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THE RELATIONSHIP BETWEEN PARENTAL CONFLICT AND FAMILY
INTERACTIONS: THE ROLE OF EMOTIONAL SECURITY AND
PARENTING BEHAVIORS

By

Nicole Stettler

Accepted in Partial Completion
Of the Requirements for the Degree
Master of Science

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MASTER'S THESIS

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Nicole Stettler

November 9, 2010

The Relationship between Parental Conflict and Family Interactions:
The Role of Emotional Security and Parenting Behaviors

A Thesis
Presented to
The Faculty of
Western Washington University

In Partial Fulfillment
Of the Requirements for the Degree
Master of Science

By
Nicole Stettler
October 2010

Abstract

Interparental conflict (IPC) is an inevitable part of family life which has been linked to child adjustment. Two theories have been proposed to explain this relationship. The emotional security hypothesis represents a direct path by which IPC affects children by threatening their sense of felt security in the interparental relationship. In contrast, the spillover hypothesis suggests that IPC affects children indirectly by influencing parenting practices. The current study extends previous research by examining both of these pathways in families with infants, as well as testing how IPC may contribute to family outcomes. Seventy-four two-parent families of 6- to 14-month-old infants completed a series of questionnaires and laboratory interactions assessing dimensions of IPC, emotional security, parenting and coparenting behaviors, and child and family behaviors. Results provided some support for both the emotional security and spillover hypotheses. Implications for theory and potential future directions for research are discussed.

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The Relationship between Parental Conflict and Family Interactions: The Role of Emotional Security and Parenting Behaviors

Conflict is an inevitable part of family life. Previous research has linked interparental distress with children's maladjustment. However, this relationship can be complex, and several theories have been put forth to explain the pathways by which parents' conflict may affect children. For example, children may be directly impacted by conflict through the implied threat to their emotional security (Davies & Cummings, 1994). They may also experience an indirect effect if a couple's conflict impacts their parenting behaviors, "spilling over" from the marital subsystem to the parent-child subsystem (Katz & Gottman, 1996; Kitzmann, 2000). Cummings and Davies (2002) have called for more "process-oriented research" to examine these types of questions in order to gain a better understanding of the pathways and contextual factors of how marital conflict affects children's outcomes. Particularly, little research has investigated the effects of interparental conflict in infants.

Emotional Security

One construct that has been proposed to help explain variations among children's reactions to interparental conflict (IPC) is the emotional security theory (EST; Davies & Cummings, 1994). Emotional security is the feeling of confidence children have toward the availability and stability of their caregivers. Thus, children react not to the conflict per se, but rather to their perception of the meaning behind the conflict and its implications for themselves and their family (Davies, Harold, Goeke-Morey, & Cummings, 2002; Du Rocher Schudlich & Cummings, 2007). If

conflict is interpreted to threaten this sense of security, the effects on children will be more deleterious. Conversely, if conflict is not perceived of as threatening, it may have little to no effect on the child's later adjustment, or may even provide some benefit, such as modeling positive conflict strategies.

Emotional security has been found to mediate the relationship between interparental conflict and child symptoms, even after controlling for parenting and parent-child attachment, suggesting that it is a distinct process that children experience in reaction to conflict (Davies et al., 2002). Further, at least one study has found no significant correlation between children's emotional security and parenting (Davies et al., 2002). Although it is an internal process, it can be inferred from the child's emotions, behaviors, thoughts, and physiological responses to interparental conflict (Cummings & Wilson, 1999). For example, a recent meta-analysis showed that two clusters of behaviors were common responses to interparental conflict: involvement (e.g., trying to actively break up the conflict, distracting parents during the conflict) and avoidance (e.g., avoiding the conflict situation) (Rhoades, 2008). However, the studies included in this meta-analysis did not include infants or toddlers in their samples. Infants may demonstrate similar behaviors in more age-appropriate ways, such as "distracting" parents by making bids for their attention or showing "avoidance" by directing attention to toys rather than their parents.

Dimensions of IPC

Varying perceptions of interparental conflict may be influenced by its particular characteristics. Researchers have noted the need for investigation of how specific IPC behaviors affect children (Cummings & Davies, 1994), as well as the importance of including both destructive and constructive conflict styles in studies of IPC (McCoy, Cummings, & Davies, 2009). Beyond the destructive/constructive dichotomy, conflict behaviors can be further divided into angry (hostile behaviors that hurt the partner), depressive (avoidance or withdrawal behaviors), and constructive (working towards a resolution) (Du Rocher Schudlich, Papp, & Cummings, 2009). More fine-tuned definitions of conflict behaviors are important to understanding precisely how elements of IPC affect children.

In previous research, certain conflict behaviors (threat, personal insult, verbal hostility, defensiveness, nonverbal hostility, marital withdrawal and physical distress) were found to elicit more negative emotionality and less happiness among children, while others (calm discussion, support, and affection) were related to increased positive emotionality (Cummings, Goeke-Morey, & Papp, 2003). In infants, verbally aggressive IPC predicted and seemed to increase the likelihood of infant's withdrawal from novel stimuli (Crockenberg, Leerkes, & Lekka, 2007). However, even nonverbal hostility among parents is related to children's distress (DeArth-Pendley & Cummings, 2002), suggesting that children perceive and respond to not only the content of the argument, but the emotionality as well. Alternatively, constructive conflict behaviors may buffer children against the effects

of conflict or even elicit positive effects. Goeke-Morey and colleagues (2003) found that parents' expressions of support and affection during conflict were associated with children's positive emotional responses. A longitudinal study of children's emotional security and prosocial behavior also found that constructive IPC seemed to increase positive outcomes in children's functioning (McCoy et al., 2009). One study specifically examining 6 month olds, found a link between mothers' reports of marital harmony and higher levels of physiological and emotional regulation (Porter, Wouden-Miller, Silva, & Porter, 2003).

How a conflict ends also appears to have an impact on children's emotional security. Conflict resolution appears to decrease some of the harmful effects of IPC (Cummings & Wilson, 1999). In previous research, children rated later conflicts between a couple more negatively if there was a history of unresolved conflicts between the same couple rather than a history of resolution (El-Sheikh, Cummings, & Reiter, 1996). Further research suggests that the emotional tone of the resolution is also an important factor. Harmonious endings were found to be associated with less fear, sadness, and anger in children than hostile endings (Davies, Myers, & Cummings, 1996). Importantly, explicit verbal resolution did not seem to have an impact on this effect; changes in emotional tone were sufficient to bolster children's emotional security (Davies et al., 1996). This finding is instructive in hypothesizing infants' reactions to IPC, suggesting that they may be able to perceive and benefit from conflict resolution, even if they are not necessarily able to understand the verbal content of the ending.

Infant Attention to IPC

Another important predictor of children's emotional security in response to IPC may be their attention to the conflict. Previous research has not specifically studied infant's attention in relation to IPC. Cummings and Davies (2010) postulate that one of the domains of emotional security is regulation of exposure to conflict, which can include avoidance. However, it may also be that the attention infants pay to their parents' discussion is less intentional and instead determined by other external stimuli, such as novel toys in the environment. If infants do not attend to the conflict, they presumably would not experience emotional distress because of it. Thus, it is expected that infants who show more discussion attending during the conflict will also display more signs of emotional insecurity.

Impact of Emotional Security on Family Outcomes

Although no previous research has focused specifically on how children's sense of emotional security may impact whole family interactions, it has suggested this may be the case. In a study examining how family characteristics may exacerbate or buffer the effects of conflict on emotional security and child functioning, there was a significant negative relationship between a child's emotional insecurity and family cohesion (Davies, Harold, Goeke-Morey, & Cummings, 2002). Although this finding is correlational, and thus it is equally likely that family cohesion could predict emotional security rather than vice versa, it does suggest that there is a connection between the two. This is also supported by research on family systems, as well as temperament and child effects (Cox & Paley,

2005). Children's behavior can elicit differential treatment from caregivers. For example, infants who are more irritable may elicit less involvement from parents over time. In general, family systems theory would predict that behavioral changes associated with emotional insecurity, such as distress, frustration, and self-soothing, would lead to "further change in individuals, relationships, and the whole family system" (Cox & Paley, 2005).

Spillover Hypothesis

Aside from the direct effect that IPC has on children through impact on emotional security, there may also be an indirect effect through conflict's effect on parenting behaviors (Cummings & Wilson, 1999). Based on family systems theory, the spillover hypothesis suggests that distress and conflict in one family subsystem can have an impact on other subsystems (Margolin, Christensen, & John, 1996; Rinaldi & Howe, 2003). Katz and Gottman (1996) posit that IPC may cause a deficit in "cognitive room" for parents, leading to withdrawal behaviors that a child may interpret as rejection, a threat to emotional security. Further support comes from the link between IPC and impaired parent-child attachment, which provides evidence for less sensitive and responsive parenting because of marital discord (Cox, Paley, & Harter, 2001). The relationships between IPC and parent-child relationships have received support in several studies, including meta-analyses (Krishnakumar & Buehler, 2000). Specific models have suggests that IPC may impact parenting in one or more areas: 1) poor behavioral control of the child (e.g., inconsistent or harsh disciplinary practices, negligent monitoring), 2) greater psychological control of the

child through manipulation of the parent-child relationship (e.g., inducing guilt, intrusiveness, criticism), and 3) lack of warmth, acceptance and emotional availability (Davies et al., 2002).

