pattern of negative, intrusive, and unresponsive behaviors of depressed parents. Downey and Coyne (1990) suggest in their literature review, moreover, that these behaviors are not only associated with diagnoses of clinical depression but may also be seen in mothers with mild depressive symptoms and mothers experiencing chronic environmental stressors such as marital conflict and economic hardship.
Children of depressed parents are at risk for a host of internalizing emotional and externalizing behavioral difficulties similar to the sequelae experienced by children exposed to destructive marital conflict (Cummings, 1995; Cummings & Davies, 1992; Downey & Coyne, 1990; Fendrich, Warner, & Weissman, 1990; Gerlma et al., 1990; Hammen, 1995. This concordance is not surprising given the evidence that destructive marital conflict and maternal depression covary in terms of child outcomes (Cummings, 1995; Fincham & Osborne, 1993) and as such, it is important to disentangle the relevant contributions to children’s adjustment.

Few models have been proposed to explain the relationship between depression and marital conflict as predictors of child adjustment (Graham-Bermann, 1998; Peppler & Moore, 1998). Evidence that does exist suggests that marital conflict is a more significant contributor to child adjustment difficulties than maternal depression (Cummings, 1998; Cummings & Davies, 1994b; Emery, 1982; Holden & Richie, 1991; Shaw & Emery, 1987). Indeed, maternal experiences of stress and mental health difficulties may moderate or magnify the effects of destructive marital conflict on child adjustment by a deleterious influence on parenting behaviors (Cummings & Davies, 1992; Fincham & Osborne, 1993; Holden & Richie, 1991). This potentiating effect may be especially relevant to the development of internalizing difficulties in children exposed to destructive marital conflict (Downey & Coyne, 1990). As with parental anxiety, the presence of depression may exacerbate children’s negative responses to exposure to destructive marital conflict by fostering cold and insensitive parenting behaviors. The delineation of the relation between destructive marital conflict, parental depression and parenting behavior also offers opportunities for family intervention at multiple levels.
The potential impact of depression, therefore, was assessed by employing depression as a moderating variable between marital conflict and parenting behaviors.

*The influence of parental stress on parenting behavior.* Maternal stress, both from environmental conditions in the family and maternal perceptions of the difficulties in parenting, also may influence parenting behaviors by interacting with marital conflict to influence child adjustment (Cummings & Davies, 1992; 1994a; Holden & Richie, 1991). Environmental conditions, for example, such as poverty, divorce, community violence, inconsistent work history, and coincident violent marital conflict clearly may have a negative impact on parenting behaviors and beliefs about one’s efficacy as a parent (Elder, Eccles, Ardelt, & Lord, 1995; Holden & Richie, 1991; Levendosky & Graham-Burmann, 1996; Raver & Leadbeater, 1999).

Parenting stress, relating specifically to an individual’s perception that parenting itself is stressful, also may be influential in determining child maladjustment. Factors that contribute to parenting stress can include negative assessments of the parent-child relationship and the restrictions on one’s own life that parenting engenders (Levendosky & Graham-Bermann, 1996). Such stress also may reflect temperamental irritability from the child contributing to negative parental perceptions (Abidin, 1990). This perception may be exacerbated if a child has been exposed to marital conflict and subsequently begins to manifest emotional and behavioral maladjustment. Indeed, work by Holden and Richie (1991) has indicated that marital conflict is associated with increased levels of parenting stress.

Work by Levendosky and colleagues (1998) specifically addressed the interrelated issues of violence, stress, and child maladjustment. Both the subject of the
Levendosky study and its methodology have contributed to the formulation of the research model used in this current study and thus, is discussed in some detail. The authors recruited 60 women and their children, ages 7-12, from four shelters for battered women and a control group of 61 women and children from the community. The samples were matched on several demographic variables including child age, race, and income. Exposure to family violence, levels of parenting stress and child adjustment variables were assessed by maternal self-reports. Interestingly, initial results suggested that both groups were at risk for high levels of stress because of economic deprivation and the fact that one-third of the control group reported family violence. Thus, both groups were combined for subsequent analyses. Regression analyses were used to assess the independent contributions of income, violence and parenting stress on child internalizing and externalizing behaviors for the entire study sample. Finally, to test the role of parenting stress as a moderator, the contribution of interactions between stress and violence on child behavior were tested.

Results of initial regression analyses indicated that exposure to psychological and physical violence and parenting stress were significantly predictive of child internalizing symptoms. The test of stress as a moderating variable also was significant revealing that a combination of psychological abuse and parenting stress was predictive of child internalizing symptoms.

Some caveats regarding the methodology used in this study need to be mentioned. First, because all measures were by maternal self-report, reporting bias may exist because mothers experiencing both violence and stress may naturally tend to report higher levels of child behavior problems. Second, the low-income population may reduce
generalizability of results to other populations. Nonetheless, the importance of a complex moderation model in explaining the effects of marital violence on child adjustment is supported.

Summary and Statement of the Problem

Research discussed in this study has delineated the complex association between exposure to marital conflict and negative sequelae for many children. Although such behavioral and emotional maladjustment might be manifested as externalizing aggressive behaviors, the focus of this study was on the less frequently examined internalizing difficulties of anxiety and depression and how they become manifest in the child’s social world by social disengagement or withdrawal. This emphasis is important because one of the primary developmental tasks that children face is establishing rewarding peer relationships. Hindrance of this process can ultimately lead to peer rejection, subsequent social isolation and further mental distress. Thus although part of the emphasis of this study was to delineate mechanisms relating these constructs, an additional focus was to inform prevention and intervention efforts to children so exposed.

Also, by understanding the mechanisms by which social withdrawal becomes a salient outcome for children exposed to destructive marital conflict one quickly comes to the conclusion that planning effective intervention with children must include the complex family ecology in which they live. This study has drawn upon research models (e.g., Cummings, 1998; Margolin & John, 1997) describing both direct and indirect effects of destructive marital conflict on children. Direct effects include traumatic arousal subsequent to destructive marital conflict that might inhibit a child’s ability to regulate emotions in subsequent social interactions. Socially inhibited behaviors within
the family also might be observed by children and then applied to their own interactions with peers. Also including indirect effects of marital conflict on children, focused primarily on disturbances of parenting behaviors allows additional opportunities to understand the complex interactions between destructive marital conflict and parental distress and how these factors come to influence children’s development. Insensitive and intrusive parent-child behaviors, for example, have been shown to be associated with socially withdrawn children as well.

In both direct and indirect pathways, anxiety experienced by children exposed to marital conflict seems to be an important mechanism in the development of social withdrawal or disengagement. Consequently, research relating to the etiology of anxiety in children has been presented and interwoven with work by Rubin and colleagues (1995) that delineates similar constructs involved in the formation of social withdrawal.

This study was in essence an integration of several disparate lines of research and as such provided a new application of marital conflict models to facilitate the examination of social withdrawal in children exposed to marital conflict. In relation to the Levendosky and Graham-Bermann (1996) study previously mentioned, for example, this research added significant strengths to the design by acknowledging both direct and indirect mechanisms thought to describe the relation between exposure to marital conflict and child maladjustment. The indirect mechanism, furthermore, also included observed measures of parenting behavior to explain the relation between marital conflict and child internalizing symptoms thereby avoiding reliance purely on maternal self-report. Finally, multiple moderators (anxiety and depression as well as parenting stress) were employed to capture the potential richness of intra-parental characteristics that may impact
parenting. Thus, the model examined had a substantial degree of ecological validity intended to inform additional research efforts and direct intervention.

Based on the findings of research reviewed in this study, therefore, a mixed model of child social adjustment that included both the direct effects of marital conflict on children and indirect effects mediated by parent-child interactions was expected to provide the most comprehensive explanation of the relationship between marital conflict and children’s social withdrawal or disengagement. Within the indirect pathway mediated by parenting behavior, it was also expected that levels of emotional distress and parenting stress would likely affect the quality of parenting behaviors. Thus by employing a moderational model, levels of parental emotional distress and parenting stress would influence the magnitude of the relationship between marital conflict and parenting behaviors. The following general hypotheses were tested.

1. There will be significant relations among scores on measures of marital conflict, the three latent variables measuring parenting behaviors (i.e., “positive parenting,” “negative-intrusive parenting,” and “depressed-disengaged parenting”), child social disengagement and parent emotional distress (i.e., parent depression and anxiety, and stress).

2. Marital conflict will predict significant variance in child social disengagement (Teacher Assessment, Playground Observations).

3. Parenting behaviors will serve as a partial mediating variable between the relation between marital conflict and child social disengagement. As a test for mediation, (a) marital conflict will account for a significant amount of variance in child behavior, (b) the three parenting behavior domains will account for a significant amount of
variance in child social adjustment, and (c) the amount of variance in child social
adjustment accounted for by marital conflict will be significantly reduced when the
effects of marital conflict on the parenting behavior domains and the effects of the
parenting domains on child social adjustment are controlled (See Fig. 1).

4. Parent stress and emotional distress will serve as moderator variables of the
relationship
between marital conflict and the three separate parenting behavior domains. As a test
for moderation, (a) a significant interaction between marital conflict and parent
emotional stress and distress will exist in predicting “positive parenting,” “negative-
intrusive parenting,” and “depressed-disengaged parenting” behaviors. (b) parents
who have experienced significant marital conflict and who experience high levels of
distress will be expected to manifest the greatest behavioral impairment (see Figure1).

Method

Participants

Participants were a sub-sample of 72 parents and their children drawn from a
sample of parents and children in a grant funded university project, “Parents and Children
Together” (PACT) sanctioned by the NCSU Institutional Review Board. Participants for
the sub-sample study were deemed eligible for inclusion if they met the criterion of
having been in a relationship with a partner within the last two years. The 72 participants
represented approximately 27% of the full sample. Of the 72 parent participants, 61
(84.7%) were female and 11 (15.3%) were males ranging in age from 22 to 50 years with
a mean age of 34. The parent sample was comprised of 40 (55.5%) African–American
parents, 29 (40.3%) parents of Caucasian lineage, 2 (2.8%) parents of Hispanic and
(1.4%) of other heritage. Size of families ranged from 2 to 7 members with a mean size of 3.97. Participating children had a mean age of 7.3 years and ranged between 4 and 9 years old. Parents’ educational achievement ranged from less than a high school diploma to possession of graduate/professional degrees, although the mean level of education suggested that most parents had at least a high school diploma and some college experience. Based on the Hollingshead (1975) formula for determining socio-economic status (SES), parents were assigned a rating between I-V with V representing the lowest level of SES. Parents were distributed across all five levels. Inspection of parents’ marital status revealed that 49 parents were married, 3 divorced, 17 were single, and 8 were separated at the time intake interviews were conducted. Mean family monthly income was $2893, with a wide range between $200 and $15,000. Median monthly income was approximately $2000.

This sample of parents included participants from two distinct groups: (a) families with substantiated cases of physical abuse that were referred by State of North Carolina Department of Human Services (DHS) and (b) families recruited from the community. These groups were combined in this research to provide a sample of sufficient size and variability to allow exploration of the proposed model. A range of marital conflict resolution patterns including verbal conflict and the most dramatic physically assaultive strategies was desired. The justification for this is as follows. First, there appears to be significant co-morbidity between physically violent marital conflict and physical maltreatment of children with estimates ranging between 20% and 100% (Appel & Holden, 1998; Cummings & Davies, 1994; Hughes, 1988; Sternberg, 1993, 1998; Straus Gelles, & Steinmetz, 1980). This rate far exceeds the base rate of 6% in community
samples. Hughes (1988) noted, for example, that in her sample of shelter residing children exposed to family violence almost 60% had also been physically abused. Work by Sternberg et al. (1993) also suggested that children experiencing physical maltreatment as well as being exposed to physically violent forms of marital conflict displayed similar profiles in the range and intensity of internalizing and externalizing behaviors to children exposed to violent marital conflict alone. This finding suggests that inclusion of children with multiple experiences of violence in the family may not, in itself, introduce a significant confounding variable. As Jaffee (1990) noted, “it is widely acknowledged that … different forms of maltreatment give rise to many of the same developmental adjustment problems, suggesting that very similar psychological processes may be commonly responsible for the children’s reactions to trauma” (p. 68).

To understand the relation between exposure to marital conflict and child maladjustment, therefore, it is important to have variability in the levels of marital conflict to which children are exposed. Because of the fact that the more severe forms of destructive marital conflict likely co-occur with child physical abuse, excluding maltreating families would have restricted variability within the sample and thus, limited the generalizability of the findings. Demographic analyses were conducted for each group of parents and children to explore if significant differences existed (see Table 1).
Table 1

Characteristics of Participants

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*Note: Ns vary due to missing data.*
Participants for the sub-sample examined in this research were drawn from the larger sample based on the criteria of complete data focusing on the relevant variable under study. If families had more than one child with complete data, only the first identified child was included to avoid replication of parenting behaviors in the database.

**Procedures**

Participants in the larger study were recruited in two ways. First, families with substantiated cases of physical abuse were referred by the State of North Carolina Department of Human Services (DHS). Families in contact with the DHS, who met the research criteria (reports of physical abuse and a child living in the home who was between 5-11 years age), were informed of a research opportunity in the PACT project and provided with verbal and written descriptions of the study (see Appendix A). A second method of recruitment involved the placement of flyers in stores and public facilities in neighborhoods as well as by newspaper advertisements and word of mouth.

Interested parents called the PACT office and were screened for participation. Criteria for exclusion from the study included the presence of child sexual abuse and/or severe parental substance abuse. If the parents met the initial inclusion and exclusionary criteria to the study, a 20-minute psychosocial interview was conducted by phone to collect demographic and background information on parents and children. Additional sections of the interview contained questions assessing the parent-child relationship, reasons for disciplinary responses with children and methods of discipline used, experiences of trauma, and methods of conflict resolution between adults in the family (see Appendix B). The assessment of marital conflict used the adapted Conflict Tactics Scale (CTS) (Strauss, 1979) employed in this study.
Subsequent to the phone interview, appointments were scheduled for families to participate in clinic based data collection. To reduce potential barriers to participation funds for taxi transportation to the clinic were provided. Babysitting was provided by supervised undergraduate students. Upon arrival at the clinic, parents were given a full description of the PACT project and procedures and were encouraged to ask questions for clarification of procedures. If the parents continued to express interest, they signed an informed consent form (see Appendix C). Parental permission was also obtained for school visits, to be conducted approximately six months later (see Appendix D). During these visits the child’s teacher was asked to complete the Social Behavior Scale (SBS) and a 30-minute observation of the child’s social adjustment was conducted on the school playground by trained undergraduate students.

