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**“Johnny Feels Cranky”: A Family Systems Approach to Studying the Links between  
Interparental Conflict and Preschoolers’ Emotion Understanding**

By

Kristen A. Stouder

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

Kathleen L. Kitto, Dean of the Graduate School

ADVISORY COMMITTEE

Chair, Dr. Tina Du Rocher Schudlich

Dr. Rebecca Goodvin

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## **MASTER'S THESIS**

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Kristen A. Stouder

January 16, 2013

“Johnny Feels Cranky”: A Family Systems Approach to Studying the Links between  
Interparental Conflict and Preschoolers’ Emotion Understanding

A Thesis Presented to the Faculty of  
Western Washington University

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

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Kristen A. Stouder

January, 2013

## Abstract

Emotion understanding is a necessary ability for young children to develop, as this competence helps children navigate their social world. Parents offer a rich environment for children to learn about emotion, but to date little is known about how interparental conflict relates to children's growing emotion understanding. From a family systems perspective, it is important to consider not only how conflict behaviors may be connected with children's emotion understanding directly, but also indirectly through changes in parenting behaviors. In this study interparental conflict tactics and related parenting behaviors of both mothers and fathers were examined in relation to children's emotion understanding. At Time 1, seventy-four families participated and parents' conflict and parenting behaviors were observed with their infants present. Thirty families returned when children were of the preschool age and children's emotion understanding was assessed. Significant associations emerged for fathers', but not mothers', conflict styles in relation to children's emotion understanding. Contrary to expectations, fathers' use of constructive conflict was negatively associated with children's emotion understanding, whereas fathers' use of depressive conflict was related to higher levels of children's emotion understanding. Implications for how these processes relate to children's emotion understanding in the broader context of the family emotional climate and children's developmental level are discussed.

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## Table of Contents

Abstract.....	iv
Acknowledgements.....	v
List of Tables and Figures.....	vii
Introduction.....	1
Method.....	16
Results.....	26
Discussion.....	46
References.....	58

## List of Tables and Figures

Figure 1. Aim 2: Proposed Model of Spillover Effects: Parenting Behaviors as a Mediator between Conflict Behaviors and Children’s Emotion Understanding.....	24
Figure 2. Aim 3: Proposed Model for Testing Indirect Associations of One Parents’ Conflict and the Other Parents’ Parenting Behaviors in Predicting Children’s Emotion Understanding.....	25
Table 1: Factor Pattern (and Structure) Coefficients of Fathers’ Conflict Codes.....	27
Table 2: Factor Pattern (and Structure) Coefficients of Mothers’ Conflict Codes.....	29
Table 3: Descriptive Statistics.....	31
Table 4: Intercorrelations among all Variables.....	33
Table 5: Regression Models Predicting Children’s Emotion Understanding with Fathers’ Conflict Tactics.....	36
Table 6: Regression Models Predicting Children’s Emotion Understanding with Mothers’ Conflict Tactics.....	37
Figure 3. All Possible Pathways of Mothers’ Parenting Behaviors as a Mediator between Mothers’ Conflict Tactics and Children’s Emotion Understanding.....	38



Figure 4. All Possible Pathways of Fathers' Parenting Behaviors as a Mediator between Fathers' Conflict Tactics and Children's Emotion Understanding.....	39
Figure 5. All Possible Pathways of the Indirect Associations of Mothers' Conflict Behaviors and Fathers' Parenting, and Related Associations with Children's Emotion Understanding. ....	42
Figure 6. All Possible Pathways of the Indirect Associations of Fathers' Conflict Behaviors and Mothers' Parenting, and Related Associations with Children's Emotion Understanding. ....	43

## **Introduction**

Interparental conflict is a natural part of family life, even among parents reporting high relationship satisfaction (Gottman, 1997; Katz & Gottman, 1996). Interparental conflict has been linked to child adjustment across several domains, including academic performance (Emery & O'Leary, 1982; Johnston, Gonzalez, & Campbell, 1987), behavioral difficulties (McCoy, Cummings, & Davies, 2009), internalizing symptoms (Jouriles, Murphy, & O'Leary, 1989) and emotional development (Davies & Cummings, 1994; Cummings & Davies, 2010; McCoy et al., 2009). Recent process-oriented approaches offer a framework in which to examine influential pathways across family processes, allowing us to make connections between interparental conflict and resulting child outcomes. Given that the highest levels of interparental conflict occur during the early childhood years (Belsky & Rovine, 1990), this is a particularly important process to consider.

Children experience rapid emotional development during toddlerhood and the preschool years, especially in how they think about and understand emotions. Children begin to reflect more complexly about emotion throughout this age range as they interpret emotional exchanges in the social world around them (Laible & Thompson, 1998; Thompson, 2008; Thompson & Lagattuta, 2006). Parents, in particular, provide numerous opportunities for children to learn about emotions through emotional expressions, explanations for emotions, and reactions to their children's emotions (Denham & Kochanoff, 2002; Denham, Zoller, & Couchoud, 1994; Laible, 2004; Thompson & Lagattuta, 2006; Thompson, 2008). The emotionally charged process of interparental conflict may be a unique factor contributing to children's growing emotion knowledge, both directly and indirectly through spillover into parenting behaviors (Goeke-Morey & Cummings, 2007; Katz & Gottman, 1996).

## **Emotion Understanding**

Children's conceptual understanding of emotions begins very early in life, but by the time children are of the preschool age this understanding matures to where they can accurately recognize emotional expressions, describe internal states, identify the antecedents and consequences of emotion, and realize that others may have emotion emotions different than their own (Bretherton, Fritz, Zahn-Waxler, & Ridgeway, 1986; Denham, 1986; Denham & Couchoud, 1990; Saarni, 1993; Thompson & Lagattuta, 2006). Emotion understanding is closely intertwined with other key developmental accomplishments, which is why children experience such extensive growth in this process during the preschool years. For example, children's ability to use language allows them to have conversations with others about emotion, put words to emotional states, and to convey their own emotional experiences (Bretherton et al., 1986, Thompson, 2008; Thompson & Lagattuta, 2006). Preschoolers' awareness of others' mental states, or theory of mind, emerges during this time as well. This helps children take the emotional perspective of others, which is a particularly important and complex component of emotion understanding (Thompson, 2008; Thompson & Ontai, 2008). Together, these developmental milestones facilitate children's emotion understanding. By the end of the preschool years, children are remarkably effective in navigating their social world.

Emotion understanding is a crucial developmental task, because this ability helps guide children's behaviors in social interactions (Thompson & Lagattuta, 2006). Children's ability to accurately interpret and process emotional content helps them manage their own feelings and respond appropriately to others (Denham, 1986; Garner, Jones, & Miner, 1994; Thompson, 2008). This is especially important for negative emotions, which are conceptually more complex

and troubling for young children, and require greater effort to comprehend (Thompson & Lagattuta). Children's ability to grasp others' feelings is equally challenging and necessary (Thompson & Lagattuta). Children who are competent emotional perspective-takers are particularly skilled in social encounters, because they can more effectively interpret others' emotions and interact in a suitable manner (Denham et al., 2001; Saarni, 1993; Thompson & Lagattuta). This perspective-taking component of emotion understanding is sometimes referred to as children's "non-stereotypical" emotion understanding, and has been somewhat overlooked in the literature.

Greater understanding of emotions has been linked with higher quality family relationships (Brown & Dunn, 1996), higher levels of prosocial behavior (Denham, 1986; Denham et al., 2001), empathy (Denham et al., 2001), and more positive ratings by peers (Denham et al., 2001; Denham, Blair, Schmidt, & DeMulder, 2002). In short, emotion understanding is a foundation for social competence in early childhood. The preschool age is an important time to study this construct because children's expanding concepts about emotion solidify into a more coherent understanding during these years.

Although researchers have made substantial progress in identifying children's normative emotional development, differential predictors from early family environments in relation to later emotional development are less understood (Denham & Couchoud, 1990; Thompson, 2008; Thompson & Lagattuta, 2006). Children intrinsically seek to derive meaning from interactions in the family, particularly those interactions in which emotions are salient (Cummings & Davies, 2010). Thus, interparental conflict may be one such process that provides opportunities for children to learn about emotion, since such exchanges between parents are frequently arousing

and inherent with emotional content (Cummings & Davies, 2010; Davies & Cummings, 1994). In further exploring the relationship between these behaviors and children's emotion understanding, we may untangle some of the complexities by which emotion understanding develops.

### **Interparental Conflict**

Consistent with popular notions, early researchers collapsed all marital disagreements into one global construct of conflict resulting in a broad, one-dimensional view that failed to distinguish the complexities of these interactions (Cummings & Davies, 2002; Cummings & Davies, 2010; Katz & Gottman, 1996). More recently, researchers have acknowledged that interparental conflict can contain both positive and negative elements, and that these elements can have unique impacts across other family processes (Cummings & Davies, 2002; McCoy et al., 2009). Borrowing from Cummings and Davies' (2010) definition, conflict is any interparental interaction characterized by a difference of opinion involving both negative and positive behaviors and emotions.

Researchers continue to accumulate empirical evidence supporting the distinction of three types of conflict: constructive, destructive, and depressive (Cummings & Davies, 2002; 2010; Davies & Cummings, 1994; Du Rocher Schudlich & Cummings, 2003; Du Rocher Schudlich et al., 2011; McCoy et al., 2009; Sturge-Apple, Davies, & Cummings, 2006a; 2006b). Constructive interparental conflict is characterized by well-modulated emotional expression, attempts at resolution, a high degree of problem solving, demonstrations of support and validation, and a sometimes-humorous approach to discussing tensions (Cummings & Davies, 2010; Du Rocher Schudlich & Cummings, 2003; Du Rocher Schudlich et al., 2011; McCoy et al., 2009). In

contrast, parents who engage in destructive conflict behaviors are often verbally hostile. They demonstrate contempt, defensiveness, high levels of anger, and may show physical aggression (Cummings & Davies, 2002; 2010; McCoy et al., 2009). Finally, depressive conflict is characterized by avoidance of the interaction, emotional distress, withdrawal from the conflict, observed sadness, anxiousness, helplessness and hopelessness, and self-reported feelings of worry (Cummings & Davies, 2002; 2010; Du Rocher Schudlich et al., 2011).