Dimensions of IPC

Specific strategies used during instances of IPC have been shown to be related to negative parenting behavior. Cox et al. (1999) found that, for mothers, withdrawal during conflict predicted less sensitive and less responsive parenting behaviors toward their infant. For fathers, both anger and withdrawal were associated with less sensitive and responsive parenting. A more recent study found that, for mothers, withdrawal and hostility during IPC was related to both inconsistent discipline and psychological control of their children, a relationship mediated by cortisol reactivity (Sturge-Apple, Davies, Cicchetti, & Cummings, 2009). Some work has also demonstrated links between constructive conflict strategies and parenting. For example, McCoy et al. (2009) found that constructive behaviors during IPC predicted warm parenting. Interestingly, no relationship was found between destructive conflict and parenting. Some research has also examined how IPC may impact coparenting, that is, interparental behavior involving or related to the child (McHale, Kuersten, & Lauretti, 1996). More positive engagement within the marital relationship is associated with more positive coparenting (Schoppe-Sullivan, Mangelsdorf, Frosch, & McHale, 2004). Further, McHale, Kuersten, and Lauretti (1996) report a lack of finding direct relationships between marital quality and behaviors observed in toddlers, suggesting that coparental processes may be a

mediating factor. That is, positive relationship qualities may also “spill over” into the coparenting relationship, increasing warmth and cooperation between partners, and leading to more positive family interactions.

Partners’ affect during conflict has also been examined in relationship to parenting. In a study by Kitzmann (2000), negativity during marital discussion was related to lower support and engagement with their children by both mothers and fathers as well as less democratic parenting. This study also reported effects for the whole family, with higher negativity between parents related to lower family cohesion, more family negativity, and lower family warmth.

Impact of Spillover on Family Outcomes

Disruptions in the parent-child and coparental subsystems may also impact later whole family interactions. In a study examining the spillover of tensions in families, Margolin, Christensen, and John (1996) found support for a conflictual parent-child antecedent predicting later spillover into whole family tension for both distressed and nondistressed families after an interval of delay. Further work has shown that early coparenting behavior predicts later marital behavior (Schoppe-Sullivan et al., 2004). Although previous research has not specifically examined how parenting or coparenting behaviors may be related to subsequent whole family interactions, the interrelatedness between subsystems espoused by family systems theory suggests that these relationships would exist (Cox, Paley, & Harter, 2001).

Weak and strong models of parenting mediating the relationship between IPC and child outcomes have been postulated, expressing partial or full mediation,

respectively (Davies et al., 2002). However, research has not addressed which model best fits the data. A study by Kaczynski and colleagues (2006) supports a fully mediated model. Parent and child reports of the frequency, intensity, and level of resolution of IPC predicted children's externalizing and internalizing symptoms. However, this relationship was mediated by both maternal and paternal parenting, as measured by observers using the System for Coding Interactions and Family Functioning (SCIFF; Lindahl & Malik, 2000). In this case, the correlations between IPC and children's symptoms dropped to nonsignificant levels when parenting variables were included in the model, providing support for the strong model of mediation.

The Present Study

Following previous research, this study utilizes a multi-method correlational design to measure the associations between IPC and child and family interactions, as well as potential mediators. Crockenberg, Leerkes, & Lekka (2007) used parents' reports of marital aggression, infant's exposure to arguments, and infant temperament to predict negative maternal behavior and signs of infant withdrawal in six-month-olds. Kitzmann (2000) and Kaczynski et al. (2006) included reports of marital conflict as well as data from coded family interactions to predict child adjustment. Similar to this study, Kaczynski et al. (2006) combined their self-report and observational variables using Structural Equation Modeling to create a best-fit model of the data. More recently, Sturge-Apple et al. (2009) used multiple methods,

including self-report, observation, and physiological measures, to examine the relationship between marital conflict and parenting.

The use of a laboratory procedure involving realistic marital discussion and play is also important because the behaviors of interest occur along with other variables in family life (Davies et al., 1996). Including triadic interactions and analysis in research provides important information on coparenting and whole-family variables in addition to individual and dyadic information (Cox et al., 2001). Few studies to date have included these triadic interactions, but it may be an important piece in examining the effects of IPC on children (Schoppe-Sullivan et al., 2004).

The literature on IPC focuses almost exclusively on children preschool age and older. Very little research has been done on how infants are affected by and react to conflict between their parents. The EST posits that children develop an internal working model of conflict over the course of their exposure to IPC (Du Rocher Schudlich & Cummings, 2007). In attachment theory, internal working models of caregivers are supposed to begin developing in early infancy (Delius, Bovenschen, & Spangler, 2008). Research has found evidence of internal working models in a study of 12- to 16-month-old infants (Johnson, Dweck, & Chen, 2007), suggesting that they are beginning to synthesize and remember information about people and relationships, such as the parental union. Thus, the impact of IPC on infants is an important piece to consider during this important point in development, wherein children may be beginning to develop coherent impressions

of and responses to conflict. The current study addresses this gap by focusing on infants 6- to 12-months-old.

Finally, although there has been support in the research for both emotional security theory and the spillover hypothesis, few studies have included both as potential mediators of IPC on children's adjustment. Du Rocher Schudlich and Cummings (2007) found that, perhaps due to the presence of emotional security in the model, parenting was not a significant mediator. Another study found that only a specific parenting behavior (behavioral control) moderated the relationship between IPC and children's externalizing and internalizing symptoms (Schoppe-Sullivan, Schermerhorn, & Cummings, 2007). These inconsistencies warrant further attention. By including both hypothesized mediational pathways within the same model, this study will provide more information on how emotional security and spillover into parenting operate as mediating pathways in the context of each other.

Specific research questions of this study include: 1) how infant's attention, specific parental conflict strategies, parents' affect during conflict, and level of conflict resolution affect the infant's emotional security; 2) how conflict strategies, intensity, and resolution affect parenting and coparenting behaviors in the subsequent triadic play interaction; 3) how the infant's behaviors during the conflict and parenting and coparenting behaviors during the triadic interaction mediate the relationship between interparental conflict and subsequent infant and whole family ratings. Figure 1 depicts the hypothesized relationships between the variables.

Methods

Participants

Seventy-four families were recruited to participate in the study. Families were contacted through information from county birth records. Inclusion criteria were that participants 1) had an infant between six and twelve months old, 2) were two parents, biological or not, who had lived together at least since the infant was born, and 3) were comfortable speaking and reading English. Three of the families had twins, yielding an overall sample size of 77 infants. Infants ranged from 6.2-14.7 months old ($M = 10.22$, $SD = 2.13$). Forty-three (56.6%) of the infants were male, 33 (42.9%) were female, and one (1.3%) was unreported. The majority of infants (79.2%) were White.

Fathers ranged in age from 21-46 years old ($M = 31.56$, $SD = 5.88$). Mothers ranged from 19-40 years old ($M = 29.45$, $SD = 5.55$). The majority of fathers (89.6%) and mothers (87.0%) were White. The sample was highly educated, with 98.7% of fathers and 100% of mothers having completed high school/GED or higher, and 39.5% of fathers and 52.6% of mothers reporting a Bachelor's degree or higher. The majority of families (67.6%) reported a combined household income of \$40,001 or higher.

Sixty-six couples (85.7%) were married. Length of marriage ranged from 0-13 years ($M = 4.93$, $SD = 3.15$). Couples had been living together from 1-14 years ($M = 5.78$, $SD = 3.34$). Seven fathers (9.1%) and six mothers (7.9%) had been married

previously. The infant in the study was the only child for 31 (41.3%) of fathers and 35 (46.1%) of mothers.

Measures

Marital conflict. The *Conflict and Problem Solving Scale* (CPS; Kerig, 2006) is a self-report questionnaire measuring characteristics of couples' conflict and partners' specific conflict strategies. Partners rate the frequency with which both partners utilized 44 different conflict tactics over the past year using a four-point scale. These are then computed into scores for cooperation, stonewalling, verbal aggression, and physical aggression. The CPS has good convergent validity and good test-retest reliability over three months, $r = .63$ (Kerig, 1996). Reliability coefficients of the subscales for mothers in the current sample ranged from .61 to .84, with a mean alpha of .73. For fathers, alphas ranged from .61 to .88, with a mean alpha of .73.

The *Dyadic Interaction Form* (DIF; Du Rocher Schudlich, 2008) was developed for the project to capture each partner's impressions about the conflict interactions. A similar form has been used by various researchers from the Cummings group when evaluating marital interactions. This self-report questionnaire asks participants to rate their affect during the interaction and as well as their perceptions of the level of conflict resolution. Dimensions of affect are rated on a 1 (*Not at all*) to 10 (*A whole lot*) scale and include the following: Happy, Loving, Angry, Worried, Scared, Sad, Hopeless, and Helpless. Perception of resolution is rated on the same 1 to 10 scale in response to the question, "How much was the problem solved at the end for you?" An additional item, "How much attention do you think your baby

paid to your interaction with your spouse?" captures the parents' impressions of how much attention their infant paid to the interaction.

Marital conflict was also assessed by observational raters using the *Marital Observation Coding system* (Du RocherSchudlich, 2007). This system was adapted from a previous coding system by Cummings et al. (2006). To assess conflict strategies, thirteen specific conflict behaviors are coded for each partner on a 1-9 scale. *Conflict* reflects tension, hostility, dissension, antagonism, or negative affect displayed by a partner during the conflict interaction. Examples include bodily tenseness and critical comments directed at the partner. *Defensiveness* measures attempts to deflect or protect oneself from a perceived attack. Examples include counter blaming and denying responsibility. *Contempt* is a general lack of respect for the thoughts or feelings of the partner. Examples include eye rolling, sarcasm, insult, and commands directed at the partner. *Withdrawal* is avoidance of the discussion. Examples of withdrawal include avoiding eye contact and low self-disclosure. *Demand* describes a partner who refuses to move on from a particular aspect or topic of the discussion. Examples of demand behaviors include actively blocking new topics of conversation and repositioning themselves to be in front of their partner. *Anger* and frustration is a particular aspect of negative affect. Examples of signs of anger include shaking head with disapproval, crossed arms, and a raised voice or yelling. *Sadness* or depression is another aspect of negative affect. Examples of signs of sadness include downcast eyes, a slumped posture, and a monotone voice. *Anxiety* is the final aspect of negative affect, and also includes genuinely felt concern

or fearfulness. Examples of anxiety include concerned facial expressions, excessive fidgeting, and stuttering or rapid speech. *Positive affect* refers to the positive emotional tone of the voice, facial expression, and position of the body. Examples of the positive affect dimension include chuckling or laughter, eye contact with the partner, and a relaxed posture. *Communication skills* captures the extent of a person's expressive skills while speaking. Examples include an expressive voice, high self-disclosure (when appropriate), and summarization of opinions or decisions. *Support validation* refers to listening and speaking skills which convey a sense of supportiveness and understanding. Examples include attentiveness toward the partner when they are speaking and complimenting the partner. *Problem solving* captures the ability to define a problem and effectively work toward a solution. Examples of problem solving behavior include describing the problem positively or neutrally, negotiating or compromising, and making general or hypothesized plans to solve the problem. *Humor* measures attempts to lighten the mood or dissolve tension through positive jokes or humor. Examples include laughing or giggling, pointing out something humorous, or making humorous impersonations of themselves or others. *Resolution* is a global scale of whether the individual attempted to reach a solution and how satisfied or confident they were about that solution at the end of the interaction.