Data collection in the clinic was conducted by well-trained undergraduate assistants, who were familiar and reliable with assessment tools. These individuals worked with each family for approximately three and one-half hours under the supervision of a graduate student. After developing rapport with a participating family, a number of assessment instruments were administered, only some of which (e.g., SCL-90-R, PSI-SF) were be used in this research. Assessment fidelity was maintained by graduate research assistants who monitored test administration.

During the clinic assessment procedure, the first measure administered was the SCL-90-R. Use of this instrument was intended to assess parent mental health status and, as such, it was also used as an initial screening instrument to identify parents in need of immediate intervention that might obviate the rest of the assessment session. The SCL-90-R was administered as a paper and pencil task, although items were read to
participants with reading difficulty. It normally takes between 12-15 minutes to administer. The initial prompt invited respondents to rate their level of distress to presented problems during the past seven days. The measure allowed respondents to rate their distress on a scale ranging from 0 (“Not at All Distressing”) to 4 (Extremely Distressing”).

In administering the PSI-SF, respondents were asked to read and respond to test items by circling Strongly Agree (SA), Agree (A), Not Sure (NS), Disagree (D), or Strongly Disagree (SD) on the test form. Items were read to parents with difficulty interpreting the test protocol.

As a measure of parenting behaviors, parents and children participated in a 30-minute interactional session based on modified procedures delineated by Mash and Johnston (1982) This interaction took place in a carpeted and decorated room within the PACT laboratory in which the participants sat beside each other at a table to play and complete puzzle tasks. Adjacent to this space was a “control” room in which audio and video recording apparatus was located. The session was divided into three 10-minute segments, during the first of which the dyads were instructed to simply play together using a standard set of age appropriate materials (e.g., legos, markers, and pencils). The second 10 minute segment was a structured “instructions” task in which the parents were given the following instructions to relay to the child: “Clean up the toys, draw a picture of a person, and play quietly while I read a magazine.” The final 10-minute segment involved the parent and child cooperatively putting together two puzzles within a 10-minute time limit. The parent was instructed to help the child but not to touch the puzzle
pieces. The puzzle was of a difficulty level slightly exceeding the child’s ability based on chronological age.

All observations were videotaped for later analysis. The video camera was installed out of sight inside a clock, although participants were informed that the sessions would be recorded. After the completion of the three segments, the parents and children were debriefed and a snack was provided. The child was also allowed to finish the puzzle with the examiner if he or she so chose.

Child classroom behaviors were assessed by the teacher using a modified form of the Social Behavior Scale (SBS). Permission to assess students was obtained from the school principal and the county in which the school was located. These checklists were mailed to each child’s classroom teacher approximately 6 months following the intake of the family into the PACT project. Self-addressed stamped envelopes were provided to facilitate returns.

Finally, to measure child social behavior in a naturalistic setting, each participant child was unobtrusively observed on the school playground during a regularly scheduled recess period. Children were observed for 30 minutes of unstructured play and behavior was coded by trained observers using a modified behavioral coding system (Haskett & Kistner, 1991).

Confidentiality of the participating families was maintained by assigning identification numbers to each family to assure anonymity. All assessment data were catalogued by these numbers and stored in locked filing cabinets. Each parent was paid $75 for their participation, given the opportunity for a review of the family evaluation findings and, provided a list of community resources.
Instrumentation

Measure of Marital Conflict: Conflict Tactics Scale. The instrument used to assess the severity of marital conflict was a modified form of the Conflict Tactics Scale (CTS) developed by Straus (1979). The original CTS (Form A) consisted of 14 items and was designed as a self-report instrument to assess the methods by which individuals in families resolved conflicts. Subsequent revisions of the CTS included forms to assess the conflict resolution strategies of each dyad within the family; parent to child, child to sibling and mother to father. These forms included up to 18 items and allowed the instrument to be used in an interview format. The number of assessment items in all forms of the CTS was deliberately limited to enhance the applicability of the instrument to survey research (Shumm & Bagarozzi, 1989).

The CTS was designed to encompass three theoretical response mode possibilities in the resolution of conflict. The first of these response modes or “tactics clusters,” comprise the Reasoning sub-scale of the CTS and includes intellectual responses to resolving conflicts such as discussion, reasoning, and argument. The second response mode, which translates into the Verbal Aggression sub-scale on the CTS, is comprised of tactics that include verbal and non-verbal efforts to symbolically hurt the partner and includes threats, insults, spiteful comments, and breaking objects. Finally, the Physical Aggression sub-scale assesses forceful tactics to resolve conflicts. These tactics may include assaults on the partner such as slapping and kicking, up to and including the administration of beatings and the use of weapons. The three conceptual modes of conflict resolution delineated above have been substantiated by factor analysis (Strauss & Gelles, 1989). This analysis delineated three factors corresponding to physical
aggression, verbal aggression, and reasoning. A fourth factor, lethality, was comprised of two questions (use of knife and gun) suggesting a unique factor of extreme violence.

Non-violent reasoning based methods are placed first in the scale followed by verbally aggressive then physically aggressive items. The intent of this organization is to reduce the refusal rate of participants to highly sensitive information. Items are presented that allow respondents to endorse socially appropriate conflict tactics before less desirable outcomes (Strauss & Gelles, 1989).

The authors designed the CTS to be administered as a paper and pencil self-report instrument, although they note the form can be read to respondents who experience reading difficulty. Respondents are asked to indicate the frequency with which they used each conflict tactic in a period of time specified by the clinician or researcher. The CTS may be scored by simply summing the response codes for those questions that correspond to each conflict tactic used to obtain Reasoning, Verbal Aggression and Physical Aggression scores. In addition, scores may be weighted to reflect the increasing severity of the endorsed tactics.

Internal consistency of the CTS was computed using Cronbach’s alpha. For husband–to-wife CTS scores, the alphas ranged from .50 for the Reasoning scale to .80 and .83 for the Verbal and Physical Violence scales. Wife-to-husband CTS scores showed a similar profile. The low reliabilities of the Reasoning score are likely the result of (a) the limited number of items (i.e., three) that assess this construct (Strauss & Gelles, 1989) and (b) difficulty parents can have in recall of the non-emotionally charged resolution tactics.
Concurrent validity of the CTS was determined by correlations between college students’ retrospective accounts of family violence and parental reports of such violence. Correlations ranged from a low of .19 for Reasoning scale items to .51 and .64 for the Verbal Aggression and Violence scales, respectively. Construct validity of the scales was measured by comparison between CTS scores and empirical studies assessing marital violence. The CTS was chosen for this research because of its wide application in family violence research (e.g., Grych, Seid & Fincham, 1992; Holden & Richie, 1991; Kolbo et al., 1996).

The modified CTS form used in this research was developed by Kaufman, Jones, Steiglitz, Vitulano, and Mannarino (1994). It consisted of a scale of 11 items. For the purpose of the current research, the modified CTS was included at the end of a comprehensive psycho-social phone interview (see Appendix B) by the doctoral degreed associate researcher on the research project. As such, it was administered orally and items were read to the respondents.

In deference to its mode of administration, this scale differed from Form A (Strauss, 1979) of the CTS by reducing the number of Reasoning items from four to one and eliminating one Verbal-Behavioral Symbolic Aggression item, “sulked or refused to talk about it.” Conversely, items to assess severe violence, “beat up the other one” and “used a weapon” were added to expand the Physical Aggression sub-scale. Thus, the range of verbally aggressive and physically aggressive items seems comparable to that of the CTS forms and is expected to provide good variability of behavior within the sample.

Any alteration to the length of a measure will likely affect reliability (Salvia & Ysseldyke, 1988). Although no specific analyses were undertaken by Kaufman et al,
(1994) to assess the technical qualities of their modified scale, some general comments can be offered. Specifically, the reduction of the measure by eliminating three verbal reasoning items will very likely reduce the reliability and validity of this sub-scale. The “Reasoning” subscale was not be utilized in this research, however, so that the alterations will likely have minimal impact on this study. A second point however, needs to be addressed. As Schumm and Bagarozzi (1989) noted, the “Reasoning” scale is important as an introductory device that is intended to lower resistance to responding to more socially reprehensible physically violent tactics. The potential impact of item reduction in this research, however, is mitigated by the embedding of the modified CTS in an extensive Psychosocial Interview of about 20 minutes duration (see Appendix). Previous questions assessed several kinds of abusive and traumatic experiences that might have occurred in the family including harsh disciplinary practices and sexual abuse history. The presence of these items will likely in themselves reduce inhibitions to answer the CTS.

There were two further modifications to the CTS used in this study. First, the initial prompt differed from that of Strauss (1979) and Kaufman et al., (1994). The interval over which the respondents were asked to recall how they typically resolved disagreement with partner was lengthened from one year to two years.

The second modification in administration of the CTS, prompted by the need for simplicity given the phone-based interview format of this instrument with no written protocol for the participants to reference, reduced the available responses to assess frequency of conflict. A rating scale from 1 to 3 was employed to assess the frequency of conflict tactics rather than the standard CTS 1-6 scale. In the modified scale, “one”
indicated the method was never used, “two” indicated the tactic was used once as an isolated incident, and “three” indicated that the tactic was used more than once in the past two years. In the standard administration procedure the use of “0ne” indicated the tactic was never used, but the “six” suggested that tactic was used more than 20 times allowing for the greater specificity and a higher ceiling in assessing the frequency of conflict.

The use of the truncated scale eliminates one difficulty of the CTS scoring cited by Strauss (1979). In the CTS, scoring by the addition of frequency scores across tactics, especially if one employs a severity weighted system that multiplies physically assaultive tactics by constants of increasing values relative to severity, presents a significant problem with creating a skewed distribution (Strauss & Gelles, 1989). As such, the authors do not recommend the use of CTS scores as a continuous variable or in statistical methods that require a normal distribution such as correlation or regression. Use of the restricted frequency scoring system in this instrument could have reduced the impact of this problem by limiting the range of frequency scores to three.

Measures of Parental Stress and Psychopathology

Parenting Stress Index- Short Form (PSI-SF). The PSI-SF (Abidin, 1993) is a derivative instrument of the full length PSI developed to provide an easily administered self-report instrument of parental stress relative to disturbances in parent-child relationships. The PSI-SF contains 36 items drawn directly from the 120 item full PSI. The PSI encompasses three domains of behavior directly impacting parenting behaviors and subsequent child adjustment. These domains form the sub-scales of the 36 item PSI-SF, Parental Distress (12 items), Parent-Child Dysfunctional Interaction (12 items) and Difficult Child (12 items). The Total Stress (TS) raw score, which was used in this study,
is a composite of the three sub-scale scores indicative of an overall level of parental stress in relation to the parenting role. Raw scores above the 90th percentile suggest clinically significant levels of overall stress that may require clinical intervention (Abidin, 1993).

Reliability of the PSI-SF was estimated by measures of internal consistency and temporal stability. Internal consistency reliabilities for the three sub-scales ranged from .80 for the P-CDI to .87 for the PD. The alpha for the composite Total Stress (TS) measure was .91. Stability of the instrument was assessed by test-retest after a six-month interval and yielded reliability coefficients of .68 for the P-CDI and .85 for the PD and a Total Stress (TS) alpha of .84.

The PSI-SF has not been validated by independent research efforts but, as all items were drawn from the full-length measure, the PSI-SF does show high correlations with the full PSI. The TS composite on the PSI-SF, for example, is used as a measure of the overall stress an individual experiences with the parenting role. This scale correlates with the Total Stress scale on the PSI at the .95 level. Correlations between sub-scale scores on the PSI-BF and analogous scales on the PSI are also high ranging from .87 to .92.

*Symptom Checklist-90-Revised (SCL-90-R).* The Symptom Checklist 90-Revised (SCL-90-R), encompassing nine symptom clusters, was used to measure parent emotional distress (Derogatis, 1994). In the current study only two were used: (a) Depression (assessing mood and affect) and (e) Anxiety (measuring somatic tension and apprehension). The nine symptom clusters, in combination, also comprise three measures of global distress, one of which, the Global Severity Index (GSI), was employed in this study. The GSI is a measure of the total number of symptoms endorsed combined with
the perceived intensity of those symptoms. As such, it is the best single measure in the scale of overall emotional distress.

Raw scores on the SCL-90-R are derived by adding the 0-4 values for items comprising the nine sub-scales and dividing the sum by the number of items endorsed. The GSI is calculated by adding the scores of the nine symptom scales and dividing the sum by the total number of items endorsed. Raw scores of each scale and summary scales may be converted to standardized $T$ scores ($M = 50 \ SD = 10$) with the use of provided norm tables. Four norm groups are provided, adult non-patients, adult psychiatric outpatients, adult psychiatric inpatients, and adolescent non-patients. The adult non-patient norm group will be used in this research. High scores suggest greater perceived disturbance. Derogatis (1994) also proposed the instrument may be used as a screening device to identify a positive “case” for a given diagnostic category. The $T$ score associated with this category of “caseness” is 63.

The psychometric properties of the SCL-90-R suggest this is a sound instrument. The mean internal consistency reliabilities of the two subscales to be used in this research, Anxiety and Depression, are .86 and .90 respectively. The one-week test-retest reliabilities are also strong. The anxiety sub-scale has a reliability of .80 and Depression, .78 (Derogatis, 1994).

The validity of the SCL-90-R has been assessed in several ways. Convergent-discriminant validity studies suggest the SCL-90-R has moderate to high correlations with MMPI scales. Correlations, for example between the analogous depression scales range from .68 to .75 and .57 for the anxiety scale. The SCL-90-R has also been
effective in discriminating diagnostic categories of psychopathology and measuring amelioration of relevant symptoms within the therapeutic process (Derogatis, 1994).