Distinguishing specific interparental conflict behaviors is important because these behaviors have differential associations with various child outcomes (see Cummings and Davies, 2010 for a review). Not all types of conflict are equally detrimental to children's development: In fact, some evidence suggests that constructive conflict may actually facilitate positive social and emotional outcomes for children (Cummings & Davies, 2010; Davies & Cummings, 1994; McCoy et al., 2009). Parents with well-modulated conflict tend to have children who demonstrate more prosocial behavior (McCoy et al., 2009), greater emotional security (Davies & Cummings, 1994), and fewer internalizing and externalizing problems (Grych & Fincham, 1990). These positive expressions of disagreement may be a natural byproduct of an emotionally secure environment in which parents are comfortable discussing difficult topics (Cummings & Davies, 2010), and as such, may support children's abilities to explore emotion in a safe environment. Those parents who are able to clearly let each other know how they feel, seek to understand the other's point of view, and work together toward a common solution in their disagreements may foster children's affective perspective-taking ability, an important aspect of emotion understanding.

In contrast, destructive marital conflict has been shown to undermine children's sense of emotional security (Davies & Cummings, 1994; McCoy et al., 2009), contribute to higher levels of anxiety and depression (Katz & Woodin, 2002), conduct problems (Grych & Fincham, 1990; Jouriles et al., 1989), and increased aggression (Dadds & Powell, 1991). Interparental hostility appears particularly disturbing to young children since children tend to interpret such behavior as emotionally and physically threatening (Gottman, Katz, & Hooven, 2001; Sturge-Apple et al., 2006a). Such strong, negative expressions of conflict may be confusing and overwhelming for children, and undermine children's ability to process these emotions in a healthy manner.

Less is known about depressive conflict behaviors, but evidence to date suggests such behaviors tend to have negative emotional outcomes for children. The high levels of fear and sadness in depressive conflict have been shown to erode children's sense of emotional security, because this conflict style is distressing for children (Du Rocher Schudlich & Cummings, 2003). Likewise, interparental withdrawal has been shown to increase levels of children's internalizing symptoms and is associated with difficulties in children's school adjustment (Sturge-Apple et al., 2006a; 2006b). For children's emotion understanding, interparental withdrawal during conflict may be a particularly problematic behavior to consider. This behavior is characterized by an avoidance of the disagreement and as such, imparts little emotional information to children. Thus, taken together, both destructive and depressive conflict tactics may be detrimental to children's emotion understanding, since limited emotion knowledge may be absorbed if parents' expressiveness is restricted, or if it is so negative that it distresses the child (Denham et al., 1994; Denham & Grout, 1993; Garner et al., 1994).

Direct connections between interparental conflict and preschoolers' emotion understanding remain scant. In fact, only one study (Nixon & Watson, 2001) has examined these two constructs in conjunction, finding that children from families with higher conflict (as reported by mothers) tended to interpret puppet vignettes enacting mild spousal disagreements as more negative. Although an important step in breaking ground toward looking at these associations, the authors did not consider conflict as a multi-dimensional construct but only looked at interparental conflict behaviors characterizing destructive conflict.

Prior research on parental emotion expression further extends and supports theoretical expectations of how these conflict and emotion understanding may be related. Denham and associates (Denham & Grout, 1993; Denham et al., 1997; Denham et al., 2002) found that maternal expressions of positive emotions were related to an increase in overall child emotion understanding. However, when mothers reported expressing higher levels of fear and anger, children demonstrated not only lower levels of overall emotion understanding (Denham & Grout) but especially anger (Denham & Grout; Garner et al., 1994). Researchers (Garner et al., 1994; Denham et al., 1997; Denham et al., 2002) have speculated that higher levels of negative emotional expression, particularly anger, may be confusing and overwhelming to children. This negativity may hinder children's ability to make sense of these emotions, contributing to a less-developed emotion understanding. Likewise, higher levels of positive emotional expression may help facilitate understanding of emotions by creating a safe environment in which to reflect on and process emotions (Thompson, 2008; Thompson & Lagattuta, 2006).

Although interparental conflict inherently involves emotional exchanges, it would be insufficient to categorize conflict as merely a form of emotional expression. Many disagreements



contain behaviors which may not be overtly emotional such as actively listening, validating another's opinion, or offering solution to a problem. Other behaviors may be more emotionally subtle, such as sarcasm. Alternatively, the absence of behaviors may be meaningful as well, indicating an inability to effectively communicate. For children, exposure to these behaviors, even if not directed at the child, may be an important process in the family by which children come to understand emotions. Taken together, there is strong theoretical and empirical evidence supporting the notion that children's conceptualizations of emotions may be related to the unique ways in which parents express their disagreements. It is an important next step to also consider the mechanisms by which interparental conflict influences children.

**Spillover into other family subsystems.** Cummings and Davies (2010) advocate the use of a theoretical framework that goes beyond merely documenting associations of marital conflict with child outcomes. Rather, they emphasize the importance of examining processes by which these outcomes occur. Process-oriented perspectives offer more sophisticated approaches for delineating how, why, and under what circumstances conflict influences child outcomes.

Family systems theory (Cox & Paley, 1997) highlights the importance of viewing the family as a system composed of many interacting subsystems (e.g., marital dyad, parent-child dyads, the triad). The marital relationship is thought of as the hub within the broader set of relationships in the family (Cox & Paley, 1997; 2003; Cummings & Davies, 2010). Emotions and experiences in one unit (such as the marital relationship) in the family may influence other family relationships (e.g., the parent-child relationship) (Katz & Gottman, 1996).

Interparental conflict is rarely contained to just the marital relationship. Often, parents challenged with their own marital issues experience strain in the parent-child relationship as

well, a finding which has gained both narrative (Grych & Fincham, 1990) and meta-analytic support (Erel & Burman, 1995; Krishnakumar & Buehler, 2000). Researchers (Katz & Gottman, 1996; Erel & Burman; Krishnakumar & Buehler) have termed this transfer of moods, emotions, and behaviors from one context to the other as “spillover.” This spillover is a likely explanatory pathway by which conflict impacts young children. As such, interparental conflict may contribute to children’s emotion understanding directly, but also indirectly, through alterations to parenting behaviors.

### **Parenting Processes as a Mediator**

Interparental conflict may be a more distal process related to children’s emotion understanding, whereas the emotional environment of the parent-child relationship may be a more proximal influence. That is, exposure to conflict expressions may provide opportunities for children to learn about emotions directly, but parents may further enhance or undermine these conceptualizations through behaviors and emotions directed toward the child. Specific aspects of the parent-child relationship such as the quality of attachment (Laible & Thompson, 1998; Ontai & Thompson, 2002; Raikes & Thompson, 2006) discourse (Ontai & Thompson, 2002; Laible, 2004), and emotional expressions (Denham et al., 1994) have received extensive support as influential processes in children’s emotion understanding. However, the broader emotional tone underlying the parent-child relationship is important as well, particularly for infants and toddlers who may lack the capacity to utilize these more complex processes until later in development (Bretherton et al., 1986; Thompson & Lagattuta, 2006).

The majority of researchers have primarily focused on emotion understanding in the context of specific parental socialization processes (e.g., maternal discourse), because these

constructs are thought to be influential around the time that emotion understanding solidifies. But other researchers have examined how the emotional tone of the parent-child relationship early in development relates to children's later emotion understanding. Notably, Bennett, Bendersky, and Lewis (2005) examined maternal parenting behaviors in a free play task at age two in predicting children's emotion understanding at age four. Those mothers demonstrating higher positive parenting tended to have children who scored higher on measures of emotion understanding at age four. The quality of early parent-child interactions may benefit children's later emotion understanding, because this reflects the ability for dyads to construct meaning about their emotional world in a manner compatible with the child's developmental capabilities (Thompson, 2008; Thompson & Lagattuta, 2006). These parent-child interactions may be an important avenue by which children come to understand the more challenging aspects of emotion, notably negative emotions, and emotions experienced by others.

There is substantial support in the literature demonstrating that parenting behaviors often mediate the relationship between interparental conflict and child maladjustment, because parents who are preoccupied with marital difficulties are often more withdrawn and less sensitive to their children (Erel & Burman, 1995; Katz & Gottman, 1996; Krishnakumar & Buehler, 2000; Sturge-Apple et al., 2006a; 2006b). Negative emotions and behaviors in marital interactions have been associated with increased negative parenting practices for both mothers and fathers, although the patterns of these associations may differ. Some research suggests that men, when faced with marital difficulty, tend to withdraw from both the marriage and from the father-child relationship (Parke & Tinesley, 1987; Crockenberg & Covey, 1991). On the other hand, women in the face of husband withdrawal tend to be more contemptuous, critical, and complain more during

interparental conflict, and in turn, become more intrusive in their parenting behaviors (Brody et al., 1986; Cowan & Cowan, 1987; Cox, Paley, & Harter, 2001). Sturge-Apple and colleagues (2006a; 2006b) looked specifically at the impact of interparental withdrawal and hostility in relation to parenting behaviors. Hostile conflict behaviors and withdrawal for both mothers and fathers were combined into aggregate interparental composite scores. Both interparental hostility and withdrawal during conflict were linked to mothers' reduced emotional availability toward her children, whereas only interparental withdrawal predicted fathers' emotional unavailability.

Although fathers remain under-studied, there is some evidence that fathers may be even more susceptible to the stresses of interparental conflict than that of mothers (Crockenberg & Covey, 1992; Cummings et al., 2000; Katz & Gottman, 1996). Whereas mothers appear better able to compartmentalize the effects of conflict, fathers may be more reactive to conflict and their ability to parent effectively may be more easily compromised (Parke & Tinsley, 1987; Crockenberg & Covey, 1992), although evidence is mixed (Cox et al., 2001; Cummings, Merrilees, & Ward-George, 2010). It is clear that marital conflict is not an isolated process. Rather, there is overwhelming evidence that this conflict can carry over to the parent-child relationship, although the manner in which this unfolds may differ between mothers and fathers.