A team of five undergraduate research assistants received extensive training in the coding system. Each discussion was coded once by one of them. A subset of 25 discussions was used to assess the coders' agreement with the gold standard codes

using Intraclass Correlation Coefficient, (3, k) which is equivalent to Cronbach's α (Shrout & Fleiss, 1979). Alphas for conflict strategies and affect ranged from .60 - .98, with a mean alpha of .91.

Emotional security. The *Conflict Reaction Infant Emotional Security* system (CRIES; Du Rocher Schudlich, Erps, Fitzgerald, & Fleischhauer, 2009) is based on previous work on infant emotional reactions to conflict (Cummings, Zahn-Waxler, & Radke-Yarrow, 1984) and behavior regulation (Braungart & Stifter, 1991; Gianino & Tronick, 1988). Infant's behaviors during the marital conflict were coded for eight items on a 0-4 scale. *Frustration* is the degree to which the infant displays anger or frustration during their parents' discussion, such as an angry face, vocal anger, hitting, kicking, or throwing objects. *Self-soothing* measures infants' initiation and maintenance of behaviors to sooth themselves by sucking on a soothing object, such as a thumb or pacifier, rocking, averting their gaze, or crawling away. *Distress* captures the infant's sadness or distress during the interaction as indicated by behaviors such as crying, negative vocalizations, or fussiness. *Stressed attention-seeking* measures behaviors aimed at enticing the parent(s) to engage or comfort the infant, such as crawling to or on the parent, vocalizing, and displaying desire to be picked up. *Contentment* captures the degree to which the infant expresses positive affect or happiness, such as through smiling, laughing, or cooing. *Affectionate attention-seeking* behaviors are those in which a positive or neutral infant attempts to share affection or attention with their parent(s), by touching, hugging, or looking toward them affectionately. *Play engagement and exploration* is the degree to which

the infant explores his or her environment and engages in positive play behaviors. Examples include crawling around the area and showing toys to parents. A final coded behavior, *discussion attending*, is used as an observational measure of the infant's attention to the conflict. This code captures infants watching and preoccupation with their parents during their discussion and the extent to which it interrupts their play or exploration.

Coding was performed by undergraduate research assistants who were blind to the other study and coding information. Codes of two advanced graduate students and the supervising professor served as a standard to which the other codes were compared for inter-rater reliability. A subset of 25 interactions was used for comparison using ICC. Alphas for infant behaviors ranged from .84 – 1.0, with a mean alpha of .95.

Parenting behaviors. Observational ratings of parenting behaviors during the triadic play task come from the *Qualitative Ratings for Parent-Child Interaction* (QRPCI; Cox & Crnic, 2005). Each parent was rated on a 0-4 scale on seven parenting dimensions. *Sensitivity/responsiveness* captures how aware and responsive the parent is to the infant's gesture, expressions, and signals. Examples include responses and engagement that is well-timed and paced to the infant's mood, acknowledging the infant's affect, and encouraging their efforts. *Intrusiveness* measures the degree to which the parent seems to operate according to their agenda, rather than the infant's. Specific behaviors include over-stimulating the infant with food or toys and not allowing the infant to make decisions or influence the pace or focus of play.

Detachment/disengagement measures the degree to which the parent withdraws from the interaction or is unaware of the infant's needs. Examples include rarely making eye contact or talking to the infant, behaving in a mechanical and distant way, or ignoring the infant. *Positive regard for the child/positive affect* rates positive feelings toward the infant expressed by the parent through behaviors such as showing physical affection, laughing with the child, and praising the child. *Negative regard for the child/negative affect* rates negative regard, as expressed through behaviors such as disapproval, a negative tone when correcting the infant, or threats. *Animation* reflects the degree of energy, excitement, or interest the parent displays toward the infant, often demonstrated through an expressive face and an enthusiastic tone of voice. *Stimulation of development* captures attempts made by the parent to encourage learning and achievement. Examples include verbally responding to and/or expanding the infant's vocalizations, demonstrating how a toy works, and reading to the infant. A final code, *dyadic mutuality*, is applied to the parent-child dyad to capture the degree of synchrony in their interaction. Dyads high on mutuality have shared experiences, demonstrate shared emotion, and appear tuned into each other's behaviors and emotions. Past research has used this instrument for assessing parent behaviors in young infants (Barnett, 2008; Barnett, Deng, Mills-Koonce, Willoughby, & Cox, 2008).

Coding was performed by a team of undergraduate and graduate research assistants. Mothers and fathers within the same family were rated by different coders. Coders were trained extensively by an advanced graduate student and the

supervising professor until they reached reliability. A subset of 20 interactions was used to assess interrater reliability using ICC. For mothers' parenting behaviors, alphas ranged from .553 - .845, with a mean alpha of .675. For fathers, alphas ranged from .571 - .779, with a mean alpha of .687.

Additional codes for coparenting come from the *Co-parenting and Family Rating System* (CRFS; McHale, Kuersten-Hogan, & Lauretti, 2000). Couple's behaviors were rated on a 0-4 scale for four dimensions of coparenting. *Coparental warmth* measures positivity, humor, and warmth between parents during play. Examples of warm behavior include heartfelt laughs, warm gazes, and affectionate touches. *Verbal sparring* captures conflict behaviors, such as disagreements between parents, sarcasm, and milder ribbing of the partner. *Active competition* reflects behavior between parents competing for the infant's attention or affection. Examples include physically moving the infant away from the other parent and using an activity or toy to entice the infant away from the other parent. *Active cooperation*, on the other hand, captures the degree to which parents support one another's interactions with the infant, by engaging in joint activity and orienting the child toward the other parent.

Another team of three undergraduate research assistants coded coparenting behaviors. They were extensively training by a graduate student and the supervising professor until they reached reliability. A subset of 20 interactions was used to assess interrater reliability using ICC. When reliability did not reach acceptable

standards, some interactions were recoded by a graduate student. After recoding, alphas ranged from .582 - .848, with a mean alpha of .732.

Family behaviors. Observational codes for whole-family behaviors during the triadic play task come from the *System for Coding Interactions and Family Functioning* (SCIFF; Lindahl & Malik, 2000). Families were rated on a 0-4 scale for three dimensions. *Positive affect* describes an overall positive emotional tone in the family's interaction. Behaviors demonstrating positive affect may include happy or excited tones of voice, smiling or relaxed facial expressions, and physical affection such as hugs or pats. *Negativity and conflict* measures an overall negative tone or tension in the family's interaction. Examples include expressions of tension, irritation, impatience, or abruptness. *Cohesiveness* assesses the sense of unity, togetherness, and closeness within the family. Highly cohesive families appear comfortable and physically close, rather than stiff and aloof. The SCIFF has been used in several studies studying marital, parent-child, and family-level processes (Lindahl, 1998; Lindahl & Malik, 1999; Lindahl, Clements, & Markman, 1997).

Family behaviors were rated by the same team of coders who rated coparenting. A subset of 20 interactions was used to assess interrater reliability using ICC. Alphas ranged from .678 to .771, with a mean alpha of .738.

Child behaviors. Observers rated infants' behavior during the triadic interaction using the child codes from the QRPCI (Cox & Crnic, 2005). Infants were rated on a 0-4 scale for four dimensions. *Positive mood* measures the extent to which the infant is satisfied, content, and pleased with the situation. Examples of behaviors

include positive vocal expressiveness, smiles, and laughter. *Negative mood*, on the other hand, assesses negative behaviors and affect displayed by the infant, including fussiness, frowns, crying, and “temper tantrums.” *Activity* describes the quality of the infant’s motor activity during the interaction. This includes the speed, frequency, intensity, and duration of activity, such as crawling, walking, bouncing, hitting, and wiggling. *Sustained attention* indicates how involved the infant was with their physical environment, as well as how easily distracted they were by new stimuli. Examples include visual tracking, complete exploration of toys or objects, and level of intent in exploration.

Child behaviors were rated by the same team of coders who rated parenting behaviors. A subset of 20 interactions was used to assess interrater reliability using ICC. Alphas ranged from .761 to .947, with a mean alpha of .862.

Procedures

Once the family agreed to participate in the study, a consent form and a packet of questionnaires were sent for them to complete and bring on the day of the visit to the lab. Upon arriving at the lab, a research assistant reviewed the consent form with them and answered any questions the family had. Couples then received instructions for the first interaction, in which they were asked to choose a typical topic of disagreement in their relationship that they would be comfortable discussing. The couple was asked to work toward a resolution and left alone for 7-10 minutes. The infant was present during the interaction. Subsequently, each partner

completed the Dyadic Interaction Form, including questions about their interaction, as well as their child's behaviors during the interaction.

For the final task, the couple was asked to play with their infant as they normally would at home. This interaction lasted for five minutes. Following this, the research assistant answered any remaining questions the family may have, thanked the participants, and gave them \$50 compensation for their time. All interactions were video recorded for later coding and analysis.