Measure of Parenting Behavior

For purposes of the present research, parenting behavior and parent child interactions were coded using a modified version of the Qualitative Ratings of Parent-Child Interactions (QRPCI) (Cox, 1992; 1997). The instrument is an observational system developed to generate qualitative ratings of parent-child interactions across 15 parent and child categories. The categories that were used in this research target parent behavior and are the following: Sensitivity and Supportive Presence, Intrusiveness, Detachment/Disengagement, Positive Regard for the Child, Negative Regard for the Child and Flatness of Affect (Appendix E). The above categories were chosen after a review of the literature, to reflect salient measures of parenting practices described for depressed parents (e.g., Downey & Coyne, 1990), anxious parents (e.g., Chorpita, 1998) and parents who experience marital conflict (e.g., Margolin et al., 1996). Originally developed for use with 2-3 year old children, the QRPIC has been used with children up to age 5 (Cox, 1999). In this research the ages of children was from 4-9 years. In order to accommodate these older children, some characteristic descriptions of parent-child interactions used as referents for the sub-scales were rewritten to be more age-appropriate.

The Sensitivity/Supportive Presence category provides a measure of how responsive the parent was to the child during structured tasks. Its intent was to measure the balance between the need for a child to work on tasks autonomously and for the parent to provide a sensitive and supportive presence for the child during the task.
Examples of target parent behaviors include helping the child regulate affect and behavior, adaptability to the child’s mood, and well-timed supportive comments congruent with the child’s needs.

The Intrusiveness category assesses the parent’s ability to recognize or understand the child’s need for autonomy and independence. The parent who scored high on this dimension interfered with the child’s needs, desires, interests, or actual behaviors and dominates or leads the interaction. Setting appropriate limits for the child with directives was not necessarily intrusive, unless lack of respect for the child was evident. Examples of parental intrusiveness might also include a parent’s failure to follow the child’s lead in interactions. Intrusiveness can occur in a harsh physical manner such as grabbing the child’s hands and placing them somewhere else or inappropriate affection such as hugging or kissing that interferes with the child efforts. The parent may be verbally intrusive by imposing directions or not allowing the child to make suggestions or pursue independent efforts.

The Detachment/Engagement category represents the level of parental interest and emotional involvement with the child as they played together or worked to complete the assigned tasks. Parents who score high on this domain tend to seem unaware of the child’s need for interaction and do not respond to the child’s looks, cues or vocalizations. Examples of behaviors suggestive of detachment include facing away from the child without attempting to visually “check in” and infrequent eye contact or conversation.

The Positive Regard category assesses the parent’s verbal and physical warmth for the child by such behaviors as smiles, hugs, praise, and enthusiasm. Its mirror image, Negative Regard, measured the intensity and frequency of parental negative affect toward
the child. Physical tension, harsh voice tones and punitive comments are characteristic of this domain. Both categories were included because a low rating on positive regard may not necessarily signify hostility or negative regard toward the child.

The final category used in this measure is Flat affect. This category represents the parent’s level of animation in face and voice. Flatness is exhibited by blank impassive facial expressions and monotone vocal expressions. It is marked by a lack of animation or apparent energy. Parents who display intrusive and negative verbal behaviors with their children, however, are not flat. This category assesses the parent’s overall demeanor, not just animation with the child.

To code observations of parent behaviors, uninformed undergraduate coders were recruited and trained. Training consisted of a presentation of the coding scales and extensive discussion of the individual behavioral indicators. Practice tapes were viewed and scored followed by a discussion of the scoring procedures addressing discrepancies and misunderstandings.

The process of coding unfolded as follows. The coder watched the designated 10-minute segment of the tape completely, taking minimal notes relating to each of the categories. These notes included initial impressions of the interactions under scrutiny and significant behaviors observed that support those impressions. Subsequent to watching the tape, the observer decided if the interaction was “characteristic” or “not characteristic” of the category and a preliminary score were assigned. The tapes were watched a second time with careful note taking of the parent and parent-child behaviors relating to each of the categories. Based on the second viewing, a final specific score was assigned for each category under consideration. During either of the two viewings, the
tape could have been stopped at any time and rewound to review key segments or behaviors. The ratings were based on both the quality and quantity of behaviors. That is, the characteristics of the behavior were noted in proportion to the frequency of their occurrence. For example, if a parent displayed a general characteristic of warmth and support for the child punctuated by one incident of irritation, that incident, however discordant, was not the sole basis for rating the parent’s behavior as not characteristic of warmth and support.

The Likert type scoring of the scales consisted of ratings from one to seven. In assigning a number to the observed behaviors, a two-step process was employed. First, the coder asked him or herself, “Is this behavior characteristic of the category being applied?” If the answer was affirmative, an initial rating of 5, 6, or 7 was assigned depending on the strength and frequency of the assigned behavior. If the coder determined that the behaviors observed were “not characteristic” of the category, a rating of 1, 2, or 3 was assigned. The middle number, “four”, was used as a midpoint determinant of the behavior to answer the question “Is the category characteristic or not characteristic of the observed behavior.” The second step in the scoring process was to assign a specific 1-7 score in each category under consideration. This scoring took place after viewing the tape segment for the second time (see Appendix F).

The data generated by the coding of observations consisted of a score of 1 through 7 for each of the 6 categories of behavior across the 3 viewed segments, for a total of 18 data points for each parent. Based on research by Cox and colleagues (1999), Rubin and Barlow (1995), and Chorpita and Barlow (1998), these data were reduced to a more manageable format by creating latent variables describing three parenting practice
domains. This procedure followed two steps. First, the data for the six categories were collapsed across the three vignettes to produce total session category scores. The scores of the three vignettes were added and then a mean score was determined. Support for this procedure was found in the “moderate” to “high” correlations between category scores in each of the three vignette sessions.

The latent variables were then calculated by first taking the mean score of the contributing observational categories from each of the three PCI vignettes and then combining these means into a single sum score. For example, the first domain, “positive parenting” included the mean scores for “positive regard,” “engaged” (a reverse coded “detachment”), and “sensitivity.” With each of the category scores having a range of 1-7, the new scales for the latent variable “positive parenting” would have a possible range of 3-21.

The second domain, termed “depressed or disengaged parenting” encompassed scores on the “disengaged” and “flat affect” categories. Finally, the third domain, “intrusive-negative parenting” utilized scores on the “negative regard,” “intrusive,” and “insensitivity” (a reverse coded sensitivity score) categories. Scores for these two latent variables were constructed in a similar fashion to the “positive parenting” score. To determine reliability of the created latent variable domain scores, Pearson-Product Moment correlations were calculated between the domain scores by the “first” author and three undergraduate coders according to the following procedure. Subsequent to the initial training period when coders understood the process, they and the first author individually coded 20 tapes used in this research, approximately 27% of the total. Measures of reliability for the domain scores across these tapes indicated that, for the
“positive parenting” domain, reliability ranged from .81 to .87 with a mean reliability of .84. For the “negative-intrusive parenting” domain reliabilities ranged from .58 to .73 with a mean reliability of .68. Finally, the reliabilities on the “depressed –disengaged parenting” domain ranged from .78 to .82 with a mean reliability of .81. Across all three parenting domains, the mean reliability was .78.

Measures of Child Social Adjustment

Social Behavior Scale (SBS). The Social Behavior Scale (SBS; see Appendix G) was used as one of the two assessment tools for measuring children’s social adjustment in this study. It is a 39 item teacher-report questionnaire. The scale includes seven sub-scales: (a) Prosocial, (b) Relational Aggression, (c) Overt Aggression, (d) Asocial, (e) Excluded, (f) Depressed, and (g) Victimized. The first three sub-scales are a composite drawn from two assessment tools, the Children’s Social Behavior Scale-Teacher Form (CSBS-T; Crick, 1996) and the Preschool Social Behavior Scale –Teacher Form (PSBS-T; Crick, Casas, & Mosher, 1997). A fourth sub-scale, Depressed, was used without modification from the CSBS-T. The two scales on the SBS that were used in this study are Asocial with Peers and Excluded by Peers. These scales, taken without modification from the Child Behavior Scale (CBS; Ladd & Profliet, 1996), were constructed by the authors to assess socially withdrawn behaviors.

No knowledge of the psychometric properties is available to support the reliability and validity of the SBS, but excellent data exist for its component scales. Principal components factor analysis of the CSBS-T, conducted by Crick (1996) for example, delineated three distinct factors, Relational Aggression, Overt Aggression and Prosocial accounting for 81.4% of the variation in children’s scores. Internal consistency
reliability coefficients for the three factors were .94, .94, and .93 respectively. Short-term stability of the instrument ranged from .80 to .93. Long term stability (6 months) was lower, ranging from .56 to .78. The scales show moderate to strong correlations with coincident peer assessments of social behavior and were predictive of future teacher and peer ratings of social acceptance and peer rejection.

Analysis of the PSBS-T, again by principal components factor analysis (Crick et al., 1997) yielded four factors, Overt Aggression, Relational Aggression, Prosocial and Depressed affect accounting for 81% of the total variation in children’s scores. Internal consistency reliability coefficients were again high, with values ranging from .87 to .96 for the delineated scales. Correlations between teacher ratings on this instrument and ratings by peers were moderate, ranging between .42 and .31.

The two scales on the SBS used in this study, Asocial with Peers and Excluded by Peers, were taken without modification from the Child Behavior Scale (CBS; Ladd & Proflolit, 1996). The entire CBS consists of 59 items drawn from an item pool suggested by existing instruments. Results from principal components factor analysis and inspection by the research team produced 6 factors accounting for 70.2% of the variance among children assessed. Internal consistency reliability for the entire scale ranged from .77 to .96.

The Asocial with Peers sub-scale (6 items) was intended to measure self-imposed social disengagement suggesting the propensity of children to isolate themselves from peers by involvement in solitary behaviors. The Excluded by Peers sub-scale (7 items) was constructed to assess social isolation that was the result of peer driven behaviors. These two scales were highly internally consistent with Cronbach alpha values of .87 and
.96, respectively. Stability of the sub-scales using two cohorts assessed in a four-month interval yielded correlations of between .54 to .59 for the Asocial construct and .67 to .72 for Excluded by Peers.

Construct validity for the CBS was assessed by calculating correlations between this instrument and other measures of child behavior. The two scales of interest in this research were found to be significantly related to an author-derived (Ladd & Profilet, 1996) observational measure of classroom behavior administered coincidently with the CBS. The CBS was also shown to correlate significantly with the “withdrawn” sub-scale of the Child Behavior Profile -Teacher Report Form (Achenbach, 1991).

Playground observation. Trained undergraduate coders targeted the occurrence of four behaviors for recording. The first of these was Engagement, a category defined as physical and verbal behavior directed to another peer or group of peers that had the purpose of engaging the peer in interaction or continuing the interaction initiated by a peer. Parameters to score this category included proximity of the child to a peer or group of peers and active behaviors such as talking, eye contact, and/or touching. Examples of these behaviors included involvement within group games, asking for or delivering help, general comments, and laughing or smiling with peers. The second coded category was Negative Behavior. This category included negative verbal expressions or physical gestures to peers not involving physical contact. Examples of Negative Behavior included teasing, name calling, profanity, tale bearing, verbal or physical threats, and commands. Rough Play was the third category selected for coding. These behaviors included physical contact with peers of a negative nature but without the strength or intensity to be classified as aggressive. Scored behaviors included holding onto
children’s clothes, elbowing or shoudering, and roughhousing as part of a games such as touch football. Aggression was the final category selected for coding. Aggression was defined as negative contact with a peer or object that included the potential for harm or damage. Behaviors encompassed by this category included hitting, scratching and throwing objects at children, taking another child’s toy and damage to property.

This research utilized behavior observations in all four categories to create a general “involvement” score reflecting the child’s socially withdrawn or disengaged behavior. As “involvement” was measured by the percent of intervals in which the child was engaged with peers in any of the four coded behaviors, a low percentage of “involved” intervals reflected socially withdrawn or disengaged children.

Results

Preliminary Analyses

Sample characteristics were computed to describe age, race, gender, socioeconomic status, marital status, and cognitive ability of parents and children (see Table 1). Because the sample included both a community recruited group and parents referred by the Department of Human Services (DHS), comparisons between these two groups of parents and children were made to determine if significant demographic differences existed that might have influenced the interpretation of results. No significant differences were found between groups for age, gender, race, employment status, or SES. Significant differences between the groups did emerge on monthly income. The community parents earned a significantly higher amount per month, \( M = 3,972 \) than the DHS referred parents, \( M = 2,084 \), \( F(1, 61) = 10.5, p = 0019 \). When two community families earning $9,500 and $15,000 per month were excluded from the data, significant
differences remained, although the mean difference was reduced to $1,226 per month from $1,888. Subsequent analyses conducted to determine if income was significantly related to other variables assessing marital conflict and parent psychopathology and stress. No significant associations were revealed.

A statistically significant difference was also evident on the parental measure of cognitive ability. The parents recruited from the community achieved a mean standard score on the Kaufman Brief Intelligence Test (KBIT) of 98.5 as compared with a standard score of 91.3 for the referred parents. The standard error of measurement for the KBIT is of such a magnitude however, that in fact the confidence intervals of these two means overlapped thereby indicating essential equivalence in their values. Given the results of these demographic analyses, no control variables were used in testing hypotheses.