Taken together, it is evident that conflict behaviors in the marital dyad affect the parent-child relationship, and the parent-child relationship affords a unique setting for children to explore emotional content. What remains to be seen is how these processes work distinctly and in conjunction in predicting children's emotion understanding. Thus, examining parenting behaviors as a mediator of the link between interparental conflict and emotion understanding is

an important next step. From a family systems perspective, this delineation will further specify the multiple family processes at work that influence emotion understanding.

### **Indirect Parental Socialization**

Past research has been notoriously limited in accounting for the impact of fathers, despite the continued call for the examination of fathers' behaviors in relation to family processes and child emotional outcomes (Cox & Paley, 1997; Cummings & Davies, 2010; Denham & Kochanoff, 2002; Thompson, 2008). More recently, some researchers have considered the differential associations of fathers and mothers in relation to children's emotion understanding, although this line of research is largely in its infancy (Denham & Kochanoff; McElwain, Halberstadt, & Volling, 2007).

Although fathers' behaviors may directly relate to children's emotional development, fathers may also have meaningful indirect roles through their contributions to mothers' socialization efforts (Goekey-Morey & Cummings, 2007). McElwain and colleagues (2007) found that children demonstrated greater emotion understanding when fathers reported greater emotional support for mothers' interactions with children. Denham and Kochanoff (2002) found direct associations of both mothers' and fathers' behaviors in relation to children's emotion understanding, although findings for fathers were less-clear. Unexpectedly, fathers' emotion explanations and emotion coaching were negatively related to children's emotion understanding. The authors suggested that perhaps fathers talk about emotions more with children who are lower in emotion understanding, but that fathers may possibly play a different role in helping children understand emotions. In exploring these possibilities, Denham and Kochanoff found that fathers' emotional expressions contributed to mothers' emotional expressions to the child, which in turn

predicted children's emotion understanding. Thus, fathers may contribute indirectly to children's emotion understanding through their support or nonsupport of maternal socialization of emotions.

Recent reviews have emphasized both the direct and the indirect roles that fathers have in children's emotional development (Goeke-Morey & Cummings, 2007; Schacht, Cummings, & Davies, 2009), but the process by which this occurs deserves further investigation. Some researchers have discussed the possibility that fathers' influence may be qualitatively different than that of mothers, and urge future researchers to examine active father-child play as a more appropriate context to examine the influence of the fathers' role on children's social cognition (Denham & Kochanoff, 2002). Given the calls of previous researchers (e.g., Denham & Kochanoff; Goeke-Morey & Cummings, 2007), the inclusion of both mothers' and fathers' influence on children's emotion understanding is an important next step.

### **Present Study**

Given support from previous literature, the ways in which parents manage their conflict may differentially predict how children understand emotions. This study will advance work in the area of children's emotion understanding in several ways. First, it is important to examine both the direct associations of exposure to interparental conflict, but also consider the indirect pathways of how these behaviors and emotions may spill over into parent-child interactions. This offers a more comprehensive framework for the mechanisms by which interparental conflict relates to children's emotional development (Cummings & Davies, 2010).

Second, the design of this study offers several unique strengths that build upon previous studies examining predictors of children's emotion understanding. Interparental conflict was

measured during children's infant years, and emotion understanding during the preschool years, whereas the majority of research looking at children's emotion understanding focuses on such processes concurrently. As such, the longitudinal nature of this study allows a unique look of the sequelae of conflict at later points in children's emotional development.

Further, both conflict and parenting measures in this study offer an advantage over previous designs. Conflict was measured through observations of parents discussing an area of disagreement, providing more depth and detail into the behaviors of conflict than self-report used before (i.e., Nixon & Watson, 2001). Furthermore, distinguishing between conflict behaviors (i.e., destructive, constructive, and depressive) instead of using a global "conflict" construct yields more precise insight into how these particular behaviors may influence children's emotion understanding. Inclusion of mothers and fathers offers a unique advantage to test both parents' influence in children's emotion understanding. Additionally, parenting behaviors of both mothers and fathers were measured during a free play task with their infant. Following recommendations of Denham and Kochanoff (2002), this may be a more contextually appropriate measure in which to elicit fathers' parenting influences on children's emotion understanding.

Finally, I decided to examine multiple aspects of children's emotion understanding. In addition to looking at children's overall understanding of emotions, I considered children's understanding of both negative emotions and emotions opposite of how the parents reported that the child would feel. Negative emotions are more difficult for children to understand and regulate, requiring more interpretive effort the part of the child and more guidance from parents (Thompson, 2008). In the same vein, emotions opposite of the child's (non-stereotypical emotions) require a higher-order understanding, as children must distinguish between their own

emotions and the emotions of others. Considering the multiple domains of emotion understanding is important, because these types of conflict may differentially predict unique aspects of emotion understanding.

**Aim 1.** Examine associations between distinct interparental conflict dimensions (constructive, destructive, and depressive) during infancy and preschooler's emotion understanding (total, negative, and non-stereotypical). Although no one has looked specifically at these constructs together, based on how these conflict behaviors relate to other child emotional outcomes, I expected that that negative conflict behaviors (destructive and depressive) would be associated with lower levels of emotion understanding. On the other hand, based on previous literature looking at the benefits of constructive conflict to children, I expected these behaviors to be linked with higher emotion understanding for children. Further, I wanted to explore if the strength of these associations differed for children's understanding of negative or non-stereotypical emotions, given that these types of emotion understanding are more challenging for children to grasp.

**Aim 2.** Investigate spillover from marital conflict into parenting behaviors: Is the link between marital conflict in infancy and later emotion understanding mediated by parenting behaviors? Based on research examining spillover, I expected constructive conflict behaviors to be linked with higher levels of concurrent positive parenting, and in turn associated with greater emotion understanding for children in the preschool years. Negative conflict behaviors (destructive and depressive) were expected to spill over into higher levels of concurrent negative parenting behaviors, and in turn be related to lower levels of emotion understanding for children.



**Aim 3.** Explore indirect associations of one parent’s conflict behaviors on the other parent’s parenting behaviors, and overall relation to children’s later emotion understanding. Although I examined identical models for mothers and fathers, this aim was particularly important for fathers, for whom there is some support in the literature for their socialization of children through mothers’ behaviors. Constructive conflict for one partner was expected to contribute to more positive parenting by the other partner, and in turn predict higher levels of emotion understanding for children. Negative conflict behaviors by one partner (destructive, depressive) were expected to contribute to more negative parenting for the other partner, and be related to lower levels of emotion understanding in children.

## **Method**

### **Participants**

Participants in this study were taken from a larger, longitudinal project examining multiple family processes in relation to interparental conflict. Seventy-four families participated at Time 1, although only 73 families had complete data. Families were recruited using Whatcom County birth records and were eligible if parents had been living together since the birth of their child. At Time 1, children were infants between the ages of 6 to 14 months ( $M = 10.07$ ,  $SD = 2.1$ ; 33 males, 40 females). Seventy-seven percent of children were European-American, 9.3% were Biracial, 1.4% were Asian-American or Pacific Islander, and 5.3% were reported as an “other” ethnicity.

At Time 2, thirty-one families returned to the lab when target children were between the ages of 3 to 4.5 years old. One child became too dysregulated during the emotion understanding

task to complete the measure, and therefore was dropped from analyses. This resulted in complete data from 30 families (13 boys, 17 girls,  $M_{age} = 3.59$ ,  $SD = .47$ ) at follow-up.

At Time 1, fathers were on average 31.62 years old ( $SD = 5.87$ ) and mothers were 29.56 years old ( $SD = 5.54$ ). Ninety percent of fathers and 88% of mothers identified as European-American. Fifteen percent of fathers had completed high school as their highest level of education, 26% held a bachelor's degree, and 15% had a master's degree or higher. Eight percent of mothers had completed high school as their highest level of education, 37% held at least a bachelor's, and 16% held a master's degree or higher. All couples were heterosexual, except one lesbian couple. Eighty-nine percent of couples were married ( $M$  length of marriage = 4.83,  $SD = 3.15$ ), and had been living together an average of 5.78 years ( $SD = 3.34$ ). Families' median income was \$40,000-65,000 per year. Couples had 1.66 children on average ( $SD = .75$ ). Demographic information regarding families is described using mothers' reports.

### **Attrition**

I conducted a series of *t*-tests to compare those families who returned at Time 2 to those families who did not return across several demographic, conflict, and parenting variables from these data available at Time 1. Fathers who returned at follow up were on average older ( $M_{age_{returned}} = 33.93$ ,  $SD = 5.37$ ) ( $M_{age_{dropped}} = 30.00$ ,  $SD = 5.72$ ),  $t(71) = 2.97$ ,  $p < .01$ ), and had completed more education ( $M$  level of education completed<sub>returned</sub> = Associate's degree) ( $M$  level of education completed<sub>dropped</sub> = some college)<sup>1</sup>  $t(71) = 3.00$ ,  $p < .01$ , than those fathers who did not return. Likewise, mothers who returned at follow up tended to be older ( $M_{age_{returned}} = 32.00$ ;

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<sup>1</sup> As this is an ordinal variable, standard deviations of this categorical description are not meaningful, and thus not reported.

$SD = 4.81$ ) ( $M_{\text{age}_{\text{dropped}}} = 27.86$ ;  $SD = 5.43$ ),  $t(71) = 3.35$ ,  $p < .01$ , and had completed marginally more education ( $M_{\text{level of education completed}_{\text{returned}}} = \text{Associate's Degree}$ ) ( $M_{\text{level of education completed}_{\text{dropped}}} = \text{some college}$ ),  $t(71) = 1.73$ ,  $p = .08$ , than those mothers who did not return. Families who returned at the second wave had higher average incomes ( $M_{\text{returned}} = \$44,500$ ;  $SD = \$18,150$ ) ( $M_{\text{dropped}} = \$35,500$ ;  $SD = \$17,550$ ),  $t(71) = 2.18$ ,  $p < .05$ , and a larger proportion of parents were married ( $M_{\text{returned}} = 100\%$ ,  $SD = 0$ ) ( $M_{\text{dropped}} = 81\%$ ,  $SD = .39$ ),  $t(70) = 2.54$ ,  $p < .01$ , than those families who did not return.