Results

Data Reduction

In order to fit the data into a path analysis model, data reduction procedures were used to create composite variables. Factor analysis, reliability analysis, and correlations were used to confirm theory about how variables would fit together. Final composite variables were calculated using z-scores.

Infant attention included the DIF score from the mother, from the DIF score from the father, and the CRIES score from an observational coder. Principal components analysis (PCA) using a promax rotation was conducted on all three variables. A predetermined eigenvalue cut-off of 1.0 was used. A two-factor solution explaining 80.4% of the variance was reached. Eigenvalues indicated that the first factor accounted for 45.9% of the variance and the second accounted for an additional 34.5%. The parents' DIF scores loaded on the first factor and the CRIES score loaded on the second. Thus, two infant attention composites were created, one adding the father's DIF score and the mother's DIF score, and the other simply the

CRIES score. In both cases, a higher score indicates the infant paid more attention to the conflict.

For conflict strategies, average scores subscales on the CPS for constructive (Cooperation) and destructive (Stonewalling, Verbal Aggression, and Physical Aggression) were calculated for each parent based on their self-reports. For the observational codes, average scores for each parent were also calculated for constructive (Communication Skills, Support Validation, Problem Solving, and Humor) and destructive (Conflict, Defensiveness, Contempt, Withdrawal, Demand) behaviors. The eight conflict strategies variables were entered into PCA with a promax rotation. A two-factor solution explaining 69.0% of the variance was reached. Eigenvalues indicated that the first factor accounted for 46.9% of the variance and the second accounted for an additional 22.0%; however, there was no clear pattern to how variables loaded on the factors. Correlations also showed no clear pattern, although constructive and destructive subscales were always negatively correlated with each other. Reliability analyses showed acceptable Cronbach's alphas when constructive (.68) and destructive (.71) variables were combined. Given that there is broad theoretical support for constructive and destructive conflict strategies, this converging evidence seemed to support creating two composites, one adding the four constructive variables and the other adding the four destructive variables.

For conflict affect, an average score for positive (Happy, Loving) and negative (Angry, Worried, Scared, Sad, Hopeless, Helpless) affect was calculated for each

parent based on their self-report on the DIF. For the observational codes, average scores for each parent were also be calculated for positive (Positive Affect) and negative (Anger, Sadness, and Anxiety) affect. The eight variables were entered into PCA with a promax rotation. A two-factor solution was reached, explaining 59.2% of the variance. Eigenvalues indicated that the first factor accounted for 43.3% of the variance and the second accounted for an additional 15.8%; however, there was no clear pattern to how the variables loaded on the factors. Reliability analysis showed that Cronbach's alphas only reached near-acceptable levels when split along positive (.55) and negative (.59) variables.

Given the problematic conflict affect variables, and since there is not much support in the literature for separating conflict strategies from affect, another PCA with promax rotation was conducted on all 16 conflict strategy and affect variables. A four-factor solution explaining 69.26% of the variance was reached. Eigenvalues indicated that the first factor accounted for 39.7% of the variance, the second for an additional 13.6%, the third for 9.3%, and the fourth for 6.7%; however, there was again no clear pattern to how the variables loaded on the factors. Cronbach's alpha was also low (.14) when all 16 variables were included. However, when variables were divided into constructive strategies/positive affect and destructive strategies/negative affect, alphas reached acceptable levels (.75 and .70, respectively). Thus, two final composites were created: Constructive/Positive and Destructive/Negative. For both, a higher score indicates more of each behavior.

For conflict resolution, the single reports of resolution given by each parent on the DIF were used as predictors, as well as the observational codes for each parent. The four variables were entered into PCA with a promax rotation. A one-factor solution was reached, with the eigenvalue indicating it accounted for 60.5% of the variance. The four z-scores were added together to create the composite for conflict resolution, where a higher score indicates more resolution.

Emotional security was measured by codes for secure (Contentment, and Play Engagement and Exploration) and insecure (Frustration, Self-soothing, and Distress) behaviors on the CRIES. Previous analyses of the CRIES data had shown that the Affectionate Attention-Seeking and Stressed Attention-Seeking codes did not hang together with the rest of the codes (Du Rocher Schudlich, White, Fleischhauer, & Fitzgerald, in press). Furthermore, these two codes are not as well supported theoretically or in previous research as indicators of emotional insecurity. Therefore, they were removed from analysis. The five items were entered into a PCA with promax rotation. A two-factor solution explaining 66.32% of the variance was reached. Eigenvalues indicated that the first factor accounted for 45.4% of the variance and the second accounted for an additional 20.9%, with secure and insecure factors including the items mentioned above. A composite variable was created by adding the three insecure variables together and subtracting the combined secure variables, with a higher score indicating more emotional insecurity.

Parenting was represented by adding codes for each parent of positive parenting (Sensitivity/Responsiveness, Positive Regard for the Child/Positive

Affect, Animation, Stimulation of Development, and Dyadic Mutuality) and negative parenting (Intrusiveness, Detachment/Disengagement, and Negative Regard for the Child/Negative Affect) on the QRPCI. Coparenting was predicted from adding scores for the dyad for positive (Coparental Warmth and Active Cooperation) and negative (Verbal Sparring and Active Competition) behaviors on the CFRS.

The six parenting/coparenting variables were entered into a PCA with promax rotation. A two-factor solution was reached, explaining 64.2% of the variance. However, the variables did not load onto the factors in a theoretically justifiable pattern. When a one-factor solution was forced, only 45.8% of the variance was accounted for by the solution. Cronbach's alphas only reached acceptable levels when divided into positive parenting/coparenting variables and negative parenting/coparenting variables (.57 and .59, respectively). Four composites were created: positive parenting/coparenting variables, negative parenting/coparenting variables, positive parenting only variables, and negative parenting only variables. The parenting only composites were created in order to examine effects of parenting behaviors more specifically in the models. For all composites, a higher score indicates more of that behavior.

Child ratings in the triadic interaction were represented by three codes from the QRPCI (Positive Mood, Negative Mood, and Activity). The three items were entered into a PCA with promax rotation. A one-factor solution explaining 48.5% of the variance was reached, with Positive Mood and Activity loading positively on the

factor, and Negative Mood loading negatively. A composite variable was created by adding Positive Mood and Activity and subtracting that score from Negative mood. A higher score indicates more negative ratings.

Family ratings were represented by three codes from the SCIFF (Positive Affect, Negative Affect, and Cohesiveness). The three items were entered into a PCA with promax rotation. A one-factor solution explaining 64.9% of the variance was reached, with Positive Affect and Cohesiveness loading positively on the factor and Negative Affect loading negatively. A composite variable was created by adding Positive Affect and Cohesiveness and subtracting that score from Negative Affect. Again, a higher score indicates more negative ratings.

Substantive Analyses

Descriptive statistics for all the variables are presented in Table 1. Intercorrelations between the composites are presented in Table 2. Path analysis was used to examine the relationship between IPC, children's emotional security, parenting, and child and family behaviors. Analyses were conducted using AMOS 18.0 (Arbuckle, 2009).

Fit indices are reported for all path analyses. Fit indices are used as an alternative to χ^2 since path analysis and structural equation modeling (SEM) require large sample sizes, which often results in a statistically significant χ^2 value (Kenny, 2010). CMIN/df represents the minimum discrepancy divided by its degrees of freedom. There is some debate among researchers, with some arguing that a CMIN/df of 3.0 or less is an acceptable fit and others positing that it should be 2.0

or less (Garson, 2009). The Tucker Lewis Index (TLI) corrects for model complexity. It is generally considered an acceptable fit above .90 and a good fit above .95 (Garson, 2009; Kenny, 2010). The Comparative Fit Index (CFI) is similar to the TLI, but emphasizes non-centrality. It is also considered an acceptable fit above .90 and good above .95 (Kenny, 2010). The Root Mean Square Error of Approximation (RMSEA) is based on the non-centrality parameter. An RMSEA under .05 is generally considered a good fit, and anything over .10 is a poor fit (Kenny, 2010).

Child Outcomes

The baseline model tested used infant attention, conflict strategies and affect, and resolution to predict the child outcome composite through the mediating pathways of emotional insecurity and parenting. No composites were allowed to correlate. All fit indices (CMIN/df of 7.75, CFI of .15, TLI of -.40, and RMSEA of .30) indicated the model was a poor fit. Modification indices suggested that correlating the Constructive Strategies/Positive Affect composite and the Deconstructive Strategies/Negative Affect composite would significantly improve the fit of the model. Given the theoretical and measurement relationships between the two composites, this addition to the model seemed justified. Modification indices also suggested correlating Resolution to each of the Strategy/Affect composites. Again, given the relationships between these variables, this addition seemed theoretically justified.

The second model tested included correlations between each of the Strategy/Affect composites and the Resolution composite. The fit indices (CMIN/df

of 3.10, CFI of .77, TLI of .567, and RMSEA of .17) were improved from the first model, but still not within acceptable ranges. Modification indices suggested correlating the error terms of Positive Parenting and Negative Parenting. Given that these composites represent the inverse of the same construct, it is theoretically justified to correlate them in the model.

The third tested model added a correlation between the error terms of the Positive and Negative Parenting composites. Two of the fit indices (CMIN/df of 2.11 and CFI of .89) approached acceptable fit, while the other two (TLI of .77 and RMSEA of .12) still suggested the need for improvement. None of the additional parameters suggested by the modification indices were theoretically justified.