Each of the variables used in this research was then examined by descriptive analyses to check for data entry errors and to assess the characteristics of the distribution of scores. Results from these analyses indicated the variables were approximately normally distributed with acceptable levels of skew and kurtosis (see Table 2). As with demographic variables, comparisons between the two groups of community and referred parents were made to assess group differences (see Table 3). The two groups did differ on the level of marital conflict experienced. The mean CTS-Total score for the referred parents \((M = 20.1)\) was significantly higher, \(F(1, 71) = 5.03, p = .028\), than the score for the community referred parents \((M = 17.6)\). Among the affective variables, only the
Table 2

*Characteristics of Sample Distributions for Variables Under Study*

<table>
<thead>
<tr>
<th>Construct</th>
<th>M</th>
<th>SD</th>
<th>Range</th>
<th>Skew</th>
<th>Kurtosis</th>
</tr>
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<tbody>
<tr>
<td>Marital Conflict&lt;sup&gt;a&lt;/sup&gt;</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CTS-Total</td>
<td>18.9</td>
<td>4.9</td>
<td>11-33</td>
<td>.95</td>
<td>.48</td>
</tr>
<tr>
<td>Emotional Distress&lt;sup&gt;b&lt;/sup&gt;</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SCL-90-R-Anxiety</td>
<td>50.9</td>
<td>10.9</td>
<td>37-80</td>
<td>.51</td>
<td>-.57</td>
</tr>
<tr>
<td>SCL-90-R-Depression</td>
<td>55.2</td>
<td>10.2</td>
<td>34-80</td>
<td>-.12</td>
<td>-.54</td>
</tr>
<tr>
<td>SCL-90-R-GSI</td>
<td>55.5</td>
<td>10.8</td>
<td>32-80</td>
<td>-.15</td>
<td>-.44</td>
</tr>
<tr>
<td>PSI-SF-Total Stress&lt;sup&gt;c&lt;/sup&gt;</td>
<td>82.7</td>
<td>22.2</td>
<td>42-141</td>
<td>.29</td>
<td>-.28</td>
</tr>
<tr>
<td>Parenting Behavior Domains&lt;sup&gt;d&lt;/sup&gt;</td>
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<td></td>
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<tr>
<td>Positive</td>
<td>12.7</td>
<td>3.1</td>
<td>4-18.6</td>
<td>-.36</td>
<td>-.25</td>
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<tr>
<td>Depressed/Disengaged</td>
<td>6.1</td>
<td>2.3</td>
<td>2.3-13.3</td>
<td>.83</td>
<td>.22</td>
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<tr>
<td>Negative/Intrusive</td>
<td>9</td>
<td>2.9</td>
<td>4-17.7</td>
<td>.75</td>
<td>.39</td>
</tr>
<tr>
<td>Child Social Disengagement&lt;sup&gt;e&lt;/sup&gt;</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SBS-Asocial</td>
<td>1.8</td>
<td>.65</td>
<td>1-3.7</td>
<td>.81</td>
<td>.31</td>
</tr>
<tr>
<td>SBS-Excluded</td>
<td>1.8</td>
<td>.75</td>
<td>1-4.7</td>
<td>.96</td>
<td>1.6</td>
</tr>
<tr>
<td>Intervals Involved</td>
<td>68%</td>
<td>25%</td>
<td>19%-120%</td>
<td>.01</td>
<td>.98</td>
</tr>
</tbody>
</table>

*Note.*  
<sup>a</sup> sum scores.  
<sup>b</sup> T-scores.  
<sup>c</sup> raw scores.  
<sup>d</sup> sum scores.  
<sup>e</sup> mean scores.
analysis of global stress was significantly different indicating that the referred parents ($M = 88.3$) were experiencing significantly higher levels of stress, $F(1, 71) = 5.42, \ p < .02,$ than were those parents recruited from the community ($M = 76.4$).

Tests of Hypotheses

The first hypothesis in this study stated that significant intercorrelations would exist among the scores on measures of marital violence, parenting domains, parenting emotional distress, and child social disengagement variables (see Table 3). Results of Pearson Product Moment Correlations indicated that the two subscales from the SBS (i.e., Asocial and Excluded) were positively related, and the Asocial subscale of the SBS was significantly negatively related to observed child involvement on the playground ($r = -.27$). Additionally, there was a significant positive correlation between marital conflict (CTS-Total) and the Asocial subscale on the SBS ($r = .23$) and a trend toward significance between the CTS-Total scores and the Excluded subscale of the SBS ($r = .19$).

Results of correlational analysis also indicated that all four measures of parental psychopathology and stress were significantly interrelated, as were two of the three parenting domains. Additionally, CTS-Total scores were significantly and positively related to anxiety ($r = .24$) and evinced modest associations with PSI-T ($r = .21$) and GSI ($r = .20$). Among the psychopathology and parenting variables, all psychopathology variables were significantly negatively related to Positive parenting and conversely, positively associated with Depressed-Disengaged parenting.
<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
</tr>
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<tbody>
<tr>
<td>1. CTS-Total</td>
<td>1</td>
<td>-.06</td>
<td>-.10</td>
<td>.15</td>
<td>.23*</td>
<td>.20</td>
<td>-.13</td>
<td>.13</td>
<td>.24*</td>
<td>.20</td>
<td>.21</td>
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<tr>
<td>2. Pos Parenting</td>
<td>1.0</td>
<td>-.86***</td>
<td>-.61**</td>
<td>.007</td>
<td>-.09</td>
<td>-.08</td>
<td>-.24*</td>
<td>-.26*</td>
<td>-.23*</td>
<td>-.27*</td>
<td></td>
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<tr>
<td>3. Dep-Dis Parenting</td>
<td>1.0</td>
<td>.12</td>
<td>-.09</td>
<td>.03</td>
<td>.04</td>
<td>.34**</td>
<td>.25*</td>
<td>.26*</td>
<td>.29*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Intrus-Neg. Parenting</td>
<td>1.0</td>
<td>.04</td>
<td>.04</td>
<td>.01</td>
<td>-.04</td>
<td>.15</td>
<td>.06</td>
<td>.03</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. SBS-Asocial</td>
<td>1.0</td>
<td>.57**</td>
<td>-.27*</td>
<td>.02</td>
<td>.12</td>
<td>.15</td>
<td>.01</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. SBS-Excluded</td>
<td>1.0</td>
<td>-.13</td>
<td>.04</td>
<td>.17</td>
<td>.15</td>
<td>.09</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Intervals Involved (%)</td>
<td>1.0</td>
<td>-.14</td>
<td>-.01</td>
<td>-.11</td>
<td>-.03</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>8. SCL-90-Depression</td>
<td>1.0</td>
<td>.75***</td>
<td>.85***</td>
<td>.59***</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. SCL-90-Anxiety</td>
<td>1.0</td>
<td>.83***</td>
<td>.55***</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. SCL-90-GSI</td>
<td>1.0</td>
<td>.56***</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. PSI-SF-Total Stress</td>
<td>1.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note.* $n = 72$, *$p < .05$, **$p < .01$, ***$p < .001$. 
Table 4

Comparisons Between Abusive and Non-Abusive Parents on Violence and Psychopathology and Stress

<table>
<thead>
<tr>
<th></th>
<th>Abusive</th>
<th>Non-Abusive</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>( n = 38 )</td>
<td>( n = 34 )</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>( M )</th>
<th>( SD )</th>
<th>( M )</th>
<th>( SD )</th>
<th>( F )</th>
<th>( p )</th>
</tr>
</thead>
<tbody>
<tr>
<td>CTS-Total</td>
<td>20.1</td>
<td>5.7</td>
<td>17.6</td>
<td>3.5</td>
<td>-2.2</td>
<td>.02</td>
</tr>
<tr>
<td>SCL-90 Dep.</td>
<td>55.9</td>
<td>1.6</td>
<td>54.6</td>
<td>1.8</td>
<td>-0.07</td>
<td>.51</td>
</tr>
<tr>
<td>SCL-90 Anx.</td>
<td>52.0</td>
<td>1.8</td>
<td>49.7</td>
<td>1.9</td>
<td>-0.90</td>
<td>.37</td>
</tr>
<tr>
<td>SCL-90 GSI</td>
<td>57.1</td>
<td>1.7</td>
<td>53.7</td>
<td>1.8</td>
<td>-1.3</td>
<td>.19</td>
</tr>
<tr>
<td>PSI-SF Total</td>
<td>88.3</td>
<td>3.4</td>
<td>76.4</td>
<td>3.7</td>
<td>-2.3</td>
<td>.03</td>
</tr>
</tbody>
</table>
The second hypothesis stated that marital conflict (CTS-Total) would predict unique variance in the three child social disengagement variables over and above any control variables. Demographic comparisons between the community and referred participants on demographic variables suggested no clinically significant differences and thus, no control variables were employed. To test this hypothesis, separate regression equations were estimated for each of the child social disengagement measures. Results from the first regression model suggested that marital conflict (CTS-Total) significantly predicted to child social disengagement as measured by the Asocial subscale on the SBS, $F(1, 71) = .388, p = .053, R^2 = .05$. The second regression model indicated that marital conflict did not predict a second measure of social disengagement, the Excluded subscale of the SBS, $F(1, 71) = .2.85, p = .09, R^2 = .039$. Nor was the regression model estimating the prediction of intervals a child was involved on the playgroup by marital conflict significant, $F(1, 71) = 1.23, p = .27, R^2 = .017$. In sum, the level of marital conflict in families did account for a significant amount of variance in one (Asocial behaviors) but not all measures of child social disengagement, and thus the second hypothesis was only partially supported.

The third hypothesis examined was that the three parenting behavior domains (“positive parenting,” “negative-intrusive parenting,” and “depressed-disengaged parenting”) would partially mediate the relationship between marital conflict and child social disengagement. One of the preconditions for testing mediation is the existence of significant correlations between marital conflict (CTS-Total) and the three parenting behavior domains. As this condition was not met by correlational analysis (see Table 3), mediation was not tested (Baron & Kenny, 1986).
Finally, the fourth hypothesis in this study stated that parental psychopathology (SCL-90-R, anxiety, depression GSI) and marital stress (PSI-SF-total Stress) would moderate the relationship between marital conflict (CTS-Total) and the three parenting behavior domains ("positive parenting," "negative-intrusive parenting," and "depressed disengaged parenting"). That is, parents experiencing high levels of marital conflict and high levels of parenting stress and/or psychopathology would exhibit low levels of "positive" parenting behavior and high levels of "negative-intrusive and depressed-disengaged" parenting behavior. To test this hypothesis, each of the parenting behavior domains was individually regressed on the measure of marital conflict and each of the measures of parental psychopathology, the measure of parental stress and an interaction term comprised of the product of CTS-Total scores and in turn on each of the four measures of parental psychopathology and parenting stress. One potential difficulty with this procedure is multi-collinearity produced by high correlations between the variables included in regression equations. To correct for this difficulty, variable scores are centered or put in deviation score form. Because of the low to moderate (range -.01 -.26) correlations between predictor variables and interactions terms, however, multi-collinearity was not a problem and the variable values did not need to be centered.

A series of twelve regression equations were conducted. Although whole model tests were significant for Depressed-Disengaged Parenting across each of the measures of parental psychopathology (See Table 5), none of the interaction term products between CTS-Total scores and the parental psychopathology scores were significant predictors of the variance in any domain of parenting behavior, thus, there was no evidence of
Table 5

Testing Models of Moderation of Parenting Domains, Marital Conflict, and Parent Psychopathology

<table>
<thead>
<tr>
<th></th>
<th>F(df)</th>
<th>p</th>
<th>R²</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Positive Parenting</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anxiety</td>
<td>1.96(3)</td>
<td>.13</td>
<td>.07</td>
</tr>
<tr>
<td>Depression</td>
<td>1.89(3)</td>
<td>.14</td>
<td>.08</td>
</tr>
<tr>
<td>GSI</td>
<td>1.73(3)</td>
<td>.17</td>
<td>.07</td>
</tr>
<tr>
<td>PSI-T</td>
<td>2.34(3)</td>
<td>.08</td>
<td>.09</td>
</tr>
<tr>
<td><strong>Depressed-Disengaged Parenting</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anxiety</td>
<td>2.79(3)*</td>
<td>.04</td>
<td>.11</td>
</tr>
<tr>
<td>Depression</td>
<td>4.59(3)**</td>
<td>.005</td>
<td>.17</td>
</tr>
<tr>
<td>GSI</td>
<td>3.26(3)*</td>
<td>.02</td>
<td>.12</td>
</tr>
<tr>
<td>PSI-T</td>
<td>4.16(3)**</td>
<td>.01</td>
<td>.15</td>
</tr>
<tr>
<td><strong>Intrusive-Negative Parenting</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anxiety</td>
<td>.78(3)</td>
<td>.50</td>
<td>.03</td>
</tr>
<tr>
<td>Depression</td>
<td>.65(3)</td>
<td>.58</td>
<td>.02</td>
</tr>
<tr>
<td>GSI</td>
<td>.57(3)</td>
<td>.63</td>
<td>.02</td>
</tr>
<tr>
<td>PSI-T</td>
<td>.57(3)</td>
<td>.63</td>
<td>.02</td>
</tr>
</tbody>
</table>

Note. $n = 72$, * $p < .05$, ** $p < .01$. 
moderation. Inspection of the parameter estimates for each of the twelve whole model tests revealed no significant relation between CTS-Total scores and any of the three parenting domains. Because none of the interaction terms representing moderation were significant, further probing of this data was not conducted.

Discussion

A significant body of research has delineated the association between exposure to marital conflict and negative sequelae for many children (see Margolin, Oliver, & Medina, 2001). Specific focus was placed in this study on the impact marital conflict may have on children’s social adjustment, emphasizing the link between exposure to marital conflict and the manifestation of internalizing socially withdrawn or disengaged behaviors (Rubin et al., 1990). This examination was extended by also investigating the direct and indirect mechanisms by which social withdrawal or disengagement may evolve from exposure to marital conflict.

This study drew upon the research of Cummings (1998) and Margolin and John (1997) to create a mediation/moderation mixed model to describe the complex interactions of the constructs (Cummings, Goeke-Morey, & Dukewich, 2001; Parke, Kim, Flyr, McDowell, Simpkins, Killian, & Wild, 2001). Because of the examination of multiple influences on the link between exposure to marital conflict and children’s social withdrawal or disengagement this discussion will be partitioned into sections delineating findings regarding direct effects, indirect effects mediated through parenting behavior, and moderators of those parenting behaviors.
Direct Effects of Marital Conflict on Child Social Adjustment

In examining the direct linkage between exposure to marital conflict and children’s social disengagement, it was predicted that children exposed to marital conflict involving verbal and/or physical aggression would be rated by their teachers as less interested in social interaction than non-exposed peers and manifest a preference for solitary play. These children would, furthermore, tend to be socially isolated or rejected by peers in the classroom and interact less with peers on the playground. One of these predictions was supported in this study. Indeed, children with a greater exposure to marital conflict tended to appear to their teachers as less interested in social interactions than peers appeared to be. This effect was small however, as exposure to marital conflict explained about 5% of the variance in children’s asocial behaviors. The actual motivations for these choices of solitary play are not addressed in this study. In their work on sub-typing socially withdrawn children, Harrist and colleagues (1997) identified four groups within the studied sample: unsociable children (low rates of peer interaction), socially passive and anxious children, aggressive/defiant children who were rejected by peers, and a fourth group of sad children who also manifested social immaturity. As no measures of child affect were administered in this current study, the asocial children identified here could have different etiologies. In this sample, however, teacher ratings of asocial behavior were closely associated with teacher ratings of sad/depressed behavior, $r(72) = .40, \ p < .005$, suggesting at least some support for the contention that internalizing responses by children to marital conflict were associated with asocial behaviors with peers.
Contrary to expectations, there was no revealed significant direct linkage between exposure to marital conflict and teacher ratings of peer exclusionary behavior, although results suggested a trend in that direction. Exclusion is a somewhat different construct than asocial behaviors and is more akin to active social rejection by peers than is a measure of solitary play by a child. One of the concerns expressed in the research literature about the social impact that exposure to marital conflict may have on children’s social adjustment is that of the possibility of peer rejection (Parker & Asher, 1987). Although Rubin and colleagues (1996) suggested a link between socially withdrawn behavior and peer rejection, little empirical evidence exists that supports their contention. Recent work with preschool children suggests, however, that high levels of solitary play are associated with peer rejection (Wood et al., 2002). Although no significant direct link between exposure to marital conflict and these behaviors was revealed in the present study, a significant relation was found between children’s scores on the Asocial and Excluded subscales on the Social Behavior, $r(72) = .57$, $p < .001$. Thus, as noted by teachers, children who exhibited high levels of solitary play also tended to be excluded in play by peers. Because of the correlational nature of this finding that precludes establishing causality, an equally likely explanation is that children who were rejected by peers were also likely to seek solitary play activities (Wood et al., 2002).