I also examined whether parents who returned to the lab at Time 2 differed across any conflict or parenting behaviors from those families who did not return. For mothers, no statistically significant differences emerged. However, fathers demonstrated several statistically significant differences in both their conflict and parenting behaviors. Fathers who returned at Time 2 showed more resolution during the marital disagreement ( $M_{\text{returned}} = 6.10$ ,  $SD = 2.29$ ) ( $M_{\text{dropped}} = 4.93$ ,  $SD = 2.24$ ),  $t(71) = 2.19$ ,  $p = .03$ , tended to have somewhat better communication skills in the marital interaction ( $M_{\text{returned}} = 6.48$ ,  $SD = 1.65$ ) ( $M_{\text{dropped}} = 5.67$ ,  $SD = 2.15$ ),  $t(68) = 1.84$ ,  $p = .07$ , showed slightly less contempt ( $M_{\text{returned}} = 1.84$ ,  $SD = 1.24$ ) ( $M_{\text{dropped}} = 2.62$ ,  $SD = 2.23$ ),  $t(66.6) = -1.76$ ,  $p = .06$ , and anger ( $M_{\text{returned}} = 1.87$ ,  $SD = .96$ ) ( $M_{\text{dropped}} = 2.62$ ,  $SD = 1.85$ ),  $t(64.6) = -2.06$ ,  $p = .03$ , and tended to be marginally more supportive of their spouse during the marital interaction ( $M_{\text{returned}} = 5.77$ ,  $SD = 1.89$ ) ( $M_{\text{dropped}} = 4.88$ ,  $SD = 2.09$ ),  $t(71) = 1.88$ ,  $p = .06$ , than those fathers who did not return at Time 2. These fathers also exhibited less intrusive parenting ( $M_{\text{returned}} = 1.35$ ,  $SD = .98$ ) ( $M_{\text{dropped}} = 1.72$ ,  $SD = 1.35$ ),  $t(71) = -2.61$ ,  $p < .01$ , and showed higher levels of sensitivity ( $M_{\text{returned}} = 2.20$ ,  $SD = 1.05$ )

( $M_{\text{dropped}} = 1.57$ ,  $SD = 1.02$ )  $t(71) = 2.55$ ,  $p = .01$ , during the triadic play task than those who did not return at Time 2.

## **Procedure**

At Time 1, parents engaged in a marital disagreement task for 10 minutes with their infant present. To examine spillover effects of interparental conflict, parents and children engaged in a 5 minute free play task immediately following the marital disagreement. Parents were instructed to play with their infants as they normally would at home. All interactions were videotaped and later coded. When families returned to the lab at Time 2 children's receptive vocabulary and emotion understanding were measured.

**Marital interaction (Time 1).** To assess parents' marital conflict, parents were instructed to engage in a 10 minute marital discussion with their infant present. Prior to the interaction, parents separately indicated on a questionnaire the four topics that were the most typical areas of disagreement in their marital relationship. From these lists, they were asked to collaboratively choose one topic that they would both be comfortable discussing in front of their child, but were not allowed to discuss topics regarding child-related issues or their sexual relationship. They were then asked to try to work toward a resolution to the problem. All family members were videotaped during the interaction.

**Coding.** An adapted version of The Marital Daily Records (MDR; Cummings, Goeke-Morey, Papp, & Dukewich, 2002) protocol was used to code observational records of marital interactions on dimensions of emotional and behavioral responses during conflict discussion. Fourteen conflict dimensions were assessed and coded using a 9-point scale ranging from 1

(*absence of the behavior*) to 9 (*most intense expressions*). Observations were coded based on frequency and intensity of relevant behavior, affect, and content for the entire interaction.

Conflict dimensions included: *communication skills* (appropriate emotional expression and nonverbal behavior), *problem solving* (the ability to define a problem and work toward a mutually satisfactory solution), *humor* (an individual's positive attempts to lighten the mood or tension by using jokes or finding humor in the situation without insult to the other partner), *positive affect* (positive emotional tone of voice, facial expressions, or body posture), *support/validation* (appropriate and positive listening and speaking skills that encourage an understanding of the partner), *resolution* (the degree to which the topic was resolved for the couple), *conflict* (the level of tension, hostility, dissent, antagonism, or negative affect an individual displays), *defensiveness* (trying to avoid blame or responsibility), *contempt* (e.g., lack of respect, insult, sarcasm, or derisive comments), *demand* (e.g., nagging, hounding, or not letting go of a topic), *anger* (verbal or nonverbal expressions of frustration, directed at the partner or subject matter), *sadness* (presence of sad or depressed feelings), *anxiety* (e.g., unsteady voice, verbal concern over subject matter, nervous behaviors), and *withdrawal* (avoidance of the interaction).

Each discussion was coded once by one of five undergraduate research assistants who received extensive training by the principal investigator. A subset of 25 interactions was used to assess the coders' agreement with the principal investigator's codes using Intraclass Correlation Coefficient (ICC) (3, k), which is equivalent to Cronbach's alpha (Shrout & Fleiss, 1979). Alphas for conflict expressions ranged from .60 - .98, with a mean alpha of .91.

**Triadic family play task (Time 1).** To examine spillover of marital conflict into parenting, families engaged in a 5 minute triadic free-play task. Families were provided with a standard set of infant toys and parents were instructed to play with their infant in the lab as they normally would at home. The task was designed to elicit patterns of normal, triadic interactions in families.

**Coding.** Parenting behaviors in the triadic interaction were coded using scales from the Qualitative Ratings for Parent-Child Interaction at 3-15 Months of Age (Cox & Crnic, 1993). Coding was based on frequency and intensity on a 0 - 4 scale from 0 (*not at all characteristic*) to 4 (*highly characteristic*). Parent-child interaction codes included *sensitivity* (appropriateness of parental response to child's physical and emotional needs), *positive regard for child/positive affect* (e.g., praise, warm tone of voice, physical affection), *animation* (degree of energy or excitement expressed toward child), *stimulation of development* (parental involvement in stimulation of learning experiences with child), and *dyadic mutuality* (degree of reciprocated communication and involvement), *intrusiveness* (e.g., imposition of parent behaviors without waiting for response from child, insensitivity to child's pace and exploration, overstimulation, adult-centered play), *detachment/disengagement* (e.g., uninvolved, unaware, disengaged from child, unresponsive to child's needs), *negative regard for child/negative affect* (verbal and nonverbal displays of negative emotion toward child such as disapproval or harsh physical behaviors).

Parenting behaviors were coded once by different groups of raters blind to other study and coding information. Coders received extensive training from one of two advanced graduate students. Codes of these graduate students and the principal investigator served as the standard to

which the scoring of the other coders was compared for inter-rater reliability. A subset of 25 interactions was used to assess the coders' agreement with the graduate students' and principal investigator's codes using Cronbach's alpha (Shrout & Fleiss, 1979). Coders were required to reach inter-rater reliability of .8 prior to coding independently. A subset of 20 interactions was also double-coded to assess inter-rater reliability among coders. Alphas for inter-rater reliability for these codes ranged from .55 to .85 ( $M = .68$ ) for mothers' parenting behaviors and .55 to .78 ( $M = .69$ ) for fathers' parenting behaviors.

**Child emotion understanding (Time 2).** Children participated in Denham's (1986) affective knowledge task which contains two parts. Part 1 measures expressive and receptive abilities. Children were presented with four cloth faces, each expressing four target emotions of happiness, sadness, anger, and fear, and asked to name the emotion on each face (expressive task), then to point to the face containing the target emotion (receptive task). Part 2 involves affective perspective taking. Children observed a puppet enact 20 vignettes demonstrating situations in which the character experienced one of the four target emotions. Eight situations were stereotypical (i.e., typical of what a child would feel in such a situation) and 12 were non-stereotypical (opposite of what the parents had previously indicated the child would feel in the situation). Children received 2 points for identifying the correct target emotion, one point for identifying the incorrect target emotion but identifying the correct valence of emotion, and zero points if they chose an emotion of the incorrect valence. Children could receive up to 56 points for the entire task.

This measure assesses children's emotion understanding across several domains; therefore, I created three composite variables to look at the unique associations between parents'

behaviors and children's understanding of emotions in these different areas. I created scores of children's understanding of total emotions (scores across the entire measure), children's understanding of just negative emotions<sup>2</sup> (anger, sadness, and fear), and children's understanding of emotions opposite of how parents had indicated their child would typically feel (non-stereotypical situations).

**Child vocabulary (Time 2).** Young children's emotion understanding is highly correlated with their language ability (Bosacki & Moore, 2004; Izard, 2001; Sullivan et al., 2010); therefore I wanted to take this into consideration. Preschoolers' vocabulary ability was measured using the receptive language scale of the Peabody Picture Vocabulary Test, Fourth Edition (PPVT-IV) (Dunn & Dunn, 2007). Children were asked to point to the one picture correctly representing the target word among three distracter pictures. This evaluates children's knowledge of standard English words.

### **Data Analysis Plan: Primary Analyses**

**Aim 1.** The direct associations of interparental conflict in relation to emotion understanding were examined using hierarchical regression. Models were tested separately for both mothers and fathers, and for each type of emotion understanding outcome. I entered children's vocabulary in Step 1 as a statistical control, then parents' conflict tactics (constructive,

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<sup>2</sup> Because not all children received the same number of negative emotions in the task (based on how parents indicated the child would typically feel for the non-stereotypical situations), I created a ratio variable dividing the total points children received for the negative emotions out of the total points possible.



destructive, and depressive) in Step 2 in predicting children’s emotion understanding (total, negative, and non-stereotypical).

**Aim 2.** To investigate the spillover of marital conflict into parenting, I tested models examining parenting behaviors as mediators between specific marital conflict dimensions and children’s emotion understanding. Relations between each conflict dimension (constructive, destructive, and depressive) and parenting behaviors were examined using path analysis in relation to children’s emotion understanding (total, negative, and non-stereotypical). Models were tested separately for mothers and fathers and for each emotion understanding outcome (see Figure 1).