In the fourth tested model, coparenting variables were removed from the Positive and Negative Parenting composites. It was decided to separate coparenting behaviors out from the parenting behavior composites in order to fully parse out the relationships between the variables. The model, X^2 statistic, and fit indices are presented in Figure 1. The CMIN/df ratio and CFI (1.91 and .92, respectively) indicate this model adequately fits the data. The TLI and RMSEA (.84 and .11 (CI .05 - .16), respectively) still suggest improvement is needed. There has been some suggestion that TLI and RMSEA over-reject models with a small sample size, which may explain why these indices indicate a worse fit than the other measures (Rigdon, 2007). Within this model, Constructive Strategies/Positive Affect predicted more Positive Parenting ($\beta = .145, p = .006$) and less Negative Parenting ($\beta = -.15, p = .004$).

There were also trends for Resolution to predict less Emotional Insecurity ($\beta = -.13, p = .10$) and for Emotional Insecurity to predict worse Child outcomes ($\beta = .26, p = .06$).

In the next three variables, the Child outcome variable was parsed out into its components in order to examine the unique predictors of each, which was not possible when combined as they were in the previous model. The model presented in Figure 2 looked specifically at Child Positive Affect as the outcome variable. The X^2 statistic and fit indices are also given. The CMIN/df ratio (1.91) and CFI (.92) again suggest adequate model fit. The TLI (.84) and RMSEA (.11; CI .05 - .16) suggest improvement is needed. Within this model, Constructive Strategies/Positive Affect again predicted more Positive Parenting ($\beta = .15, p = .006$) and less Negative Parenting ($\beta = -.15, p = .004$). Positive Parenting also significantly predicted higher Child Positive Affect ($\beta = .35, p < .001$). There was also a trend for Resolution to predict less Emotional Insecurity ($\beta = -.13, p = .10$).

The next model examined Child Negative Affect as the outcome variable. The model, X^2 statistic and fit indices are presented in Figure 3. The CMIN/df ratio (1.70) and CFI (.94) suggest good fit of the model to the data. The TLI (.88) suggests the model could be improved. RMSEA is .10 (CI .03 - .15), which does not meet standards for adequate fit. However, the 90% confidence interval contains both .05 and .10, and p -close is not statistically significant, suggesting that the model cannot be disconfirmed. Constructive Strategies/Positive Affect again predicted more Positive Parenting ($\beta = .15, p = .006$) and less Negative Parenting ($\beta = -.15, p = .004$). Negative Parenting also predicted more Child Negative Affect ($\beta = .21, p = .020$).

Again, there was a trend for Resolution to predict less Emotional Insecurity ($\beta = -.13$, $p = .10$). Emotional Insecurity also significantly predicted greater Child Negative Affect ($\beta = .14$, $p = .025$).

The final child model examined Activity as the outcome variable. The model, X^2 statistic and fit indices are presented in Figure 4. The CMIN/df ratio (1.50), CFI (.95), and TLI (.90) indicate adequate fit. RMSEA (.08; CI .00 - .12) is slightly above adequate fit; however, again the 90% confidence interval and p -close (.20) indicate the model cannot be disconfirmed. Constructive Strategies/Positive Affect again predicted more Positive Parenting ($\beta = .15$, $p = .006$) and less Negative Parenting ($\beta = -.15$, $p = .004$). Again, there was a trend for Resolution to predict less Emotional Insecurity ($\beta = -.13$, $p = .10$). No composites significantly predicted Child Activity.

Models were also tested including only the Constructive Strategies/Positive Affect and Positive Parenting composites or the Destructive Strategies/Negative Affect and Negative Parenting composites. None of these models reached acceptable fit and so are not presented. The two Infant Attention composites were also removed from models and, again, this did not improve model fit.

Family Outcomes

The fourth tested model, including all added modifications, as shown in Figure 1, was used as the baseline model for predicting the Family composite. The model, X^2 statistic and fit indices are presented in Figure 5. The CMIN/df ratio(1.31), CFI (.98), TLI (.95), and RMSEA (.06; .00 - .13) all indicate adequate or good fit of the model to the data. Constructive Strategies/Positive Affect predicted more Positive

Parenting ($\beta = .15, p = .006$) and less Negative Parenting ($\beta = -.15, p = .004$). Positive Parenting significantly predicted less negative Family outcomes ($\beta = -0.69, p < .001$). Again, there was a trend for Resolution to predict less Emotional Insecurity ($\beta = -.13, p = .10$).

Models were also tested with each of the three individual components of the Family outcome composite (Positive Affect, Negativity & Conflict, and Cohesiveness) serving as the outcome variable, each resulting in the same pattern of results (not presented here) as for the overall composite.

Discussion

The aim of the present study was to examine the effect of interparental conflict on child and family behaviors during a play interaction, through the pathways of emotional security and parenting behaviors. The effect of conflict on the emotional security of infants and the parenting behaviors of their parents have not been tested previously. Multiple measures were used, including self-report questionnaires and observational laboratory procedures, in order to assess the constructs of interest. These methods provided a rich set of data in order to test the hypothesized conceptual model through path analysis. The overall pattern of results suggests some support for both the emotional security and spillover hypotheses.

In support of emotional security theory, there was a consistent trend for more resolution of parents' conflict predicting fewer emotionally insecure behaviors from infants during the conflict. The importance of resolution on children's reactions to IPC has been well-documented (e.g., Davies et al., 1996; El-Sheikh et al., 1996).

However, there was no relationship between the conflict strategies used or affect displayed by parents and infants' expressions of insecurity. This may be because infants are not yet attuned to these tactics. Previous research has also documented the potentiating effects of parents' conflict history on emotional security (Cummings & Davies, 2010), so perhaps infants simply have not been exposed to enough conflict to trigger increased reactivity. However, Crockenberg et al. (2007) found that verbally aggressive IPC increased withdrawal behaviors of infants as young as six months old. Furthermore, infants as young as five months old have been shown to have the ability to discriminate between happy and angry expressions when signaled by both facial and vocal components (Balaban, Snidman, & Kagan, 1997). Infants as young as three months respond to their mothers' displays of facial and vocal expressions of joy and anger, as well as the neutral "still-face." Thus, it would be expected that infants in the current sample would have the ability to detect and attune to their parents emotional expressions. Another potential explanation may be a restricted range of conflict behaviors and affect. Because conflict occurred in an observed laboratory setting, there was very little overt aggression or anger displayed by couples.

Constructive conflict strategies and positive affect consistently predicted more positive parenting behaviors and fewer negative parenting behaviors. Since more positive parenting further predicted more positive affect from the child, this supports the spillover hypothesis. It also demonstrates that conflict, when constructive, can be beneficial to the child. Interestingly, destructive conflict

strategies and negative affect were not associated with parenting. This is consistent with previous findings by McCoy et al. (2009) that constructive, but not destructive, conflict significantly predicted more warm parenting behaviors. It may be that only particular aspects of parenting, such as behavioral or psychological control, are impacted by destructive conflict (McCoy et al., 2009). Another potential explanation may be the limited range of destructive behaviors evidenced in the laboratory setting.

Further support for the spillover hypothesis comes from the finding that positive parenting strongly predicted less negative family outcomes. Infants' displays of emotional insecurity were not related to family outcomes, suggesting that at this age, parents are driving the triadic interactions. Fivaz-Depeursinge, Frascarolo, & Corboz-Warnery (1996) noted that parents, particularly sensitive parents, will assume control over the infant in interactions in order to guide and support the infant's regulation. It may be that parenting and/or coparenting actually mediates or moderates the relationship between signs of emotional insecurity and later child behaviors.

Coparenting was not significantly predicted by dimensions of IPC in any of the models, nor did it predict any of the outcomes. In previous literature, coparenting has been conceptualized as a triadic or whole-family level of analysis, rather than dyadic, as with parenting (e.g., Schoppe-Sullivan et al., 2004). It may be that the coparenting variables would fit better as a dimension of the family outcome variable, especially given that the coparenting and family variables in this study

were high correlated. Coparenting has not been studied in conjunction with this constellation of variables (i.e., constructive and destructive conflict, parenting, emotional security), so when placed in a model with these many other constructs, it may play less of a role in affecting child and family outcomes.

Infant attention did not predict infants' emotional security. One potential explanation is that attention is a better indicator of temperamental variables (e.g., attentional control and effortful control), which have been identified most consistently as protective factors (Davies & Windle, 2001). Thus, it may be that infant attention moderates the relationship between IPC and emotional security, rather than predicting emotional security directly (Cummings & Davies, 2010). Attention may also be a dimension of emotional security. Children exposed to destructive IPC tend to display sensitization to subsequent conflict, resulting in heightened negative reactions and withdrawal, signs of emotional insecurity (Davies, Myers, Cummings, & Heindel, 1999).

Limitations

There are several limitations of this study worth noting. First, the sample size was small, given the research questions. A larger sample size would have allowed for use of structural equation modeling (SEM), rather than path analysis of composites. This would have provided more detailed information in regards to how variables contributed to the model. A larger sample would have also allowed for comparisons across development or between subsamples. For example, Cummings and Davies (2010) have identified several potential moderating factors of the

relationship between IPC, emotional security, and child outcomes, including child gender, temperament, and family characteristics such as race and ethnicity.

Second, the sample was also relatively homogenous and self-selected. Although participants were recruited from the community, there could be important differences between families who elected to participate versus those who did not. The majority of the parents were white, highly educated, and middle-class or higher, so the results cannot be generalized to the more diverse general population.

In terms of coding, some of the interrater reliabilities were smaller than would be preferred. Relationships between variables derived from observational coding may need to be interpreted cautiously. However, in most cases, the reliabilites were within acceptable ranges.

Finally, all of the questionnaire and observational data was gathered concurrently, rather than across time points. Therefore, results showing that some variables predicted others are tempered by the fact that those predictive behaviors did not occur before the outcome behaviors. It is possible that the relationship occurs in the other direction, or that a third variable actually predicts both.

Future Directions and Implications

To address some of these limitations, future research should focus on recruiting more diverse participants, including minorities, low-income families, and other at-risk populations. The current sample included only one same-sex couple and their infant, making comparisons impossible; future studies should also attempt to recruit more gay and lesbian parents and their children.