One possible contributor to the weak association between exposure to marital conflict and Asocial and Excluded behaviors by children was the use of teacher reports of child social behavior. The tendency in much previous research was to use mothers as the source of information about both the level of violence experienced and the coincident adjustment problems of their children (Sternberg, Lamb, & Dawud Noursi, 1998). That
practice places the reports of significant associations between marital conflict and child maladjustment under the possible influence of shared method variance where mothers report on both the independent variable and the dependent variables (Sternberg et al., 1998). Because the current study relied on maternal reports of marital conflict as they entered the study and teacher reports of children’s social maladjustment six months later, the absence of a significant association among two of the outcome measures and the marital conflict measure might have resulted from a more stringent test of this association than found in previous work. Findings suggest that for many children, exposure to marital conflict may not represent a significant threat to social adjustment over time. Also, as the assessments of child social behavior were made in the classroom, they may represent an ecologically valid assessment of the negative impact of martial conflict on children in environments removed from the potential stresses within the nuclear family.

Reinforcing this idea is the fact that parental accounts of marital conflict fairly consistently have been shown to have a low relation to children’s perceptions of the same experiences (Sternberg, 1993; Sternberg, Lamb, & Dawud-Noursi, 1998). One important factor that may contribute to these differences is the meanings or appraisals that children attach to their exposure to marital conflict (Grych & Cardoza-Fernandes, 2002; Grych & Fincham, 1990). This appraisal process encompasses the complex interplay of children’s perceptions of parental affect such as anger, the relevance of the causes of conflict to children’s behaviors and inferred implications of conflict for family functioning (Grych & Cardoza-Fernandes, 2002). Recent work by Levendosky and Graham-Bermann (2001) indicated that although experiences of domestic violence augmented with reports of childhood experiences of abuse contributed to 25% of the variance in maternal reports of
child adjustment, these constructs only explained 1% of the variance in child reports of their adjustment difficulties. It is possible, therefore, that the fact that teachers and observers did not rate children as being rejected in class or disengaged on the playground was due to the fact that exposure to marital violence was not salient to the child and thus, these behaviors were not in evidence.

Finally, an additional possible explanation for the weak and non-significant direct linkages between marital conflict and child social adjustment is that the modifications made to the measure of marital conflict (Conflict Tactics Scale) in this study made the elucidation of such a linkage less likely than would be expected with use of the original scale. Particularly important was the truncation of the frequency count for conflict tactics. As noted in the methodology section, a range from 0 to 3 was employed to assess the frequency of conflict tactics rather than the standard CTS 1-6 scale. In the modified scale, “zero” indicated no information, “one” indicated the method was never used, “two” indicated the tactic was used once as an isolated incident, and “three” indicated that the tactic was used more than once in the past two years. In the standard administration procedure, the use of “one” indicated the tactic was never used, but “six” suggested that tactic was used more that 20 times, allowing for the greater specificity and a higher ceiling in assessing the frequency of conflict. The use of the truncated scaling in the modified version of the CTS used in this study possibly reduced the ability to discriminate levels of conflict among participating parents.

Direct links between marital conflict and engagement with peers on the playground. Also contrary to expectation, there was no significant direct link between exposure to marital conflict and the level of engagement with peers on the playground as
observed by independent raters. That is, children exposed to “high” levels of marital conflict did not appear to interact with peers less frequently on the playground than did classmates. Part of the difference between significant teacher ratings of asocial behaviors in class and non-significant observations of engagement on the playground is that teachers may have more accurate perceptions of children than an observer who witnesses only a 30-minute segment of behavior on the playground. It is also possible that when multiple classes adjourn to the playground at one time, opportunities for disengaged children to play with peers from other classes arise.

Another important factor is that children in this study were drawn from a community population rather than from shelters for battered women (as in much previous research). As shelter residence can exacerbate the trauma of exposure to marital conflict for many children due to dislocation from friends and classmates, disruptions of routines and economic stress (Sternberg, 1993, 1998) one might naturally expect lower levels of social maladjustment within the current sample than those recruited from shelters. The children in this current study may have had access, furthermore, to other support systems in school and in their neighborhoods that may have buffered them from the negative effects of marital conflict. As elucidated by Bronfenbrenner (1978), children’s experiences include a complex array of environmental factors within and without the family. These include the possible buffering effect of sibling relationships in the home and peer relationships at school (Lockwood, Gaylord, Kitzmann, & Cohen, 2002). Thus, the likelihood of finding strong direct links between exposure to marital conflict and social maladjustment was reduced in this relatively low risk sample. Resilience of children exposed to marital conflict was elucidated by Hughes and Luke (1998) who
noted in their cluster analysis of the adjustment of children residing in battered women’s shelters that fully 62 % of the children were classified as either coping well or tolerably well with their experiences. Thus, even with the potential for social dislocation implied by shelter residence, many children exposed to severe marital violence were exhibiting few adjustment problems. Children in this current study, drawn as they were from essentially a community population and not residing in shelters could be expected to exhibit a diminished level of social maladjustment.

**Links between classroom and playground behavior.** Despite the low likelihood of significant social maladjustment in the current sample, a significant negative correlation existed, \( r (72) = -.27, p = .02 \), between children’s asocial behavior observed in the classroom by teachers and engagement with peers on the playground. Although there was no evidence of a direct link between exposure to marital conflict and disengagement with peers on the playground, this association supports the idea of the potential pervasiveness of socially withdrawn behavior children across settings for some children.

To explore this association more deeply, a post-hoc analysis of children who were identified by teachers as relatively Asocial with peers and Excluded by them was conducted. Children who achieved a mean score of 2, more than two standard deviations above the sample mean on the SBS Asocial and Excluded subscales, were included in this “extreme” group. In actuality, “extreme” is a relative term here. The possible range for the SBS-Asocial and Excluded subscales was from 1 (“This behavior is never true of a child”) to 5 (“This behavior is almost always true of a child”). The verbal description of the children with a mean score of 2 was that they “rarely exhibited asocial behaviors or were excluded by peers.” Thus, while appearing at the “extreme” of the sample, these
identified behaviors were relatively infrequently observed. The intent of this analysis was to explore the idea that the association between marital conflict and social adjustment might be more robust for children manifesting more frequent evidence of social disengagement than did children in the sample as a whole.

For the 19 children included in this grouping, examination of the association between exposure to marital conflict and social maladjustment was revealing. Despite the diminished power resulting from a very significant reduction in sample size, a statistically significant association was found between exposure to marital conflict and teacher reports of asocial behavior, \( r(19) = .64, p = .003 \) and exclusion by peers, \( r(19) = .65, p = .002 \). This finding suggests that for the children in this subsample, exposure to marital conflict was significantly related to both disinterest in playing with peers and exclusion by them even when the observed behaviors were of low frequency.

The specific reasons for this isolation are not clear, although a high correlation between the Asocial and Excluded subscales for these children, \( r(17) = .82, p < .001 \), suggests that disinterest in interacting with peers may be contributing to isolation by peers. This finding is consistent with those discussed by McDoughall and colleagues (2001) that suggest socially rejected children appear to manifest socially disengaged behaviors and experience more internalizing difficulties such as depression and low self-esteem than non-rejected peers (McDoughall, Hymel, Vaillancourt, & Merger, 2001).

As with all correlational research, a plausible alternative argument is that rejected children may also choose more solitary play activities. In sum, findings from this community sample of children appeared to support a weak but statistically significant direct association between exposure to marital conflict and socially disengaged behaviors
as assessed by teachers six months later. The link was not evident for exclusionary behaviors by peers or for levels of engagement with peers on the playground. For children with relatively high levels of asocial behavior, however, there did tend to be link between marital conflict and rejection by peers.

Parenting as a Mechanism to Link Marital Conflict and Child Social Withdrawal

The indirect mechanisms examined in this study were posited to affect the relation between destructive marital conflict and child adjustment through a disruption in parent-child relationships primarily through disturbances in parenting behaviors or parenting practices. Such disturbances have been proposed to at least partially mediate the impact of destructive marital conflict on children (Emery, 1982; Fincham et al., 1994; Margolin & John, 1997) and have been termed the “spillover hypothesis” as disturbances in the marital relationship tend to spillover into parent child relationships (see Erel & Burman, 1995).

One of the conditions for mediation is significant relations among the component variables in the mediation model. In this current study, contrary to expectations and a significant body of previous research, no significant associations were found between the experience of marital conflict and any of the observed parenting behaviors examined in the parent-child interactions. Although surprising in the face of previous research, this finding is consistent with recent work by Levendosky and Graham-Bermann (2001) whose results indicated that experiences of domestic violence accounted for just 5% of the variance in parenting behaviors. Indeed, in Levendosky and Graham-Bermann’s (2001) work, parenting behavior was measured using a self-report protocol and as this single informant methodology is vulnerable to shared method variance one might see
stronger results than would be expected when as in this current study, multiple
independent informants were employed. This lack of explanatory power also may have
been influenced by sample selection. Levendosky and Graham-Bermann (2001) chose to
employ a community sample in their research similar to the design used here. As such
both studies avoided measuring negative effects of marital conflict on children residing in
shelters, a circumstance that may in itself contribute to children’s distress. Also
congruent with this study, Levendosky and Graham-Bermann (2001) decided to measure
exposure to marital conflict as a continuous variable to maximize the ecological validity
of the scales by avoiding the participation of women exclusively residing in shelters.
This methodology may have reduced the likelihood of finding a significant link between
parenting and child social maladjustment. It may, however, also represent a clearer
picture than in much previous work of how exposure to marital conflict affects children.

Prior research suggests that the impact of marital conflict on parenting behavior is
not universally negative. This phenomenon has been termed the “compensatory
hypothesis” (Erel & Burman, 1995) and suggests that exposure to marital violence may
prompt some parents to try to assuage the negative effects of marital conflict on their
children by increased attention to their children’s needs (Cox, Paley, & Harter, 2001).
Although this attention may not always be positive for children (i.e., the parent might
seek the gratification of personal needs in the parent-child relationship), this
compensation for trauma may be a salient factor that buffers children from the negative
effects of marital conflict. Work by Cummings and colleagues (1998) suggests that, in a
comparison between shelter residing mothers and those drawn from the community, no
significant differences were revealed in maternal affection, attention or ability to provide
structure during observed mother–child interactions. A follow-up study with greater
minority representation found similar results with no group differences in maternal
warmth, emotional availability, or positive reinforcement of children (Cummings et al.,
1998). The significant difference in parenting that did emerge was the propensity of
battered women to alter their parenting behavior in the presence of the abusive partner.
This finding suggests an interesting possibility for the current results. This current study
also employed observation methodology to derive measures of parenting behaviors that
were more ecologically valid than self-report measures. Given the opportunity for one-
on-one interactions with their child in a safe environment outside of the home, perhaps
mothers perceived a chance for a relatively positive interaction with the child without the
other parent or siblings competing for attention. Thus, they appeared more warm and
responsive than otherwise might have been expected. Parents who experienced marital
conflict also may have been able to compartmentalize experiences in their marriages and
parenting roles thus avoiding the “spillover” phenomenon (Krishnakumar & Buehler,
2000).

Another possible influence on the non-significant results discussed here relates to
the use of the Conflict Tactics Scale as the sole measure of marital conflict in the sample.
Current research suggests the importance of using multiple measures in assessing
central constructs in research. Although the CTS does assess the tactics that parents
employ in resolving disagreements, recent work by Cummings and colleagues (2001)
suggests that this measure may not encompass other important conflict variables. These
variables include conflict history over time rather than a retrospective “snapshot” of
behavior, assessing parent behaviors like withdrawal or avoidance that may indicate
serious marital difficulty, and understanding the salience of conflict behaviors on children. Including measures such as parental diaries to describe the complexity of marital conflict in the naturalist environment of the home might provide significant beneficial additions to research methodology. Such diaries might include assessments of constructive as well as destructive marital conflict, supportive parent responses in conflict situations, and family reactions to incidents of conflict extended over time (Cummings et al., 2001). Assessment of marital conflict from the child’s perspective using measures like the Children’s Perspective of Interparental Conflict Scale (Grych, Seid, & Fincham, 1992) also may have made the assessment of marital conflict in this current research more powerful.

**Associations Between Parenting and Child Social Withdrawal**

There were no significant associations between observed parenting behaviors and any of the child outcome measures of social withdrawal or disengagement. Several reasons may account for this. First, it may be that in this community sample, levels of marital conflict simply did not exert a significant deleterious effect on parenting. Second, parents may have interacted with their children more positively than was expected from their exposure to marital conflict and if stress did exist within the nuclear family they were able to ignore it or compensate for it. Third, child characteristics not measured in this study may have provided buffers from the negative effects of the poor parenting that was extant. Buffering characteristics might include temperamental factors within the children, areas of special skill or talent, extra-family social supports, as well as child appraisals of marital conflict as not being particularly salient to them (Margolin, Oliver, & Medina, 2001). Thus, this sample of children may have had individual characteristics
that offered resilience in the face of difficulties in parenting they experienced. Fourth, the gender of the participating parents may have contributed to difficulty observing the effects of impaired parenting on children’s social behavior. In this study only nine of the 72 parents were males. Previous research has suggested that men and women respond to marital stress in different ways with men tending to withdraw from family interactions, and specifically, interactions with their children (Davies & Lindsay, 2001). Kitzmann (1999) also suggested that fathers who withdrew from interactions with their children after a conflictual exchange, accounted for most of the negative effects in children’s adjustment (Katz & Gottman, 1996). Mother’s parenting behaviors were not observed to substantially change after episodes of marital conflict. Given the proposed pathway of observational learning as a mechanism for children’s adjustment difficulties, father’s responses to marital conflict may, in fact, be more salient to children’s maladjusted responses than that of mothers who, if marriages dissolve remain overwhelmingly the primary caretakers of children. Similarly, work by Park and colleagues (2001) suggested that paternal negative problem-solving strategies were associated with higher rates of peer avoidance in children.