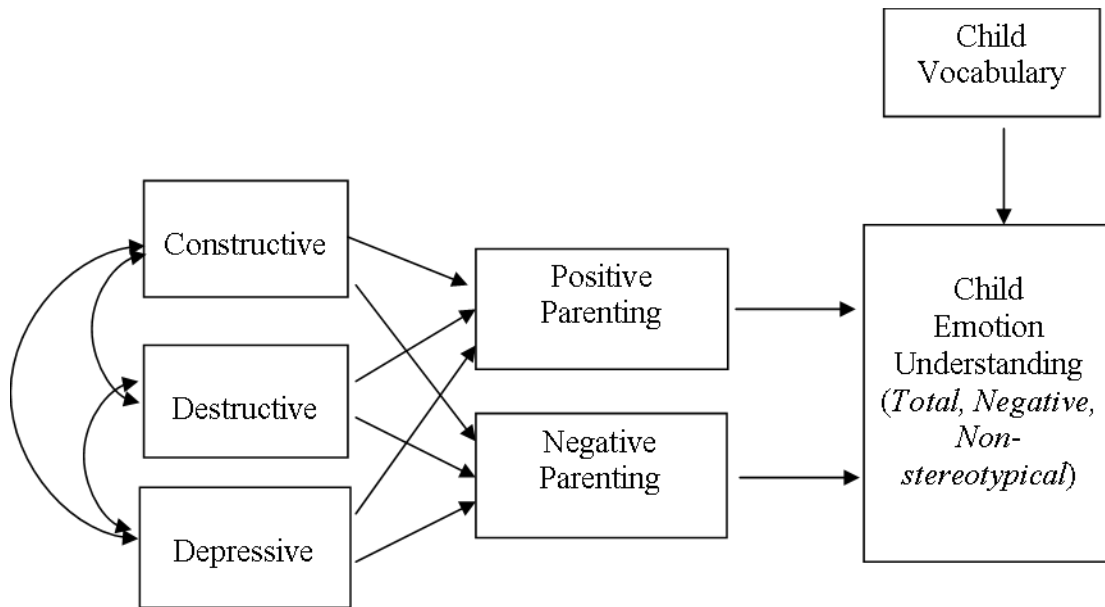


Figure 1. *Aim 2: Proposed model of spillover effects: Parenting behaviors as a mediator between conflict behaviors and children’s emotion understanding.*

**Aim 3.** I examined how one parent’s conflict behaviors indirectly related to children’s emotion understanding through associations with the others parent’s parenting behaviors. I tested models examining associations between fathers’ conflict behaviors and mothers’ parenting in relation to each type of emotion understanding outcome for children (total, negative, and non-stereotypical). I then tested identical models for mothers, examining relations between mothers’ conflict behaviors and fathers’ parenting behaviors, and related associations with children’s emotion understanding (see Figure 2).

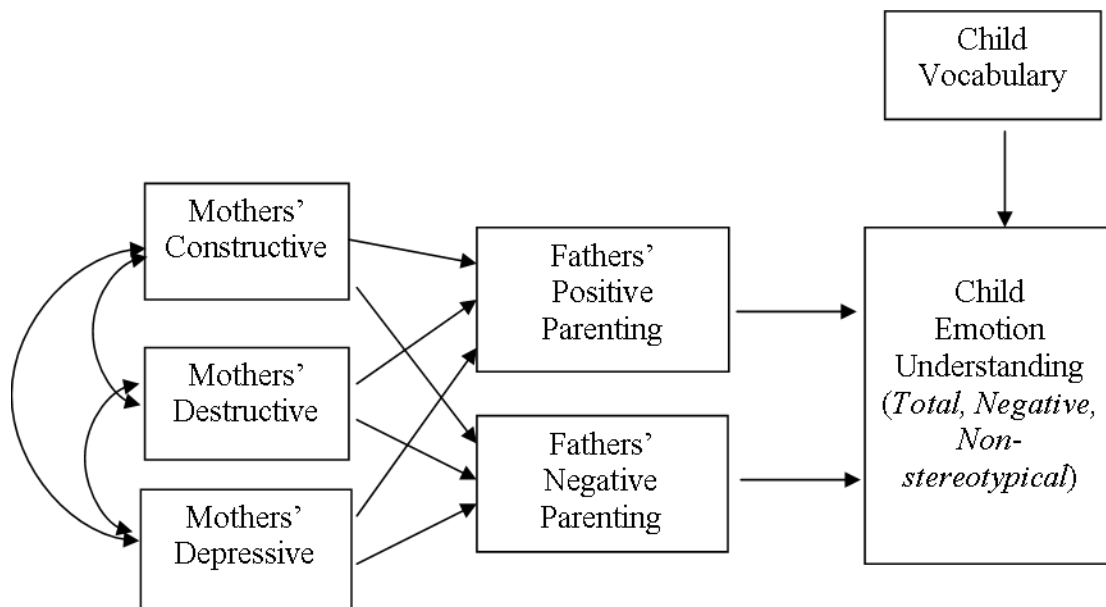


Figure 2. *Aim 3: Proposed model for testing indirect associations of one parent's conflict and the other parent's parenting behaviors in predicting children's emotion understanding.*

## Results

### Data Reduction

**Fathers' conflict codes.** To reduce the individual conflict codes into composite scores, I submitted the codes to a factor principle axis factoring using a promax rotation method<sup>3</sup> which allowed factors to correlate with each other. I then verified the reliability of these composites using Cronbach's alpha both in the full sample at Time 1 ( $N = 73$ ) and in the sub-sample of those families who returned at follow-up ( $N = 30$ ).

Fathers' conflict data were sufficient for factor analysis as suggested by an overall Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy of .84. Four factors emerged with Eigenvalues greater than 1, and examination of the scree plot supported a four factor solution. These four factors explained 78.9% of the variance in conflict scores for fathers. Because "humor" cross-loaded equally on two factors and had a low individual KMO (.48), I dropped this code to further differentiate the factors.

Without the inclusion of humor, the overall KMO increased to .85. Three factors emerged with Eigenvalues greater than 1, and this was supported in the scree plot. These 3 factors explained 75.6% of the variance in conflict scores. Factor 1, Destructive Conflict, contained the codes contempt, anger, conflict, defensiveness, and demand. Factor 2, Constructive Conflict, contained the codes communication skills, problem solving, support, positive affect, resolution, and withdrawal, which loaded highly negatively with the other

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<sup>3</sup> I used multiple methods of extraction including principle components analysis and maximum likelihood in addition to the principle axis factoring reported here. All extraction methods resulted in similar factor structures and loadings as those reported from the principle axis factoring. I conducted factor analyses separate for mothers and fathers, using the full sample from Time 1 ( $N = 73$ ).

codes and was therefore subtracted from the composite. Factor 3, Depressive Conflict, contained the codes anxiety and sadness. Factor loadings for fathers' conflict codes are shown in Table 1.

Table 1

*Factor Pattern (and Structure) Coefficients of Father's Conflict Codes*

Code	Factor		
	Destructive	Constructive	Depressive
Contempt	<b>.93 (.91)</b>	.03 (-.47)	-.07 (-.06)
Anger	<b>.91 (.90)</b>	.01 (-.51)	-.20 (.22)
Conflict	<b>.89 (.91)</b>	-.04 (-.52)	-.06 (-.04)
Defensiveness	<b>.78 (.84)</b>	-.10 (-.53)	.02 (.05)
Demand	<b>.75 (.70)</b>	.08 (-.34)	.02 (.02)
Communication	-.14 (-.61)	<b>.86 (.92)</b>	.11 (-.01)
Withdrawal	-.38 (.09)	<b>-.85 (-.66)</b>	.14 (.24)
Problem Solving	-.18 (-.60)	<b>.77 (.85)</b>	.15 (.05)
Support	-.80 (-.49)	<b>.74 (.79)</b>	<.01 (-.10)
Positive Affect	-.08 (-.47)	<b>.71 (.77)</b>	-.10 (-.19)
Resolution	-.19 (-.52)	<b>.60 (.71)</b>	-.02 (-.10)
Anxiety	.14 (.07)	.15 (-.03)	<b>.78 (.76)</b>
Sadness	-.07 (.09)	-.26 (-.31)	<b>.67 (.70)</b>
Eigenvalues	6.34	2.00	1.49

*Note:* Uses principle axis factoring with promax rotation.

**Mothers' conflict codes.** I submitted mothers' conflict codes to principle axis factoring using a promax rotation method as described above. The data were sufficient for analysis as suggested by an overall KMO of .86. For mothers, three factors emerged with

Eigenvalues greater than 1. As with the analysis of fathers' conflict, humor for mothers did not load clearly on any of the factors, and had a low individual KMO of .36. As such, humor was dropped from the analysis to further differentiate the factors.

With the elimination of humor, the overall KMO increased to .87. For mothers, only two factors emerged with Eigenvalues greater than 1. As with fathers, anger, conflict, defensiveness, and contempt loaded highly on Factor 1, Destructive Conflict. For mothers, communication, problem solving, support and resolution loaded highly on Factor 2, Constructive Conflict. Mother's withdrawal and sadness both loaded highly negatively on a third factor (Depressive Conflict), although this third factor did not contain a full item's worth of variance (Eigenvalue = .93). In contrast to fathers' factor loadings, mothers' demand, positive affect, and anxiety did not load clearly on any factor. Factor loadings for mothers are shown in Table 2.

Table 2

*Factor Pattern (and Structure) Coefficients of Mothers' Conflict Codes*

Code	Factor		
	Destructive	Constructive	Depressive
Contempt	<b>.69 (.80)</b>	-.17 (-.62)	<.01 (-.25)
Anger	<b>.97 (.90)</b>	.10 (-.54)	<.01 (-.16)
Conflict	<b>.90 (.89)</b>	.04 (-.59)	-.05 (-.23)
Defensiveness	<b>.87 (.84)</b>	.06 (-.55)	-.07 (-.23)
Demand	.50 (.57)	-.27 (-.35)	.45 (.19)
Communication	-.02 (-.63)	<b>.88 (.94)</b>	.08 (.58)
Withdrawal	-.06 (.18)	-.13 (-.48)	<b>-.70 (-.76)</b>
Problem Solving	.01 (-.61)	<b>.96 (.91)</b>	-.07 (.47)
Support	-.17 (-.61)	<b>.62 (.83)</b>	.17 (.55)
Positive Affect	-.25 (-.56)	.33 (.72)	.42 (.66)
Resolution	.10 (-.45)	<b>.83 (.77)</b>	<.01 (.45)
Anxiety	.14 (.32)	-.28 (-.36)	.04 (-.15)
Sadness	-.05 (.09)	.03 (-.35)	<b>-.74 (.70)</b>
Eigenvalues	6.41	2.06	.93

*Note:* Uses principle axis factoring with promax rotation.