Of particular importance is to examine more of the moderating variables suggested by Cummings and Davies (2010). Child age in particular needs to be examined, both cross-sectionally and longitudinally, in order to identify when conflict strategies and/or affect begin to affect emotional security, and how the relationship changes over time. As previously mentioned, very little research on IPC and emotional security has focused on infants and toddlers, so more work focusing on development across these age groups is needed.

Finally, more research is needed on the role of infant attention in regards to IPC and emotional security. As previously suggested, it may be a moderate how conflict affects infants. It may also be a dimension of emotional security itself. Future research should focus on where infant attention best fits in conceptual models of the emotional security hypothesis.

This study demonstrates some support for both the emotional security and spillover hypotheses of how interparental conflict affects child and family outcomes. It also provides some of the first evidence showing that even very young infants attend to and are affected by conflict between their parents. This has important implications for prevention and intervention with families with young infants. Constructive conflict, positive affect, and resolution seem to play important roles in affecting parenting and emotional security, and leading to more positive and less negative child and family outcomes.

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Table 1. Means, SDs, and ranges of Individual Variables

Measure	Mean	SD	Range	Possible Range
Infant Attention				
Mother report (DIF)	2.86	2.21	.00 – 9.00	.00 – 9.00
Father report (DIF)	2.46	2.01	.00 – 8.00	.00 – 9.00
Observer report (CRIES)	1.81	0.90	.00 – 4.00	.00 – 4.00
Conflict Strategies				
Cooperation – Mother (CPS)	30.45	3.74	22.00 – 36.00	.00 – 54.00
Cooperation – Father (CPS)	42.52	6.73	27.00 – 54.00	.00 – 54.00
Comm Skills – Mother (MOC)	5.82	1.86	2.00 – 9.00	1.00 – 9.00
Comm Skills – Father (MOC)	6.01	1.94	1.00 – 9.00	1.00 – 9.00
Humor – Mother (MOC)	1.99	1.11	1.00 – 6.00	1.00 – 9.00
Humor – Father (MOC)	2.01	1.21	1.00 – 6.00	1.00 – 9.00
Prob Solving – Mother (MOC)	5.57	2.14	2.00 – 9.00	1.00 – 9.00
Prob Solving – Father (MOC)	5.80	2.02	2.00 – 9.00	1.00 – 9.00
Support Valid – Mother (MOC)	5.12	2.07	2.00 – 9.00	1.00 – 9.00
Support Valid – Father (MOC)	5.32	2.02	2.00 – 9.00	1.00 – 9.00
Phys Aggression – Mother (CPS)	1.49	2.46	.00 – 14.00	.00 – 48.00
Phys Aggression – Father (CPS)	1.78	3.38	.00 – 17.00	.00 – 48.00
Verb Aggression – Mother (CPS)	24.10	9.83	4.00 – 44.00	.00 – 54.00
Verb Aggression – Father (CPS)	22.41	10.62	1.00 – 47.00	.00 – 54.00
Stonewalling – Mother (CPS)	12.03	5.43	2.00 – 23.00	.00 – 42.00
Stonewalling – Father (CPS)	12.04	7.65	1.00 – 36.00	.00 – 42.00
Conflict – Mother (MOC)	3.72	2.00	1.00 – 8.00	1.00 – 9.00
Conflict – Father (MOC)	3.51	2.01	1.00 – 9.00	1.00 – 9.00
Contempt – Mother (MOC)	2.45	1.91	1.00 – 7.00	1.00 – 9.00
Contempt – Father (MOC)	2.21	1.86	1.00 – 8.00	1.00 – 9.00
Defensiveness – Mother (MOC)	3.80	2.09	1.00 – 8.00	1.00 – 9.00
Defensiveness – Father (MOC)	3.47	1.98	1.00 – 9.00	1.00 – 9.00
Withdrawal – Mother (MOC)	1.80	1.33	1.00 – 7.00	1.00 – 9.00
Withdrawal – Father (MOC)	1.82	1.15	1.00 – 6.00	1.00 – 9.00
Conflict Affect				
Happy – Mother (DIF)	6.58	2.18	1.00 – 10.00	1.00 – 10.00
Happy – Father (DIF)	6.63	2.27	1.00 – 10.00	1.00 – 10.00
Loving – Mother (DIF)	7.15	2.20	2.00 – 10.00	1.00 – 10.00
Loving – Father (DIF)	7.47	2.04	1.00 – 10.00	1.00 – 10.00
Positive Affect – Mother (MOC)	5.33	1.79	2.00 – 9.00	1.00 – 9.00
Positive Affect – Father (MOC)	5.28	1.83	2.00 – 9.00	1.00 – 9.00

Table 1 cont.

Measure	Mean	SD	Range	Possible Range
Conflict Affect (cont.)				
Angry - Mother (DIF)	2.00	1.32	1.00 - 7.00	1.00 - 10.00
Angry - Father (DIF)	2.09	1.85	1.00 - 10.00	1.00 - 10.00
Helpless - Mother (DIF)	1.52	1.32	1.00 - 8.00	1.00 - 10.00
Helpless - Father (DIF)	1.66	1.47	1.00 - 8.00	1.00 - 10.00
Hopeless - Mother (DIF)	1.76	1.66	1.00 - 8.00	1.00 - 10.00
Hopeless - Father (DIF)	1.61	1.45	1.00 - 8.00	1.00 - 10.00
Sad - Mother (DIF)	1.52	1.09	1.00 - 6.00	1.00 - 10.00
Sad - Father (DIF)	1.57	1.55	1.00 - 9.00	1.00 - 10.00
Scared - Mother (DIF)	1.48	1.15	1.00 - 6.00	1.00 - 10.00
Scared - Father (DIF)	1.14	0.37	1.00 - 3.00	1.00 - 10.00
Worried - Mother (DIF)	2.35	1.89	1.00 - 9.00	1.00 - 10.00
Worried - Father (DIF)	2.24	1.81	1.00 - 8.00	1.00 - 10.00
Anger - Mother (MOC)	2.28	1.45	1.00 - 7.00	1.00 - 9.00
Anger - Father (MOC)	2.23	1.50	1.00 - 8.00	1.00 - 9.00
Anxiety - Mother (MOC)	1.99	1.36	1.00 - 6.00	1.00 - 9.00
Anxiety - Father (MOC)	1.37	0.90	1.00 - 6.00	1.00 - 9.00
Sadness - Mother (MOC)	2.01	1.46	1.00 - 6.00	1.00 - 9.00
Sadness - Father (MOC)	1.53	1.04	1.00 - 6.00	1.00 - 9.00
Conflict Resolution				
Mother report (DIF)	6.40	1.90	0.00 - 9.00	0.00 - 9.00
Father report (DIF)	6.06	2.06	0.00 - 9.00	0.00 - 9.00
Observer - Mother (MOC)	4.72	2.17	1.00 - 9.00	1.00 - 9.00
Observer - Father (MOC)	4.88	2.06	1.00 - 9.00	1.00 - 9.00
Emotional Security				
Affection Attn Seeking (CRIES)	0.90	0.92	0.00 - 4.00	0.00 - 4.00
Contentment (CRIES)	2.23	2.00	0.00 - 4.00	0.00 - 4.00
Play (CRIES)	3.07	1.08	0.00 - 4.00	0.00 - 4.00
Distress (CRIES)	1.07	1.25	0.00 - 4.00	0.00 - 4.00
Frustration (CRIES)	0.55	1.00	0.00 - 4.00	0.00 - 4.00
Self-soothing (CRIES)	0.88	1.28	0.00 - 4.00	0.00 - 4.00
Stressed Attn Seeking (CRIES)	0.27	0.53	0.00 - 2.00	0.00 - 2.00
Parenting				
Animation - Mother (QRPCI)	2.18	0.85	0.00 - 4.00	0.00 - 4.00
Animation - Father (QRPCI)	1.99	0.94	0.00 - 4.00	0.00 - 4.00
Dyadic Mutuality - Mother (QRPCI)	1.87	1.08	0.00 - 4.00	0.00 - 4.00
Dyadic Mutuality - Father (QRPCI)	1.71	1.05	0.00 - 4.00	0.00 - 4.00

Table 1 cont.

Measure	Mean	SD	Range	Possible Range
Parenting (cont.)				
Pos Regard - Mother (QRPCI)	2.57	0.96	1.00 - 4.00	0.00 - 4.00
Pos Regard - Father (QRPCI)	2.25	1.04	0.00 - 4.00	0.00 - 4.00
Sensitivity - Mother (QRPCI)	2.00	1.09	0.00 - 4.00	0.00 - 4.00
Sensitivity - Father (QRPCI)	1.75	1.10	0.00 - 4.00	0.00 - 4.00
Stimulation of Dev - Mother (QRPCI)	1.86	1.06	0.00 - 4.00	0.00 - 4.00
Stimulation of Dev - Father (QRPCI)	1.56	0.92	0.00 - 4.00	0.00 - 4.00
Detachment - Mother (QRPCI)	1.30	1.19	0.00 - 4.00	0.00 - 4.00
Detachment - Father (QRPCI)	1.26	1.17	0.00 - 4.00	0.00 - 4.00
Intrusiveness - Mother (QRPCI)	1.42	1.17	0.00 - 4.00	0.00 - 4.00
Intrusiveness - Father (QRPCI)	1.44	1.28	0.00 - 4.00	0.00 - 4.00
Neg Regard - Mother (QRPCI)	0.37	0.67	0.00 - 3.00	0.00 - 4.00
Neg Regard - Father (QRPCI)	0.39	0.65	0.00 - 2.00	0.00 - 4.00
Coparenting				
Active Cooperation (CFRS)	2.06	1.14	0.00 - 4.00	0.00 - 4.00
Active Competition (CFRS)	1.23	1.35	0.00 - 4.00	0.00 - 4.00
Verbal Sparring (CFRS)	1.17	1.45	0.00 - 4.00	0.00 - 4.00
Warmth (CFRS)	1.60	0.78	0.00 - 4.00	0.00 - 4.00
Child				
Positive Affect (QRPCI)	1.91	0.88	0.00 - 4.00	0.00 - 4.00
Activity (QRPCI)	2.09	0.81	1.00 - 4.00	0.00 - 4.00
Negative Affect (QRPCI)	1.04	1.09	0.00 - 4.00	0.00 - 4.00
Family				
Cohesiveness (SCIFF)	1.91	0.95	0.00 - 4.00	0.00 - 4.00
Positive Affect (SCIFF)	1.81	0.93	0.00 - 4.00	0.00 - 4.00
Negativity and Conflict (SCIFF)	0.77	0.89	0.00 - 3.00	0.00 - 4.00

Note. DIF = Dyadic Interaction Form; CRIES = Conflict Reaction Infant Emotional Security; MOC = Marital Observation Coding; QRPCI = Qualitative Ratings for Parent-Child Interactions; CFRS = Co-parenting and Family Rating System; SCIFF = System for Coding Interactions and Family Functioning.