Finally, this current study did not elucidate how reported conflicts were resolved and it is possible that even fairly egregious conflicts could be moderated by an otherwise strong marital relationship or a positive resolution (Cummings & Davies, 1994). Conversely, infrequent episodes of marital conflict may not automatically imply better parenting. Parents may have arrived at the stage of marriage when withdrawal is the defining characteristic and thus, while not fighting, may be disengaged with their children (Katz & Gottman, 1996).
A second focus of this investigation was an examination of the moderational impact of maternal anxiety, depression, and perceived stress related to parenting behavior. Moderating variables affect the strength or direction of the relation between the independent and dependent variables and suggest that the relation is not constant but varies across the levels of the moderator. In this study, it was hypothesized that the presence of parental psychopathology and/or stress would exacerbate the effect of marital conflict on parenting behaviors. That is, even if a significant relation between marital conflict and impaired parenting was not initially revealed, parental experiences of anxiety, depression, or stress were expected to interact with marital conflict so that in concert, they would create a negative influence on parenting. Contrary to expectations no significant interactions were revealed.

What was apparent from this research was that experiences of marital conflict were significantly associated with parental anxiety and tended to be associated with parenting stress. Also apparent was the significant relation between parent reports of psychopathology and stress and two of the three parenting behavior domains. Specifically, it was found that positive parenting behaviors characterized by warm and sensitive interactions with the child were negatively related to anxiety, depression, a global measure of symptoms, and total stress experienced. These findings are consistent with a substantial body of literature suggesting that mothers who experience anxiety, depression, and stress are found to be generally less warm and supportive of their children (Cummings, 1995, Cummings & Davies, 1994b; Downey & Coyne, 1991; Hammen, 1995; Hirshfield, Brody, Fararone, & Rosenbaum, 1997; Levendovsky &

Also important were the positive significant relations between all measures of parental psychopathology and stress and the depressed-disengaged parenting domain characterized by a lack of observed involvement with children and a flat affect. Thus, mothers experiencing emotional difficulties and stress seemed to lack the available psychological resources and energy for nurturing parenting and consistent child management (Goodman & Gottlieb, 1999). As Downey and Coyne (1990) noted, these behaviors are associated not only with diagnoses of clinical depression but also may be seen in mothers with mild depressive symptoms and mothers experiencing chronic environmental stressors. And yet, there was no observed relation between parenting and child outcomes.

Given the relation between marital conflict and anxiety and the multiple significant relations among measures of parental psychopathology and stress and parenting, the lack of a significant moderation effect is surprising. It is possible that parents may be experiencing psychological distress from sources other than exposure to marital conflict. Perhaps other factors such as economic stress, single parenthood, loss of a job, or lack of social support contribute to these findings independent of marital conflict. This hypothesis was proposed in a model by Graham-Bermann (1998), in which maternal depression and stress were suggested to be the most salient factors both generating episodes of marital conflict and affecting child behavior. To explore part of this contention post-hoc, a correlational analysis was used to examine the relation between parental psychopathology and stress and child social withdrawal. For the full
sample, \( n = 72 \), no significant associations were found. When this analysis was conducted with the smaller sample of 19 children who exhibited relatively “extreme” scores on either of the SBS subscales however, significant relations were revealed. Parental depression and anxiety, for example, were significantly associated with teacher ratings of child asocial behavior and peer rejection \( r(19) = .58, \ p = .01 \) and \( r(19) = .50, \ p = .03 \) respectively. It is possible, therefore, these children were more affected by pervasive changes in the mood and affect of their mothers at home rather than variations in observed parenting behaviors in the laboratory setting even if these behaviors are also negatively affected by psychopathology (Levendosky & Graham-Bermann, 2001).

**Conclusion**

Findings of this study seem to support direct effects models of the impact of marital conflict on child social development; specifically, that some children who are exposed to marital conflict exhibit a desire to withdraw from social interactions. Potential explanations for this finding not measured in this research included the hypothesis that exposure to destructive marital conflict may influence children’s social behavior as they model avoidant problem solving behaviors witnessed in the home. In subsequent interactions with peers, children may reproduce the behaviors they have learned through observation. Exposure to marital conflict also may affect children’s social adjustment by modifying the conceptual templates children form about interpersonal interactions and their ability to regulate emotions in conflict situations within the family and subsequently with peers.

Findings from this study did not suggest that parenting was a mechanism by which children’s social withdrawal was influenced. Perhaps, as has been noted, the children in
this study were coping well with the stress of exposure to marital conflict and thus revealed little or no social maladjustment. They may have enjoyed social support outside of the family that buffered them from the deleterious effects of marital conflict. Also important is the fact that the sample used in this study was drawn from the community. The weak and non-significant findings in this study may, in fact, represent the scope of child difficulties when exposed to marital conflict not revealed by samples drawn from shelters for battered women.

It is also possible that the parent child interactions observed in the laboratory did not effectively simulate the stressful and busy environment in the home but instead, provided a opportunity for relaxed interactions not otherwise available. Parents participating in this study may have been able to compensate for their exposure to marital conflict with supportive and consistent parenting behaviors. One salient risk factor for children’s social adjustment appears to be parental psychopathology and stress. Although these behaviors were not significantly associated with negative alterations in parenting behavior, children observed to be at the relative extremes of asocial behaviors appeared to be vulnerable to parent psychopathology and stress. Part of this risk may be the transmission of a biological predisposition for anxiety and depression that manifests itself in withdrawn behaviors with peers.

Clinical Implications

The specificity of prevention/intervention programs for children who manifest difficulties with peer interactions is a key element in ameliorating the negative effects of exposure to marital conflict (Graham-Bermann, 2001). Individual differences in how children respond to marital conflict are important in making a determination of
appropriate interventions. Results from this study suggest young children may be at risk for developing asocial (withdrawn) social behaviors when exposed to marital conflict and that these behaviors may be associated with rejection by peers. Items from the SBS-Asocial subscale delineating withdrawn behavior included, “keeping peers at a distance,” “prefers to play alone,” and “withdraws from peer activities.” To address such concerns, children exhibiting these behaviors might benefit from prevention/intervention programs emphasizing building empathy, enhancing play entry skills and social problem solving skills, coping with stress, and requisite inhibition of avoidant behavior (Graham-Bermann, 2001; Turner & Dadds, 2001).

Although parent psychopathology and stress did not moderate the relation between marital conflict and parenting behavior in this study, there was a significant association between marital conflict and parent anxiety and between several measures of parental psychopathology and maladaptive parenting. Among children who exhibited relatively “extreme” levels of asocial behaviors, parental depression and anxiety were also significantly related to withdrawn and excluded behaviors of children in the classroom. These findings support the proposition offered by Hops and colleagues (1997) suggesting efficacious mental health interventions for adults and children need to consider the contextual variables as well as presenting symptoms. Failure to ameliorate marital conflict would likely ignore an important precursor to such maladaptive behaviors and thus, individual treatments need to be embedded in efforts to modify dysfunctional family interactions. For families at risk for these outcomes, therefore, adopting a family systems approach to intervention would include interventions with parents as well as children (Cox, Paley, & Harter, 2001).
Limitations and Directions for Future Research

This study contained several methodological strengths. At the most basic level, it was designed to model the complexity of the interacting associations between exposure to marital conflict and children’s social maladjustment with the inclusion of direct and indirect (mediated through parenting) linkages among the key variables. The relation between marital conflict and parenting was further examined with the potential moderators of parent psychopathology and stress. Even with inclusive “process oriented” designs, such as was employed here, potential difficulties remain and some of these difficulties were evident in this research. One limitation was the disparity in strength of the assessment of variables included in the model. The assessment of marital conflict, as has been noted previously, consisted of a single self-report measure modified to accommodate an interview format. In contrast, parenting behaviors were relatively rigorously assessed by observation of three parent-child interaction vignettes. Much more preferable would be multiple assessments of each domain encompassing observational and self-report formats. An example of an additional assessment that might contribute to more clearly measuring important variables is parent daily record that delineates the contextual and emotional variables within conflict situations (Cummings, Goeke-Morey, & Dukewich, 2001).

Another important issue in evaluating the methods of the current study is the measurement of parenting behavior. Although the observational methods employed by this study may be more ecologically valid than parent self-reports of parenting behaviors, and avoid shared method variance, they may present a problem with generalizability to actual parenting practices in the home environment. Part of the concern is that 30
minutes of observed behavior free from the competing demands of multiple children and spouse may not be representative. Additional assessment including parent-debriefing interviews after the brief parent-child interaction might provide a needed perspective into the behaviors observed (Cummings et al., 2001). Triadic interactions in which either other siblings or both parents participate in tasks to be observed would add an important dimension. As Katz and Gottman (1997) noted, parenting is a multidimensional construct not easily characterized by observing one parent’s behavior with one child. Parenting behaviors, for example, may change in the presence of one’s spouse. Sibling relationships may exacerbate or buffer the effect of marital conflict on children exposed to it. Recent attention has turned to the examination of co-parenting as a potentially important domain for study (Cox et al., 2001). Including the child’s role in parent-child interactions by assessing child appraisals of conflict situations and child effects on parenting behaviors also would strengthen the existing research base and help target prevention/intervention efforts (Fincham & Grych, 2001).

Finally, although this study contained several methodological strengths just mentioned, it was essentially cross sectional in nature and thus causal inferences about marital conflict were difficult to make. Although the measurement of child social behavior did occur six months after the initial parent interview, the lack of baseline data on child functioning precludes this study being considered truly longitudinal. The key leap therefore, in advancing research in this area would be the employment of longitudinal designs with multiple assessments of important constructs initially and over time to allow for causal model testing. An application of advanced statistical techniques such as structural equation modeling also would allow for the testing the goodness of fit
of models in which several factors act simultaneously in producing outcomes (Cummings et al., 2001). This approach would meld nicely with process-oriented research designs and family systemic approaches to prevention and intervention.
References


Appendix A

PARENTS AND CHILDREN TOGETHER!

Director: Mary Haskett, Ph. D.
Manager: Susan Smith-Scott, Ph. D.

The Parents and children together (P.A.C.T.) Project, funded by the National Institute of Mental Health, began on May 1, 1996 and will continue for a period of five years. The purpose of this project is threefold; the ultimate aim of all three phases is to provide treatment recommendations based on knowledge of causal factors in child social adjustment and of clinically-relevant subgroups of families of physically abusive parents.

First an integrative model developed to explain factors that impact on physically abused children’s social adjustment in peer interactions will be tested. Outcome measures on children’s social adjustment in peer interactions will be collected 6 months after the initial assessment of parent factors, parent-child interactions and children’s social cognition adding to the interpretation of causal mechanisms in child adjustment.

The model is based on social learning theory and social information processing explanations of social behavior. The model first posits that parent’s emotional health and their social cognitive processes (i.e., attributions and expectations for children’s behavior, a problem solving approaches) have a direct impact on parent’s behavior and affect during interactions with their children. Further, interactive style of parents has a direct and indirect influence on children’s social adjustments. The indirect path is proposed to be mediated by children’s own social cognitive processes (i.e., attributions for peer behavior, generation of alternative solutions to problems, and enactment of solutions. Thus it is proposed that parenting style and social cognition of children will make
independent contributions to social adjustment. Findings will point to foci of 
intervention for abused children, whose needs are not adequately addressed in current 
treatment approaches.

The second purpose of this project is to identify clinically-relevant subgroups of 
abusive parents that will predict differential outcomes in child social adjustment. 
Currently, interventions for maltreating parents are not sensitive to individual differences 
across widely diverse parents. Because treatment in most communities is severely 
limited, parents are referred for intervention based on availability of treatment groups 
rather than individual treatment goals. Therapists then respond to diversity among 
parents by attempting to address a wide range of potential skill deficits. As a result, 
groups are either too lengthy (thereby increasing risk of drop out) or are diluted: in either 

Finally, comparison of abusive parents and abused children with matched 
comparison families will be conducted on all major variables in order to provide an 
expansion and replication of prior research showing significant group differences in 
affect, behavior, and social cognition of abuse and non-abuse groups. Influences of 
parent and child gender, ethnicity, and socioeconomic conditions will be explored in all 
analyses. It is anticipated that these findings will further contribute to the development of 
effective interventions. At the conclusion of the 5-year granting period, an outline of a 
treatment manual will be developed based on findings from this project. With a
continuation grant, the manual will be pilot tested and evaluated for later distribution to
treatment providers.
Appendix B.

**PSYCHOSOCIAL INTERVIEW – EXPERIMENTAL**

<table>
<thead>
<tr>
<th>Family ID</th>
<th>Parent ID#</th>
<th>Interviewer/Examiner</th>
<th>Date of Interview/exam</th>
</tr>
</thead>
</table>

**Protective Services Worker**

**Parent Information**

Birthdate: _____-____-_____; Age: Years _____ Months _____
Gender: _____ (1=Male; 2=Female); Relationship to child: _______________
Race: _____ (1=White; 2=Afro-American; 3=Hispanic; 4=Asian, 5=Other)
Level of Education: _____ (1=<7th grade; 2= 9th grade; 3=10th or 11th grade;
4=HS grad; 5=Partial college; 6=College degree; 7=Graduate/professional degree)
Phone #: ______________; Address: ____________________________
Occupation: ______________; Marital Status: ___________; Spouse Available? __________
Income: List sources (AFDC, food stamps, salary, child support) total mo. or yr. __________

Recent therapy? __; Treatment for substance abuse? __; If yes, describe on reverse.
Current medication? __; If yes, list: ________________
K-BIT Score: ______________

**Child Information – Subjects**

**Child A ID#**

Gender: _____; Date of Birth: ___________; Age: ______ yrs. ______ mos.
Grade: _____; School: ___________; Teacher: ___________
Current medication? __; If yes, list the medication(s) and reasons on back
Recent therapy or counseling? ________________
K-BIT score: ______________

**Child B ID#**

Gender: _____; Date of Birth: ___________; Age: ______ yrs. ______ mos.
Grade: _____; School: ___________; Teacher: ___________
Current medication? __; If yes, list the medication(s) and reasons on back
Recent therapy or counseling? ________________
K-BIT score: ______________

**List other family members living in your home (Use reverse if necessary):**

Relationship to child: ___________; Age: ___________; Gender: ___________

**How long have you been working with?**

Obtain information about the circumstances of PS involvement.
**Special Activities**
What kinds of things do you do with your child?
Do you like to go places with your child? Where do you go?
Do you read books, put puzzles together or cook together?
Do you play outside together? What do you do outside?