Although item loadings were similar between mothers and fathers, mothers' data were less-clear, whereas fathers' patterns generally held to theoretical expectations. Given these findings, and in the interest of consistency between parents' behaviors, I created composite conflict codes based on the results of the factor analysis for fathers. I summed together scores on positive loadings, subtracted out negative loadings, and averaged these

values to put the composite scores back into the original metrics. For both parents, constructive conflict contained the additive sum of communication skills, problem solving, support, positive affect, resolution, and withdrawal was subtracted out because it loaded negatively with the other positive codes. Destructive conflict contained the codes contempt, anger, conflict, defensiveness, and demand. Depressive conflict contained the codes anxiety and sadness. Higher scores on all composites indicate higher levels of the construct.

I verified the reliability of these composites using Cronbach's alpha for the sub-sample of 30 families that returned at follow-up. Alpha levels for both fathers' constructive ( $\alpha = .90$ ) and destructive conflict ( $\alpha = .88$ ) were acceptable, but father's depressive conflict was less-reliable ( $\alpha = .08$ ). Mothers' constructive ( $\alpha = .89$ ) and destructive conflict ( $\alpha = .85$ ) styles demonstrated good reliability. As expected, Mothers' depressive conflict was less-reliable ( $\alpha = .28$ ). However, given the theoretical importance of the depressive style of conflict, and to be consistent between mothers and fathers, I decided to retain the depressive conflict construct for further analyses. Reliabilities for both the full sample at Time 1 and the sub-sample considering just the families who returned at follow-up are shown in Table 3.

Table 3

*Descriptive Statistics*

Construct	<i>M</i>	<i>SD</i>	Range of Scores	<i>α</i>	<i>α</i>
				<i>N</i> = 73	<i>N</i> = 30
<b>Conflict Tactic</b>					
Mothers' Constructive	4.58	1.36	2.33 - 6.50	.91	.90
Mothers' Destructive	2.81	1.17	1.20 - 6.00	.90	.85
Mothers' Depressive	2.10	.90	1.00 - 4.00	.34	.28
Fathers' Constructive	4.76	1.42	1.33 - 6.50	.90	.90
Fathers' Destructive	2.37	1.02	1.00 - 4.60	.92	.88
Fathers' Depressive	1.28	.39	1.00 - 2.00	.68	.08
<b>Parenting</b>					
Mothers	.98	.57	0.00 - 2.00	.87	.78
Fathers	.96	.68	-.25 - 2.25	.82	.82
<b>Emotion Understanding</b>					
Total	46.10	6.79	36.00 - 55.00		
Negative	.80	.14	.50 - .98		
Non-Stereotypical	19.67	3.39	13.00 - 24.00		
Vocabulary	119.46	14.83	86.00 - 148.00		



**Parenting codes.** I had proposed to examine negative and positive parenting behaviors separately in relation to children's emotion understanding. However, given the complexity of the models I wanted to test relative to the sample size, I decided to create one global parenting construct. To create this parenting composite for both mothers and fathers, I subtracted the negative parenting codes (intrusiveness, negative regard, and detachment) from the positive parenting codes, and averaged these scores to keep them in the same metric. As such, higher scores on the parenting variable indicate more positive parenting. These variables demonstrated acceptable reliability (Cronbach's  $\alpha$  for fathers' parenting = .82;  $\alpha$  for mothers' parenting = .78).

### **Preliminary Analyses**

**Data distribution.** I examined the distributions of all variables and also looked for any influential outliers. Overall, these variables generally followed a normal distribution. Some of parents' negative conflict composites (destructive and depressive) reflected a positively skewed distribution, but were within acceptable parameters as outlined by Hildebrande (1986). An examination of fathers' depressive conflict showed that one father scored over 3 standard deviations above the mean on this construct. I windsorized these data, a statistical procedure in which the extreme scores on either end of this variable are replaced with the next-less extreme score. All results are reported using these windsorized data for fathers' depressive conflict. Given the small sample size, I decided to interpret associations between variables at the  $p < .10$  level for statistical significance.

**Intercorrelations among variables.** Descriptive statistics for parent's conflict tactics, parenting behaviors, and children's emotion understanding are shown in Table 3. Table 4 presents intercorrelations among all variables.

Table 4

*Intercorrelations among all Variables*

Variable	1	2	3	4	5	6	7	8	9	10	11	12
1. Fathers' Constructive	--											
2. Fathers' Destructive	-.22	--										
3. Fathers' Depressive	<.01	-.25	--									
4. Fathers' Parenting	.33 <sup>+</sup>	-.17	<.01	--								
5. Mothers' Constructive	.75**	-.17	.14	.22	--							
6. Mothers' Destructive	-.37*	.49**	-.13	.08	-.56**	--						
7. Mothers' Depressive	-.02	-.19	.02	.12	-.29	-.04	--					
8. Mothers' Parenting	.40*	.07	-.05	.42*	.35*	-.08	.10	--				
9. Total EU	-.28	<.01	.26	-.31	-.02	-.13	-.15	-.08	--			
10. Negative EU	-.29	-.08	.32 <sup>+</sup>	-.32 <sup>+</sup>	.04	-.22	-.19	.07	.96**	--		
11. Non-Stereo EU	-.38*	.03	.25	-.20	-.06	-.06	-.10	.08	.84**	.84**	--	
12. Vocabulary (PPVT)	.10	-.17	-.05	-.28	.16	-.45*	-.15	.03	.31 <sup>+</sup>	.06	.32 <sup>+</sup>	--

*Note.* <sup>+</sup> =  $p < .10$ , \* =  $p < .05$ , \*\* =  $p < .01$ . Non-Stereo = Non-Stereotypical Emotion Understanding. EU = Emotion Understanding.

As seen in this table, no statistically significant correlations emerged for any of mothers' conflict or parenting variables in relation to children's emotion understanding. However, several statistically significant associations did emerge between fathers' conflict and children's emotion understanding. Fathers' constructive conflict was negatively correlated with children's understanding of non-stereotypical emotions ( $r = -.38, p = .03$ ), indicating that fathers who demonstrated higher levels of constructive conflict tactics tended to have children who scored lower on this portion of the emotion understanding measure. On the other hand, fathers' use of depressive conflict was positively related to children's understanding of negative emotions ( $r = .32, p = .08$ ), such that fathers who displayed more sadness and anxiety during conflict tended to have children who scored higher on their understanding of negative emotions.

Mothers' constructive conflict was significantly associated with mothers' own parenting behaviors ( $r = .35, p = .06$ ), suggesting that mothers who used positive conflict tactics tended to have more positive parenting behaviors. Neither mothers' destructive nor depressive conflict styles were related to mothers' parenting behaviors, nor was mothers' parenting significantly associated with children's emotion understanding.

Fathers' constructive conflict was positively associated with fathers' own parenting behaviors ( $r = .33, p = .08$ ), suggesting that more positive conflict tactics by fathers were related to more positive parenting behaviors. Fathers' destructive and depressive conflict styles were not significantly correlated with fathers' parenting behaviors. Fathers' parenting was significantly associated with lower negative emotion understanding for children ( $r = -.32, p = .08$ ), and approached statistical significance with children's total emotion understanding ( $r = -.31, p = .10$ ).

Mothers' conflict tactics were not statistically significantly correlated with fathers' parenting, suggesting an absence of indirect associations of mothers' conflict in relation to fathers' parenting. Higher use of constructive conflict by fathers was related to more positive parenting by mothers ( $r = .40, p = .02$ ), but neither fathers' destructive or depressive conflict behaviors were significantly associated with mothers' parenting.

### **Aim 1: Regression Analyses Predicting Children's Emotion Understanding with Parents' Conflict Tactics**

Results of the hierarchical regression models predicting children's emotion understanding with parents' conflict tactics are shown in Tables 5 and 6. I entered Vocabulary (PPVT) as a statistical control in Step 1, and entered parents' three specific conflict tactics in Step 2. Consistent with the correlations, none of mothers' conflict tactics emerged as statistically significant predictors of any of the children emotion understanding outcomes, nor did final models explain a significant amount of the variance in children's emotion understanding scores.

However for fathers, several statistically significant predictors did emerge. Fathers' use of constructive conflict was a significant predictor of children's negative ( $\beta = -.33, p = .08$ ) and non-stereotypical emotion understanding ( $\beta = -.38, p = .04$ ). Thus, higher use of constructive conflict by fathers predicted lower levels of negative and non-stereotypical emotion understanding for children. Fathers' use of depressive conflict was a statistically significant predictor of children's negative emotion understanding in the context of fathers' other conflict tactics ( $\beta = .34, p = .06$ ), such that fathers who used more depressive conflict behaviors tended to have children who scored higher on the measure of negative emotion understanding. The direction and strength of these associations were consistent with the

correlations, suggesting the absence of any suppressor effects. Further, fathers' conflict tactics explained a significant amount of the variance in children's negative emotion understanding scores ( $R^2 = .22, p = .09$ ) above and beyond that which was explained by children's vocabulary. Interactions between all variables were also tested in analyses, but because no significant interactions emerged, they are not reported here.

Table 5.

*Regression Models Predicting Children's Emotion Understanding with Father's Conflict Tactics*

Predictor	<u>Total EU</u>			<u>Negative EU</u>			<u>Non-Stereotypical EU</u>		
	$\beta$	SE	$\Delta R^2$	$\beta$	SE	$\Delta R^2$	$\beta$	SE	$\Delta R^2$
Step 1									
PPVT	.28	.08	.08	.32 <sup>+</sup>	.01	.10 <sup>+</sup>	.06	.04	<.01
Step 2									
PPVT	.34 <sup>+</sup>	.08		.37*	<.01		.12	.04	
Constructive	-.30	.85		-.33 <sup>+</sup>	.02		-.38*	.43	
Destructive	.05	1.23		<.01	.02		.04	.63	
Depressive	.28	3.14	.17	.34 <sup>+</sup>	.06	.22 <sup>+</sup>	.26	1.6	.22
Final $R^2$			.25			.32*			.22

*Note.* EU = Emotion Understanding. \* =  $p < .05$ . <sup>+</sup> =  $p < .10$ .