Table 2. Intercorrelations between Composite Variables.

Composite Variables	1	2	3	4	5	6	7	8	9
1. Infant Attn - CRIES	----								
2. Infant Attn - DIF	.01	----							
3. Const Strategies / Pos Affect	-.32**	-.04	----						
4. Destr Strategies / Neg Affect	.30**	-.01	-.77**	----					
5. Resolution	-.31**	.07	.62**	-.63**	----				
6. Emotional Insecurity	.07	.05	-.01	.05	-.16	----			
7. Pos Parenting	-.18	.16	.39**	-.24*	.26*	-.10	----		
8. Neg Parenting	.16	-.04	-.45**	.34**	-.25*	.21	-.74**	----	
9. Pos Coparenting	-.18	.33**	.15	-.12	.14	-.01	.45**	-.17	----
10. Neg Coparenting	.03	.11	-.24*	.21	-.21	.14	-.19	.31**	-.18
11. Child - Total	-.20	.07	.10	-.13	.12	.25*	-.32**	.32**	.09
12. Child - Positive Affect	.18	.01	-.14	.16	-.13	-.10	.40**	-.20	.02
13. Child - Negative Affect	-.18	-.08	.04	-.11	.11	.30**	-.28*	.40**	-.06
14. Child - Activity	.14	-.23*	-.04	-.01	-.01	-.12	-.01	-.07	-.26*
15. Family - Total	.13	.18	-.21	.17	-.11	.21	-.60**	.53**	-.63**
16. Family - Positive Affect	-.18	.07	.21	-.14	.09	-.15	.56**	-.42**	.55**
17. Family - Negativity	-.03	-.09	-.05	.06	-.05	.31**	-.42**	.58**	-.20
18. Family - Cohesiveness	-.17	.26**	.24*	-.21	.13	-.04	.47**	-.30**	.77**

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

Table 2 cont.

Measures	10	11	12	13	14	15	16	17	18
1. Infant Attn - CRIES									
2. Infant Attn - DIF									
3. Const Strategies / Pos Affect									
4. Destr Strategies / Neg Affect									
5. Resolution									
6. Emotional Insecurity									
7. Pos Parenting									
8. Neg Parenting									
9. Pos Coparenting									
10. Neg Coparenting	----								
11. Child - Total	-.02	----							
12. Child - Positive Affect	.09	-.74**	----						
13. Child - Negative Affect	-.02	.67**	-.25*	----					
14. Child - Activity	-.07	-.70**	.32**	-.15	----				
15. Family - Total	.33**	.40**	-.32**	.43**	-.11	----			
16. Family - Positive Affect	-.24*	-.42**	.37**	-.33**	.20	-.86**	----		
17. Family - Negativity	.34**	.50**	-.26*	.59**	-.21	.75**	-.47**	----	
18. Family - Cohesiveness	-.23*	-.05	.13	-.11	-.18	-.80	.61**	-.33**	----

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

Figure 1. Model predicting child outcome composite from dimensions of conflict.

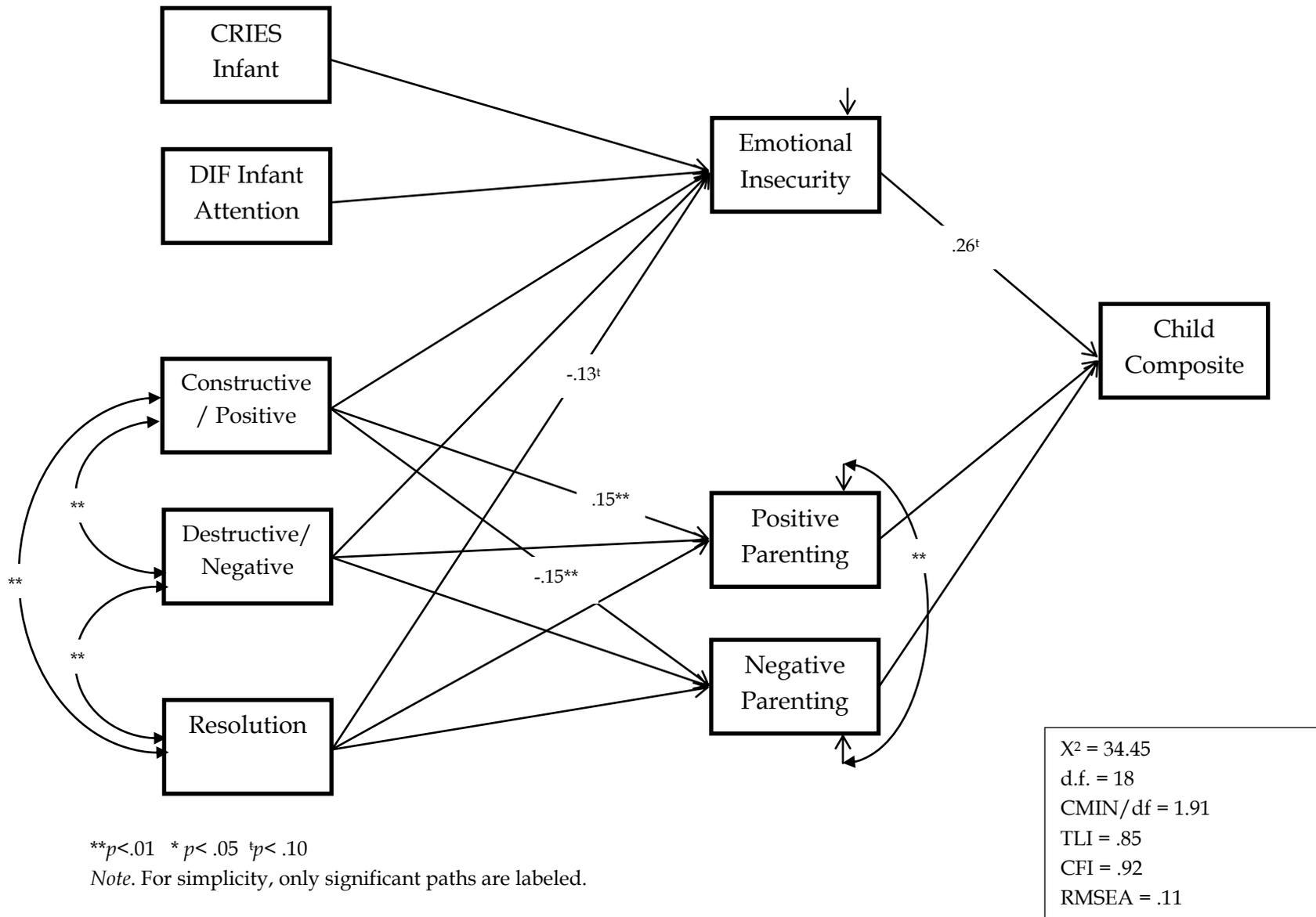


Figure 2. Model predicting child positive affect from dimensions of conflict.