**Communication**
How much does your child talk to you about what s/he has been doing or what s/he’s interested in?

Do you set aside special time to talk to your child? When?

What kind of things does your child talk to you about?
  - Does s/he tell you about what s/he has been doing in school?
  - Does s/he tell you about h/her friends and if s/he has any problems with friends?
  - Does s/he tell you about things s/he is interested in, singers, records, or sports?

**Discipline Issues**
In the next section, different disciplinary approaches will be surveyed. Prior to asking about the use of specific approaches, engage the parent in a general discussion to get information about the types of situations that elicit disciplinary action. These questions will provide examples to discuss the use of different disciplinary techniques. **Note:** Reassure parent that you ask these questions to everyone as part of the interview. Do not be judgmental, normalize parent’s responses with remarks like, “A lot of parents lose their temper with children.”

A. **Open-ended questions:**
What kind of things do you have to discipline your child for?

What kind of things does your child do that get on your nerves?

How do you usually discipline your child?

What do you usually do when your child:
  - Hits another child?
  - Hurts someone’s feelings?
  - Doesn’t take turns or play with another child?
  - Makes a mess with his/her toys?
  - Doesn’t listen to you or obey you?

B. **How often in the last three months have you-------?**
**Rating Scale:** 0= No information, 1=Never, 2=Once, isolated incident, 3=More than once.

<table>
<thead>
<tr>
<th>Reasoned with your child.</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shouted at your child.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>
Given your child a time out in a chair  0  1  2  3
Sent your child to His/her room.   0  1  2  3
Grounded your child.      0  1  2  3
Taken away privileges
   (e.g., dessert, TV shows) 0  1  2  3
Ignored your child  0  1  2  3
Ridiculed or made fun of your child. 0  1  2  3
Threatened to hit your child. 0  1  2  3
Threatened to leave child or
to send child away. 0  1  2  3

C. Have you ever.........? If yes, how often? When?
If yes to any of the following, assess severity.

When?
Slapped child on hands, legs, or buttocks? 0  1  2  3 _____
Slapped child on face or neck. 0  1  2  3 _____
Hit or punched your child. 0  1  2  3 _____
Hit your child with a strap, best, or rope. 0  1  2  3 _____
Hit your child with a stick, paddle, or
   or other hard object. 0  1  2  3 _____
Shaken your child. 0  1  2  3 _____
Pulled your child’s hair. 0  1  2  3 _____

If yes to any of the following, dismiss and report.

When?
Thrown your child against a wall. 0  1  2  3 _____
Bitten your child. 0  1  2  3 _____
Burned your child. 0  1  2  3 _____
Other (specify). 0  1  2  3 _____

D. Severity of Corporal Punishment: Lifetime/Last three months.
   “Have you left red marks on your child after hitting him/her? What about
   bruises? Any cuts? How long did the cuts/bruises take to go away? Were any
   stitches necessary? Did your child have any head injuries? Lose consciousness?
   Did you go and see a doctor? What did the doctor do?

Lifetime   Last Three Mos.
0          0    No corporal punishment
1          1    Corporal punishment, no injuries
2          2    Mild injuries, red marks that disappeared quickly
3          3    Moderate injuries, bruises or cuts that required
                  less than a week to heal
If 3, dismiss.
4          4    Significant injuries, bruises or cuts that required
                  more than a week to heal
Severe injuries, stitches, medical intervention necessary

If 4 or 5 report to DSS.

**Sexual Abuse History**
Has your child ever suggested that someone touched them inappropriately?
- Fondled them?
- Touched their private parts?
Have you ever had any concerns that this may have happened to your child?
- What has made you concerned about this?

If yes, get details then dismiss & report if necessary

**Experiences of Trauma**
If parent answers yes to any of the following, ask for a description including:
1. When did this occur?
2. Who was involved?
3. What was the children’s reaction? What was your reaction?
4. Did the child receive counseling following this event?

Has_______ ever experienced any serious accident or illness, requiring emergency room treatment or extended hospitalization?
Has _______ ever experienced a physical assault by an adult or serious assault by a peer?
Has_______ ever witnessed a serious accident in which someone was hurt?
Has _______ ever witnessed the assault or death of another person?
Has _______ ever witnessed a physical fight between adults in his/her family?

**Methods of Conflict Resolution**
“How do you and your (husband/wife/boy or girlfriend) usually solve your disagreement?”
Probe about specific areas of conflict raised in previous questions (e.g., housework, childrearing). Let parent answer spontaneously, then ask about the item listed below that were not mentioned

“Couples use may different ways to settle their disagreement. I’m going to read a list of ways couples sometimes solve differences, ways you haven’t mentioned yet. Let me know if you and your spouse have used any of these ways in the past 2 years.”

Rating Scale: 0=No information, 1= Never, 2= Once, isolated incident, 3= More than once.

- Discussed an issue calmly
  - Rating: 0 1 2 3
- Argued heatedly, but short of yelling
  - Rating: 0 1 2 3
- Yelled
  - Rating: 0 1 2 3
- Insulted or swore at one another
  - Rating: 0 1 2 3
- Stormed out of the house
  - Rating: 0 1 2 3
Threatened to hit or throw something at other 0 1 2 3
Threw, smashed, hit or kicked something 0 1 2 3

If yes to any of the following, dismiss
Threw something at the other one 0 1 2 3
Pushed grabbed, or shoved the other one 0 1 2 3
Slapped, hit, or kicked other 0 1 2 3
Beat up the other one 0 1 2 3
Uses weapon (specify) 0 1 2 3

Closing
Ok, now we’re finished with our interview. I’d like to invite you and your family to participate in the project. Let’s find a convenient time for you to come in.

Need Transportation? Y N Need child care? Y N

NOTES:
Appendix C.

Parents and Children Together

The purpose of the family interaction project, supervised by Mary Haskett, Ph.D., of the Psychology Department at NCSU, is to learn more about how families interact and about how children develop social skills.

This assessment will involve the following:
1. A brief history and assessment of general level of ability will be completed.

2. Self-report measures of attitudes about parenting and children, knowledge of problem solving, and general happiness will be completed. Assessment will also include an evaluation of your child’s problem solving and social skills. Reading skills are not required to complete the assessment. One measure of your child’s ability to solve problems involves a situation in which your child will be asked to use some markers that another child has been trained not to give up. This will only last a maximum of 10 minutes, and then the children will share markers and play together for several minutes. If your child becomes upset or very angry, we will stop the assessment immediately.

3. We will make a 30-minute videotape of you and your child interacting while you play games and work on a puzzle together. After the play session, we will have a snack and a short break.

4. With your signed permission, a school visit will be made in about 6 months to observe your child on the playground and to ask your child’s teacher to complete a brief behavioral checklist.

In exchange for participation, you will receive:
1. A cash payment of $75.00 for each eligible parent. If you decide to discontinue the assessment, at any point, you will certainly be free to leave. Your payment will be pro-rated at $25.00/hour.

2. If you choose, you may return to the University for feedback regarding the family assessment. The test results will be discussed, you will have a chance to watch your videotape, and a summary of the teacher checklist will be provided. Transportation will be provided.

3. A written summary and telephone number for agencies providing support for families in Wake County

4. An assessment of eligibility for participation in the Parent-Child-Problem solving
Treatment group. It is not, however, necessary to complete the assessment in order to be considered for enrollment in a treatment group.

**Additional Information**
The assessment will take approximately 3 1/2 hours of your time.

In order to protect your confidentiality, all paper work will be coded with a special number rather than your name. Records will be maintained in a locked room. A Certificate of Confidentiality has been issued from the US Department of Health and Human Services. This certificate protects you from involuntary disclosure of your participation in the project.

Although most families report that this assessment is not stressful, you and/or your children might find some aspects of the assessment make you feel uncomfortable. Please inform the researcher if you experience any negative feelings as a result of your participation.

We must let you know if we have suspicions that your child has sustained unreported abuse or neglect, we will abide by our legal responsibility to report the suspicions to DSS.

**Participation is voluntary and you can withdraw from the program at any time, even after you begin the assessment. In addition, you are free to refuse to respond to any portion of the assessment. Do you have any questions?**

I have read this statement, understand its contents, and agree to participate of my own free will and choice.

Parent’s Name  Date  Signature
To participate in the PARENT AND CHILDREN TOGETHER PROJECT, I agree to allow Dr. Mary Haskett to contact my child’s teacher to request that he or she complete a brief child behavior checklist and return it to Dr. Haskett.

School ________________________________ Grade __________________

City and/or address of school _________________________________________

Teacher: ________________________________

This permission will remain in effect until __________________________________________________________________________

__________________________ ________________________________
Child’s name Child’s birth date

__________________________ ________________________________
Parent’s name Parent’s signature

__________________________
Today’s date

__________________________
Child’s ID#
Appendix E

Scales for Coding Parent-Child Interaction

Introduction

These scales will be qualitative ratings of three 10-minute parent–child interactions. They are an adaptation of scales developed by Cox (1997) for observing parent-child behaviors for young children but are adaptable for use with older children. The scales are to be used to code behaviors from five categories of interaction, sensitivity, Intrusiveness, Detachment/engagement, Positive Regard for the Child and Negative Regard for the Child. The scales are scored on a seven point Likert type system.

The process of observation should unfold as follows. The observer should watch the designated ten-minute segment of the tape completely taking minimal notes relating to the chosen categories. These notes should include initial impressions of the interactions under scrutiny and significant behaviors observed that support these impressions. Subsequent to watching the tape, the observer should decide if the interaction was “characteristic” or “not characteristic” of the interaction and a preliminary score should be assigned (See scoring criteria on p.2)

The tape should be watched a second time with careful note taking of the parent and parent-child behaviors relating to the categories. After the second viewing, a final specific score should be assigned for each category under consideration. The third viewing will be used to reflect on the parent and parent-child scores assigned. The tape may be stopped at any time and rewound to review key segments or behaviors.
These guidelines need to be maintained throughout the project. A standard and repeatable procedure is one of the best ways to ensure reliability. As you become more familiar with the scale, the rating of behaviors will become more fluent. With practice, it will be possible to rate several categories at the same time.

The ratings should be made on both the quality and quantity of behaviors. That is, the characteristics of the behavior should be noted in proportion to the frequency of their occurrence. For example, if a parent displays a general characteristic of warmth and support for the child punctuated by one incident of irritation, that incident, however discordant, should not be the sole basis for rating the parent’s behavior as not characteristic of warmth and support.

**Scoring**

The Likert type scoring of the scales consists of ratings from one to seven. In assigning a number to the observed behaviors a two-step process should be employed. First, the observer should ask him or herself, “Is this behavior characteristic of the category being applied?” If the answer is affirmative, an initial rating of 5, 6, or 7 should be assigned depending on the strength and frequency of the assigned behavior. If the observer determines that the behaviors observed are “not characteristic” of the category, a rating of 1, 2, or 3 is assigned. The middle number, “four”, will be used as a midpoint determinant of the behavior to answer the question “Is the category characteristic or not characteristic of the observed behavior”.

The second step in the scoring process is to assign a specific 1-7 score in each category under consideration. This final scoring should take place after viewing the tape a second time and be reviewed during the third viewing.
Conceptual markers to use in both the initial and final assignation of numbers are the following: “one” indicates that the applied scale is not at all characteristic or indicative of the observed interaction, “three” suggests the interaction is slightly or minimally indicative of the interaction, “five” indicates the behaviors observed are significantly or predominantly characteristic of the interaction and “seven” suggests that the interactions are exceptionally indicative of the behavior category under consideration.

**Scale Categories**

**Positive Regard for the Child:**

**Rationale:** The category represents the parent’s positive feelings towards the child as expressed during interactions with him or her. Positive feelings may be shown by (a) speaking to the child in a warm soft tone of voice, (b) hugging or other expressions of physical affection, (c) an expressive face, smiling, relaxed, oriented toward the child, (d) positive verbal behaviors shown by praising, joking, laughing, (e) listening to the child, making eye contact when talking, watching attentively and appearing playful.

Ratings on this category are based on both the quantity and quality of positive behaviors.

**Quantity** is simply the frequency with which representative behaviors are demonstrated

**Quality** refers to the intensity of the behavior and may be thought of as levels of expressiveness, enthusiasm, playfulness and or warmth

1 = Not at all characteristic: Parent shows none of the behaviors noted above either physical or verbal. For example, The parent initiates not physical contact with the child and demonstrates little if any verbal affection. The parent may also appear negative with
the child or neutral, flat or expressionless. This rating may also be applied if the positive expression seems inappropriate to the situation (laughing at child non-compliance or giving clearly unwanted physical contact). Quality and quantity of behaviors are both very low or non-existent.

2

3 = Minimally characteristic: Parents display some positive verbal and/or physical behavior toward the child but it is minimal, weak in quality and/or infrequent in quantity.

4

5 = Moderately characteristic: Parents display predominantly positive behaviors toward the child with more frequent behaviors of higher quality. The sense of the interaction is clearly more positive than the 3 rating but positive regard waxes and wanes. Physical contact appears to be nurturing to the child. Praise is appropriately timed.

6

7 = Very characteristic: Parents are exceptionally high in physical and verbal expressions of positive regard extending throughout the session. Parents seem lighthearted and clearly delighted by the child.