Table 6.

*Regression Models Predicting Children's Emotion Understanding with Mothers' Conflict**Tactics*

Predictor	<u>Total EU</u>			<u>Negative EU</u>			<u>Non-Stereotypical EU</u>		
	$\beta$	SE	$\Delta R^2$	$\beta$	SE	$\Delta R^2$	$\beta$	SE	$\Delta R^2$
Step 1									
PPVT	.28	.08	.08	.32 <sup>+</sup>	.002	.10 <sup>+</sup>	.06	.04	<.01
Step 2									
PPVT	.24	.10		.20	.01		-.03	.05	
Constructive	-.10	1.26		-.20	.03		-.23	.65	
Destructive	-.10	1.58		-.25	.03		-.21	.81	
Depressive	-.11	1.60	.01	-.23	.05	.06	-.17	.82	.04
Final R <sup>2</sup>			.09			.16			.04

Note. EU = Emotion Understanding. <sup>+</sup> =  $p < .10$

**Aim 2: Parenting behaviors as a mediator between parent's conflict tactics and child emotion understanding**

As seen in Table 4, neither mothers' conflict tactics nor parenting behaviors were correlated with any of the child emotion understanding outcomes. As such, I did not test to see if mothers' parenting mediated the relationship between mothers' own conflict and children's emotion understanding (but see Figure 3 for all possible pathways). However, results from the preliminary analyses supported further examination for two of nine possible pathways for the indirect effects of fathers' parenting behaviors as a mediator of fathers' own conflict tactics and children's emotion understanding (see Figure 4).

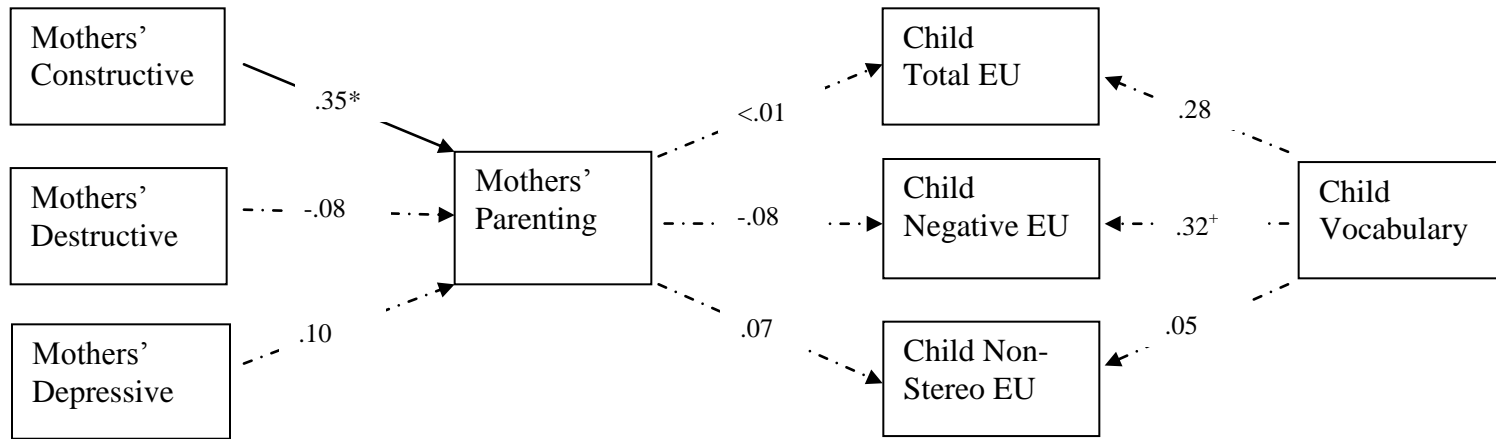


Figure 3. All possible pathways of mothers' parenting behaviors as a mediator between mothers' conflict tactics and children's emotion understanding. Models were tested separately for each emotion understanding outcome, but are presented together for sake of space. For ease of presentation, error terms are omitted.  $^+ = p < .10$ ,  $* = p < .05$ .

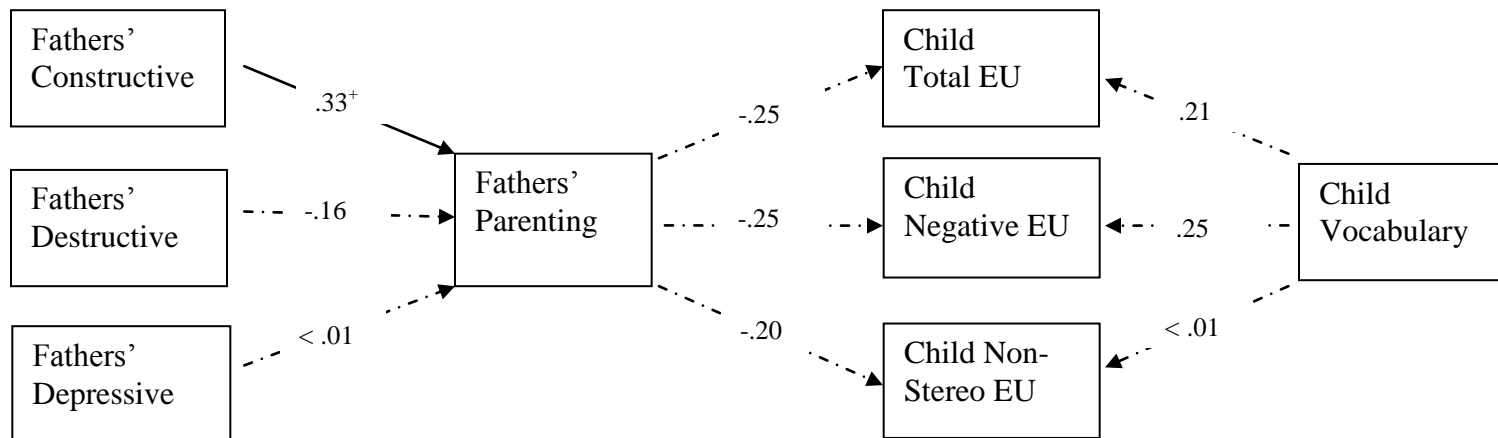


Figure 4. All possible pathways of fathers' parenting behaviors as a mediator between fathers' conflict tactics and children's emotion understanding. Models were tested separately for each emotion understanding outcome, but are presented together for sake of space.

For ease of presentation, error terms are omitted. <sup>+</sup> =  $p < .10$ .



I tested to see if fathers' parenting served as a mediator between fathers' constructive conflict and children's total and negative emotion understanding. Although fathers' constructive conflict was not statistically significantly correlated with children's total or negative emotion understanding, new conceptualizations of mediation supported testing these indirect pathways. That is, mediation can still exist when the relationship between the predictor and outcome are not directly related, but rather, are related through their relationship with the intervening variable (MacKinnon et al, 2002). This is often times the case with children's development, since parental processes influence children slowly, and unfold over a great period of time (Cummings & Davies, 2010).

I tested these models with the AMOS 20.0 statistical package, which uses maximum likelihood (ML) to estimate parameters. In the first model, I tested to see if fathers' parenting mediated the relationship between fathers' constructive conflict and children's understanding of total emotions, after statistically controlling for children's vocabulary ability. Confidence intervals of this indirect effect based on 500 bootstrap samples contained zero (95% CI: -.268 – .01,  $p = .12$ ), indicating that fathers' parenting was not a statistically significant mediator of this relationship. This model explained a small amount of variance in children's understanding of total emotions ( $R^2 = .11$ ), but this was not statistically significant.

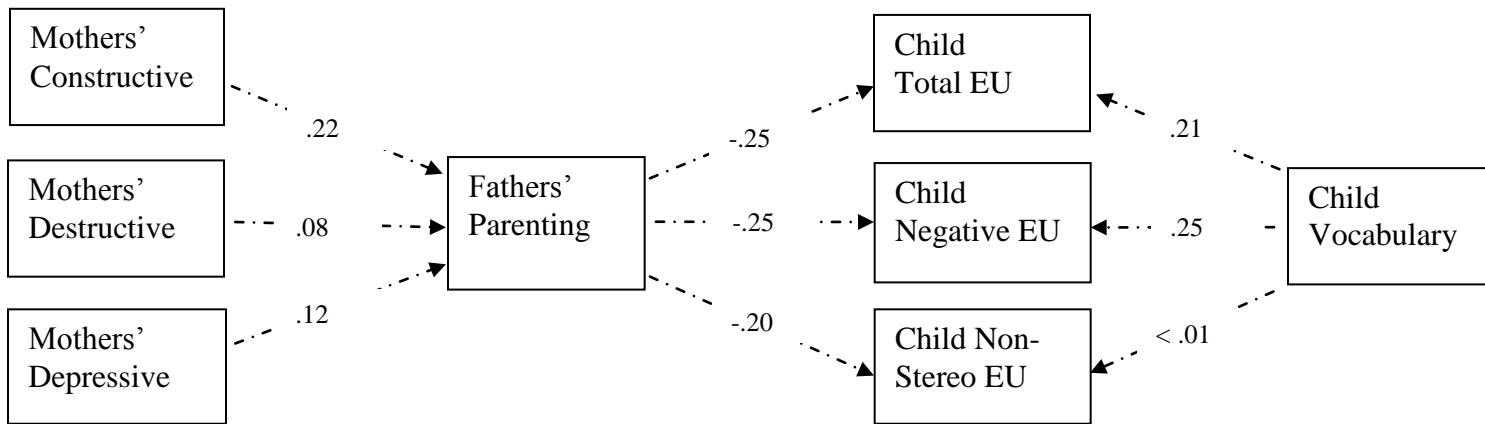
I tested a second model looking at fathers' parenting as a mediator of the relationship between fathers' own constructive conflict and children's understanding of negative emotions while controlling for children's vocabulary. Again, confidence intervals of this indirect effect based on 500 bootstrap samples contained zero (95% CI: -.278 – .05,  $p = .15$ ), suggesting that fathers' parenting did not serve as a mediator of the relationship between fathers' constructive conflict and children's negative emotion understanding. This model

explained a small amount of variance in children's understanding of negative emotions ( $R^2 = .13$ ), but was not statistically significant.