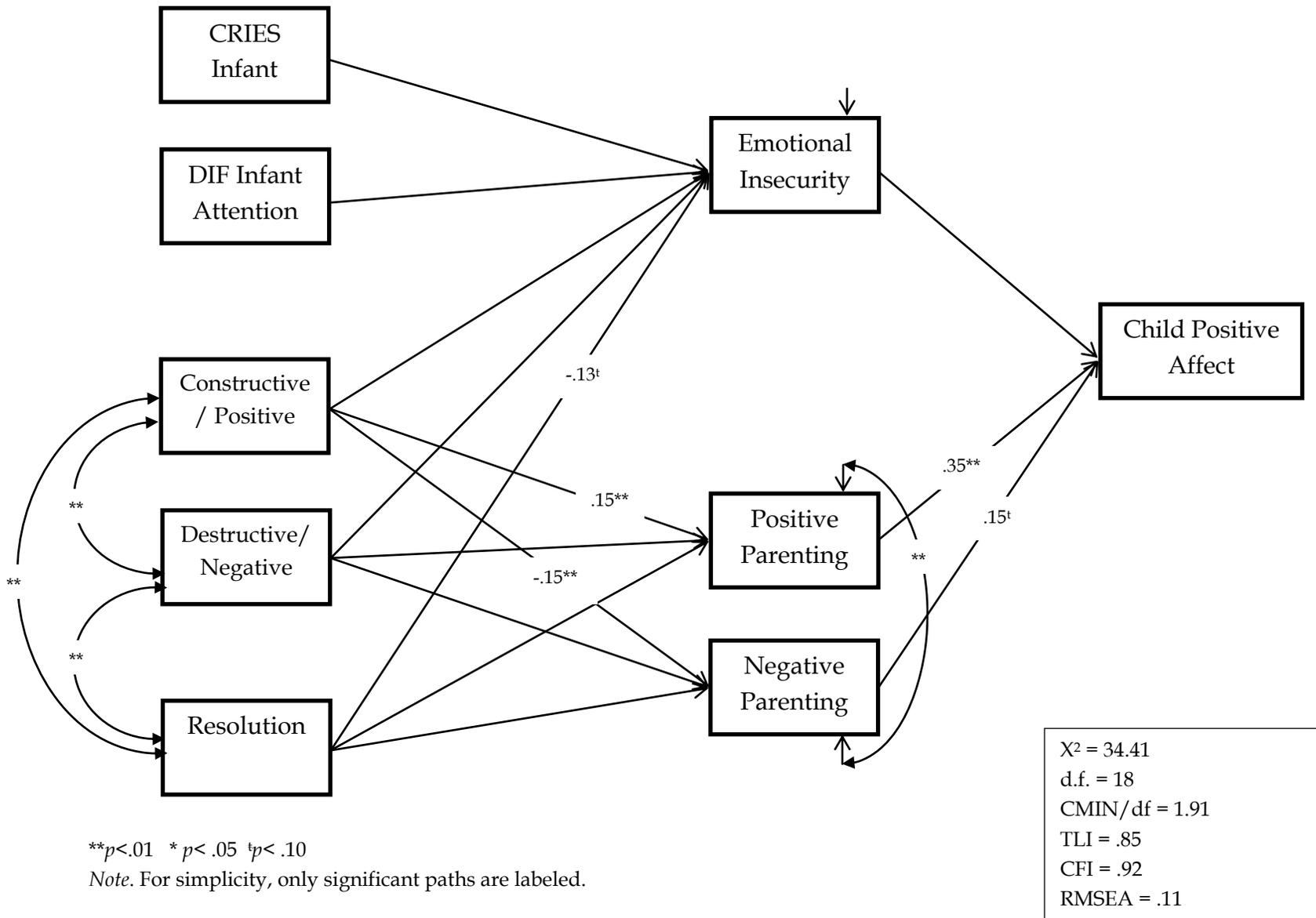
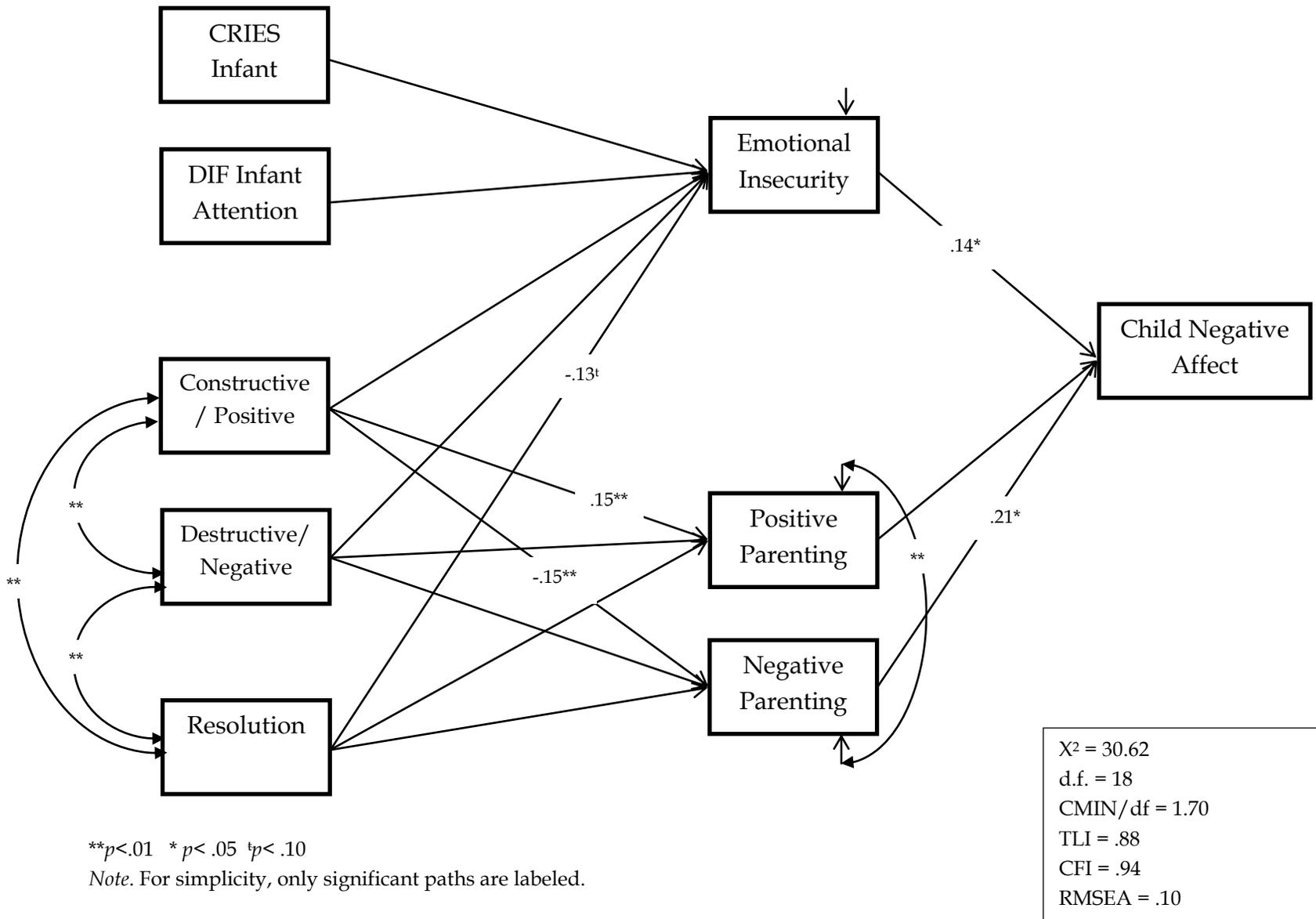


Figure 3. Model predicting child negative affect from dimensions of conflict.



**p<.01 * p< .05 †p< .10

Note. For simplicity, only significant paths are labeled.

Figure 4. Model predicting child activity from dimensions of conflict.

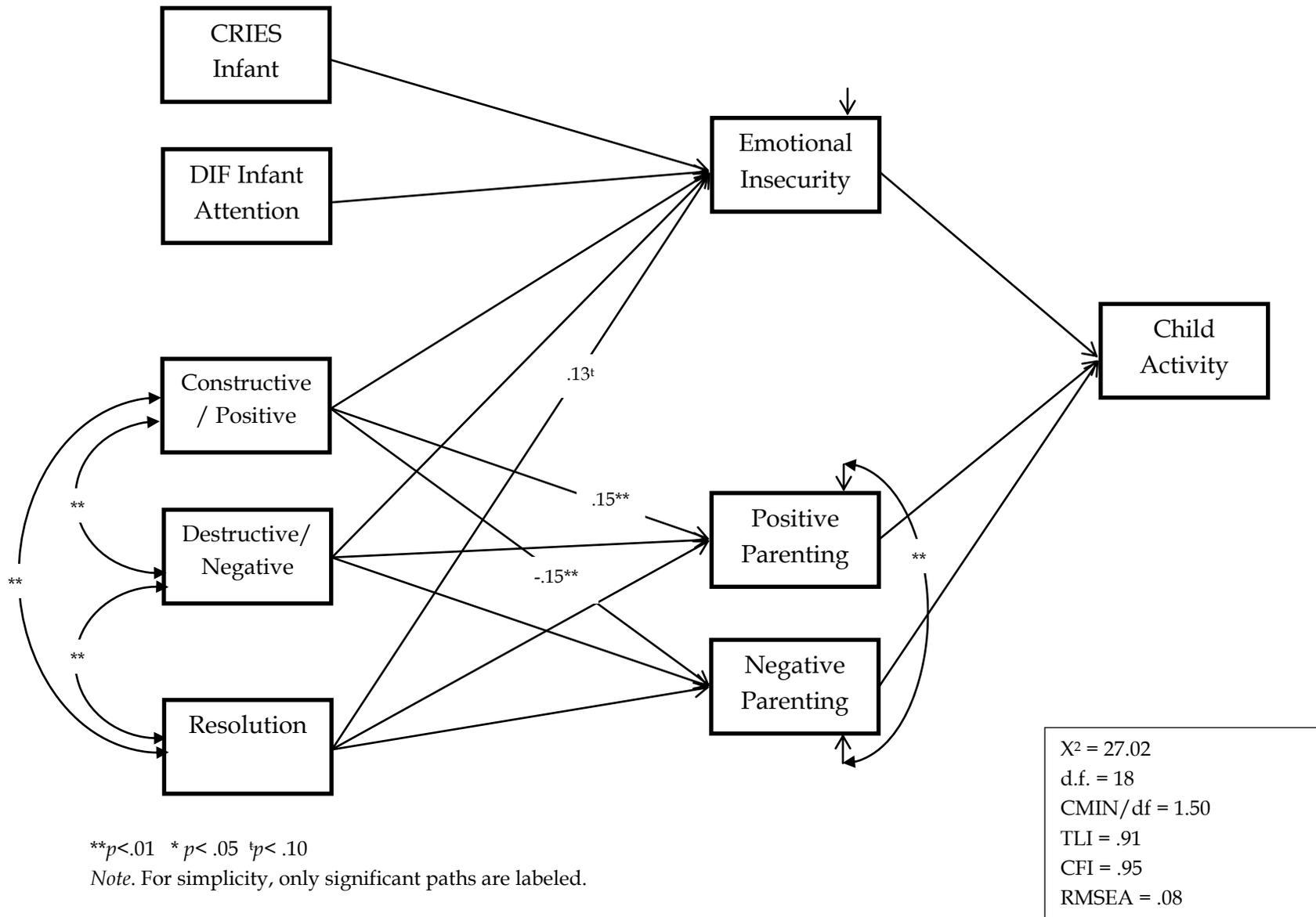


Figure 5. Model predicting family outcome composite from dimensions of conflict.