Negative Regard for the child

Rationale: The category represents both the frequency and intensity of negative affect and behavior toward the child. Behaviors indicative of this category include (a) expressions of disapproval, (b) harsh negative tone of voice when speaking with the child (negative does not mean monotone), (c) tense body and or tense facial muscles and a strained or pained expression, (d) threatening the child and or punishment without
explanation, (e) physical roughness, and (f) belittling the child, put downs, use of unflattering names and sarcasm.

Ratings on this category are based on both the quantity and quality of negative behaviors.

**Quantity** is simply the frequency with which representative behaviors are demonstrated.

**Quality** refers to the intensity of the behavior and may be thought of as levels of tension, harshness or disapproval within the session.

1 = Not at all characteristic: This rating should be assigned to parents who do not display negative verbal or physical behaviors. No evidence of anger, frustration, disgust or dislike should be evident in parent’s voice or facial expression. The parent may appear positive or expressionless and flat but not negative.

2

3 = Minimally characteristic: This rating should be given to parents who are minimally negative with low frequency and intensity of negative expressions. Positive and neutral expressions may also be observed.

4

5 = Moderately characteristic: This rating should be assigned to parents who predominately display negative verbal and or physical behaviors but may display some neutral and even positive behaviors as well. Persistent low-intensity negative behaviors or some evidence of high-intensity negative regard are observed.

6
7=Highly characteristic: Feelings of negative regard are expressed strongly, or consistent levels of moderate negative behaviors are observed. The overriding affect pervading the parent-child interaction is negative.

Flatness of Affect

Rationale: This category represents the parent’s level of animation. Flat affect may reflect boredom, depression, fatigue or distraction. Flatness is exhibited by blank impassive facial expressions and monotone vocal expressions. It is marked by a lack of animation or apparent energy. If the parent is watching the child with interest, (eyes bright), it is a sign that the parent’s affect is not flat. The parent may simply be reserved. This category assesses the parent’s overall demeanor not just animation with the child. Ratings on this category are based on both the quantity and quality of flat behaviors.

Quantity is simply the frequency with which behaviors are demonstrated

Quality refers to the intensity of the behavior and may be thought of as levels of flatness or blankness.

1=Not at all characteristic: This rating should be assigned to parents who exhibit no flatness. There is consistent animation in the parent’s demeanor, behaviors and voice.

2

3=Minimally characteristic: This rating should be given to parents who exhibit some flatness. The parent is usually animated but there is some time when facial expression is blank and impassive.

4
5=Moderately characteristic: This rating should be assigned to parents who are predominantly flat. Some periods of animation may alternate with more clear and frequent periods of flatness. Flat affect predominated.

6

7=Highly characteristic: There is a consistent absence of animation.

Sensitivity/Supportive Presence

Rationale: This category primarily refers to parental behaviors observed in relation to evolved free play, clean-up and puzzle solving activities. The focus is on how the parent helps the child have positive play and learning experiences especially when the child is dealing with a difficult task (puzzle) or a chosen activity during the free play session. The sensitive and supportive parent shows a balance of encouragement of autonomous work while maintaining a level of involvement and support that ensures the child will succeed in and enjoy the experience. If, for example, a child is having difficulty with a task, the parent will be verbally reassuring and calm perhaps even leaning physically closer to the child. A sensitive interaction is well timed to the child’s responses and appears to be in “sync” with the child. The parent helps keep the child interested if need be and also allows for autonomy when desired by the child. A sensitive parent helps the child regulate affect and arousal (e.g. frustration, boredom, and anger) and the parent can adapt his or her interactions to the child’s mood and effort.

Conversely, a parent scoring low in the category fails to provide supportive cues to the child, may appear passive, aloof and uninvolved. He or she may give the impression of greater concern for personal behavior and perceived adequacy as a parent.
rather than of the child’s feelings or actions. The parent may appear to be performing for
the camera, for example.

Ratings on this category are based on both the quantity and quality of
sensitive/supportive behaviors.

**Quantity** is simply the frequency with which behaviors are demonstrated

**Quality** refers to the intensity of the behavior and may be thought of as levels of
verbal support, encouragement connection with the child within the session.

1 = *Not at all characteristic:* There are no of parental sensitivity or support for the
child. The parent is totally intrusive (ignoring the child’s need to do things for him or her
self and/or directing the child’s behavior) or detached, aloof or unavailable. The parent
rarely responds appropriately to the child’s verbal and physical cues and interactions are
primarily ill timed or inappropriate. The parent completely fails to be supportive of the
child.

2

3 = *Minimally characteristic:* The parent gives some support but it is sporadic and
poorly timed to the child’s needs. The rating should be assigned to parents who display
infrequent or weak sensitivity. The dominant mode is one of parental insensitivity
although some positive behaviors may be noted. The parent gives some delayed and
minimal responses to child cues.

4

5 = *Moderately characteristic:* The parent provides good but occasionally
inconsistent support, reassurance and confidence in the child’s ability during activities
and tasks. The parents are, however, predominantly supportive and sensitive but some
supportive responses may be ill timed

6

7=Highly characteristic: This parent skillfully and sensitively provides support
throughout the sessions. The parent sets up the situation demonstrating confidence in the
child’s ability to complete the activity. If the child is having difficulty, the parent finds a
way to encourage whatever effort the child makes. Although inadequate efforts may be
rejected, this is done with sensitivity and confidence in the child. This rating should be
assigned to parents who are exceptionally sensitive. Interactions with the child are
characteristically well times and appropriate

Detachment/Disengagement

Rationale: This category represents the level of parental interest and emotional
involvement with the child, as they play together or work to complete the assigned tasks.
The parent seems unaware of the child’s need for interaction and does not respond to the
child’s looks, cues or vocalizations. That is, there seems to be little relationship between
the child’s behavior and the parent’s response to it and the parents’ behavioral timing
seems out of synchrony with the child ‘s affect and behavior.
Simply allowing the child to complete the puzzle or play by him or herself is not
necessarily a sign of detachment. This may be appropriate if the child if doing well and
is happy and the parent checks in with the child visually. The detached parent seems
passive, emotionally uninvolved, bored and unenthusiastic about what the child is doing.
Behaviors suggestive of detachment may include (a) facing away from the child without attempting to visually check in, (b) infrequent eye contact or conversation, (c) not responding to the child’s vocalization and or smiles, (d) ignoring what the child is doing, (e) never using the child’s name.

Ratings on this category are based on both the quantity and quality of negative behaviors.

**Quantity** is simply the frequency with which behaviors are demonstrated

**Quality** refers to the intensity of the behavior and may be thought of as levels of indifference and a lack of involvement within the session.

1 = *Not at all characteristic:* This rating should be given to parents who display no detachment or under involvement. When interacting with the child, the parent is clearly emotionally involved. These parents may be sensitive to the child’s needs or intrusive as rated by other categories.

2

3 = *Minimally characteristic:* This rating should be assigned who display minimal detachment. While the parent is sometimes uninvolved, he/she is clearly more involved than not.

4

5 = *Moderately characteristic:* This rating should be given to parents who appear predominantly detached. The parent is relatively more uninvolved than involved.

6

7 = *Highly characteristic:* This rating should be assigned to parents who are so detached that it seems worrisome. The child sits without parent attention almost the
entire time even when the parent is in close proximity. The parent may move away from the child or withdraw emotionally.

Intrusiveness

Rationale: A parent scoring high in this category lacks respect for the child as an individual and fails to recognize or understand the child’s need for autonomy and independence. The parent interferes with the child’s needs, desires, interests, or actual behaviors and dominates or leads the interaction. Setting appropriate limits for the child with directives is not necessarily intrusive, unless a lack of respect for the child is evident. Intrusiveness may be reflected by a parent’s failure to follow the child’s lead in interactions. Intrusiveness can also occur in a harsh physical manner (a) grabbing the child’s hands and placing them somewhere else or (b) inappropriate affection such as hugging or kissing that interferes with the child efforts. The parent may be verbally intrusive by (c) imposing directions or not allowing the child to make suggestions or pursue independent efforts.

It is also important to observe the context of parental intrusions referring to child behaviors that precede them (looks of helplessness for example) and child responses to the behaviors (signals to back off and/or frustration). What may seem intrusive to the coder may not be to the child. These context clues are highly subjective, however, and if clear evidence of parental intrusion is present it should be scored as such. Ratings on this category are based on both the quantity and quality of intrusive behaviors.

Quantity is simply the frequency with which behaviors are demonstrated
Quality refers to the intensity of the behavior and may be thought of as levels of intrusiveness and parental control within the session.

1 = No intrusiveness: No signs of intrusiveness are present. The parent may be involved with the child yet continue to respect the child’s needs or alternatively, may appear totally uninvolved with the child and appear detached or withdrawn. In either case, the parent does not impose directives on the child unless the child needs or asks for that direction. If directives are given, it is a manner showing patience and respect for the child. A parent may also offer the child help and let the child decide to accept or reject it. If requested, the parent will allow the child to work alone.

2

3 = Moderately low intrusiveness: There is some evidence for intrusiveness but it is not pervasive. The instances that do occur are of low intensity and may not interfere materially with the child’s need for autonomy. Directives may be poorly timed, for example.

4

5 = High intrusiveness: There are clear incidents of intrusiveness throughout the sessions and it is clear that the parent’s agenda has precedence over the child’s needs and interests. There may be either several “high intensity” interactions or persistent “low” level intrusive interactions. For example, the parent may physically direct behavior more than once or may appear uninvolved for long periods but whenever there is an interaction appear consistently intrusive.

6
7=Very high intrusiveness: The parent is highly intrusive. The parent’s agenda clearly has precedence over the child’s wishes and almost constantly intervenes inappropriately without cues from the child. Highly intrusive parents seem to react to their own schedule rather than basing their actions upon the needs of the child. The parent is domineering and may demonstrate power assertive techniques to get the child to comply either with verbal commands or physical directives.
Appendix F

Scoring Sheet for Parent-Child Interaction Scales

| Coder: ______________________ | Parent ID. # ______ |
| Date. ______ | Segment 1 2 3 | Child ID# ______ |

1. **Positive Regard for Child**
   - Notes
   - Scores
     - 1
     - 2
     - 3
     - 4
     - 5
     - 6
     - 7

2. **Negative Regard for Child**
   - Notes
   - Scores
     - 1
     - 2
     - 3
     - 4
     - 5
     - 6
     - 7

3. **Sensitivity/Support**
   - Notes
   - Scores
     - 1
     - 2
     - 3
     - 4
     - 5
     - 6
     - 7
4. **Detachment/Disengagement**

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5. **Intrusiveness**

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6. **Flat Affect**

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**Appendix G**

**Social Behavior Scale**

Child’s Name/ID: ___________________ Teacher’s Name: __________________________

Date form completed: _______________ How long has this child been in your class: ______

Using the 5-point scale below, please indicate the degree to which each statement describes this child. Then place the competed scale in the envelop provided and mail back to Dr. Mary Haskett. Thank you.

1=Never true, 2=Rarely true, 3=Sometimes true, 4= Often true, 5= Almost always true

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<tr>
<td>1. This child is good at sharing and taking turns.</td>
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<td>2. This child tells a peer that s/he won’t play</td>
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<td>With that peer or be that peer’s friend unless s/he does what this child asks.</td>
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<td>3. This child is a solitary child.</td>
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<td>4. This child hurts other children by pinching them.</td>
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<td>5. This child tries to get others to dislike certain peers by telling lies about the peers to other.</td>
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<td>6. This child likes to play alone.</td>
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<td>7. This child is ignored by peers.</td>
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<td>8. This child verbally threatens to hit or beat up other children.</td>
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<td>9. This child ruins other peer’s things when s/he is upset.</td>
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<tr>
<td>10. Peers say mean things to this child at school.</td>
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<td>11. This child pushes and shoves other children.</td>
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<td>12. This child prefers to play alone.</td>
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<tr>
<td>13. This child verbally threatens to physically harm a peer in order to get what they want.</td>
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</table>
14. This child tells other not to play with or be with a peer's friend. 1 2 3 4 5
15. This child is helpful to peers. 1 2 3 4 5
16. This child is not chosen as a playmate. 1 2 3 4 5
17. When mad at a peer, this child keeps that peer from being in the play group. 1 2 3 4 5
18. Peers avoid this child. 1 2 3 4 5
19. This child tries to cheer up peers when they are sad or upset about something. 1 2 3 4 5
20. This child tries to dominate or bully others. 1 2 3 4 5
21. This child doesn’t have much fun. 1 2 3 4 5
22. This child is ridiculed or picked on by peers. 1 2 3 4 5
23. This child doesn’t smile much. 1 2 3 4 5
24. Peers refuse to let his child play. 1 2 3 4 5
25. This child keeps peers at a distance. 1 2 3 4 5
26. This child kicks or hits other. 1 2 3 4 5
27. This child avoids peers. 1 2 3 4 5
28. This child is kind to peers. 1 2 3 4 5
29. This child tries to get others to dislike a peer. 1 2 3 4 5
30. This child is not liked much. 1 2 3 4 5
31. This child is excluded from peer’s activities. 1 2 3 4 5
32. Peers say bad things about this child to other kids at school. 1 2 3 4 5
33. This child withdraws from peer activities. 1 2 3 4 5
34. This child tells a peer that they won’t be invited to their birthday party unless s/he does what the child wants.
   1  2  3  4  5
35. This child gets hit or bullied at school.
   1  2  3  4  5
36. This child looks sad.
   1  2  3  4  5
37. This child verbally threatens to keep a peer out of the play group if the peer doesn’t do what the child wants.
   1  2  3  4  5
38. This child says or does nice things for other kids.
   1  2  3  4  5
39. Please rate this child’s overall academic performance this year.
   A   B   C   D   F
----------------------------------------------------------------------------------------------
PRO  1:__, 15:__, 19:__, 29:__, 38:__    ___/5          _____________
RA   2:__5:__,14:__, 17:__, 29:__, 34:__, 37:__    ___/7          _____________
OVT  4:__,8:__, 9:__, 11:__, 13:__, 20:__, 26:__    ___/7          _____________
ASC  3:__, 6:__, 12:__, 25:__, 27:__, 33:__    ___/6          _____________
EXL  7:__, 16:__, 18:__, 22:__, 24:__, 30:__, 31:__    ___/7          _____________
DP   21:__, 23:__, 36:__    ___/3          _____________
VIT  10:__, 32:__, 35:__    ___/3          _____________