Thus, although fathers' constructive conflict was significantly correlated with fathers' parenting, and fathers' parenting was marginally related to children's total and significantly related to negative emotion understanding, these were not significant indirect effects when considered together in the same model. This suggested that fathers' parenting was not an explanatory mechanism for the relationship between fathers' constructive conflict and children's emotion understanding. Further, although father's parenting behaviors were negatively correlated with children's total and negative emotion understanding outcomes, this association became non-significant when controlling for children's vocabulary, suggesting that fathers' parenting was not a strong predictor of emotion understanding when considering this child variable.

**Aim 3: Indirect associations of one parent's conflict and the other parents' parenting, in relation to children's emotion understanding.**

I had proposed to examine the indirect influences of one parents' conflict on the other parents' parenting behaviors in relation to children's emotion understanding. However, since mothers' conflict tactics were not significantly correlated with fathers' parenting, I did not examine the statistical significance of these pathways. Likewise, only fathers' constructive conflict was related to mothers' parenting behaviors, but mothers' parenting was not associated with any of the emotion understanding outcome variables. As such, I did not test these indirect pathways for statistical significance. All possible pathways for these models are shown in Figures 5 and 6.



*Figure 5.* All possible pathways of the indirect associations of mothers' conflict behaviors and fathers' parenting, and related associations with children's emotion understanding. Models were tested separately for each emotion understanding outcome, but are presented together for sake of space. For ease of presentation, error terms are omitted.

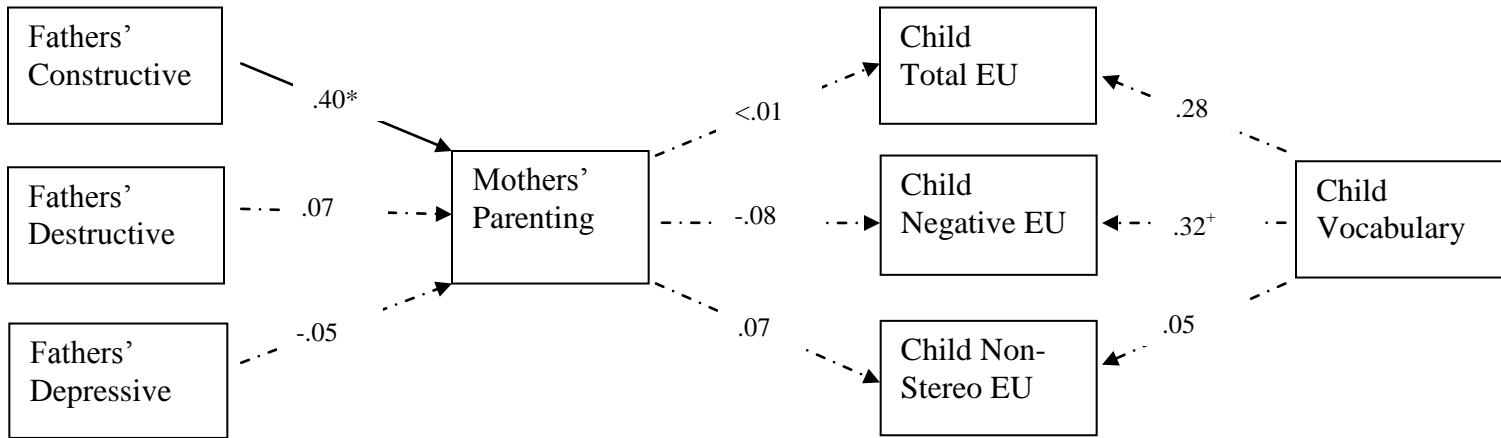


Figure 6. All possible pathways of the indirect associations of fathers' conflict behaviors and mothers' parenting, and related associations with children's emotion understanding. Models were tested separately for each emotion understanding outcome, but are presented together for sake of space. For ease of presentation, error terms are omitted. <sup>+</sup> =  $p < .10$ , \* =  $p < .05$ .

## **Post Hoc and Supplemental Analyses**

**Controls and covariates.** Previous literature has documented several correlates with child emotion understanding, including children's vocabulary (Bosacki & Moore, 2004; Izard, 2001; Sullivan et al., 2010), age (Ontai & Thompson, 2002; Laible & Thompson, 1998), and gender (Denham & Auerbach, 1995; Dunn et al., 1991; Laible, 2004; Laible, 2006). It is typical to take these into consideration when looking at measures of children's emotion understanding. I tested to see whether children in this sample demonstrated gender or age differences in emotion understanding. There were no gender differences, either as a main effect or as a moderator of the relationships between other variables. Older children tended to score higher on total ( $r = .35, p = .06$ ) and negative emotion understanding ( $r = .33, p = .07$ ). From these main effects findings, I tested all models with child age as a potential moderator, but none of these interactions emerged as statistically significant. Given the small sample at follow-up and concerns with statistical power, I decided to only take into account children's vocabulary as a statistical control in all models.

**Association between fathers' constructive conflict and children's non-stereotypical emotion understanding.** It is particularly puzzling that father's constructive conflict behaviors in this study were related to lower levels of emotion understanding for children, given that previous literature documents the benefits of constructive conflict for children's emotional development. I conducted several follow-up analyses to further understand this association. Examination of scatterplots showed four children who scored somewhat low compared to the other children on the emotion understanding task, especially the non-stereotypical portion, but whose fathers nonetheless demonstrated fairly high constructive conflict behaviors. These four children were also relatively young (range = 3.0 -

3.5 years). Although age was not directly related to children's understanding of non-stereotypical emotions, I tested models considering child age as a potential moderator and suppressor in the relationship between fathers' constructive conflict and children's emotion understanding. However, results indicated no significant moderation or suppressor effects for child age.

Previous researchers have also documented that fathers' behaviors in relation to child outcomes may depend in part on the context of mothers' behaviors (Denham & Kochanoff, 2002; McElwain et al., 2007). In this study, fathers' constructive conflict was significantly correlated with mothers' constructive and destructive conflict styles, and mothers' parenting. From this, I tested for interactions between fathers' constructive conflict and mothers' conflict and parenting to see if the association between father's constructive conflict and children's emotion understanding differed depending on mothers' behaviors. However, none of these interaction terms were statistically significant. Although theoretically the negative association seen here between fathers' constructive conflict and children's emotion understanding may hold only within certain emotional environments, or at specific child developmental phases, it is also possible that this relationship may be driven by these four young children who scored relatively low on the emotion understanding task whose fathers had high levels of constructive conflict.

**Longitudinal vs. concurrent parental conflict behaviors in relation to children's emotion understanding.** I considered the possibility that parents' concurrent conflict behaviors may show different associations with children's emotion understanding than those behaviors in infancy. Parents discussed an area of disagreement at Time 2, but these interactions were not yet coded at the time of this writing. The only concurrent measure of

interparental conflict available was the Conflict and Problem-Solving Tactics Scale (CPS) (self-report). Mother's use of physical aggression was negatively related to children's emotion understanding, but none of the other interparental conflict subscales was statistically significant.

**Positive and negative parenting behaviors examined separately.** As a follow-up, I examined positive and negative parenting behaviors separately in order to assess whether there were effects specific to these individual aspects of parenting that may not have emerged with the global parenting composites. Some new associations emerged between parents' conflict styles and parenting behaviors when distinguished in this manner. However, these individual parenting constructs were not significantly related to children's emotion understanding. As such, I chose to retain the overall composite parenting variable for each parent.

**Further explorations with mothers' depressive conflict.** I created a depressive conflict variable for mothers based on mothers' factor analysis, which contained sadness and withdrawal. This depressive conflict composite was not statistically significantly related to any of fathers' or mothers' conflict tactics, mothers' or fathers' parenting behaviors, or to any emotion understanding outcome for children. This variable demonstrated acceptable reliability in the full sample at Time 1 ( $N = 73$ ,  $\alpha = .68$ ), although was less-reliable when examined separately for just those mothers who participated at follow-up ( $N = 30$ ,  $\alpha = .34$ ).

## **Discussion**

The results of this study highlight the complexity of children's emotion understanding, and underscore the importance of taking into account the multiple behaviors of interparental conflict and how those patterns relate across mothers and fathers.

Unexpectedly, neither mothers' conflict tactics nor parenting behaviors in infancy were related to children's emotion understanding in the preschool years. However, several of father's behaviors were related to children's emotion understanding. Contrary to expectations, higher use of constructive conflict by fathers was related to lower levels of emotion understanding for children, particularly children's understanding of negative and non-stereotypical emotions. On the other hand, higher levels of depressive conflict by fathers were related to higher levels children's understanding of negative emotions.

### **Aim 1: Direct Associations between Parent's Conflict and Preschoolers' Emotion Understanding**

**Depressive conflict in the family context.** The direction of these associations is somewhat surprising, and poses some interesting possibilities. In interpreting these findings, it is important to consider how these processes operate within the broader context of the family environment (Cummings & Davies, 2010; Cummings et al., 2010; Denham & Kochanoff, 2002; Thompson, 2008; Thompson & Lagattuta, 2006). More specifically, the associations seen here between parents' conflict behaviors and children's emotion understanding may hold for those families in which the emotional tone is generally positive. Recall that in this sample, parents tended to be older, more educated, have higher incomes, and a higher proportion of parents were married compared to those families who only participated at Time 1. Fathers also demonstrated more positive conflict management strategies and less negative parenting behaviors than those who did not return at follow up. Thus, we are looking at associations within a fairly well-functioning and stable family environment, an environment in which the emotional climate is likely supportive.



It may be that in the context of an emotionally supportive, healthy family environment, the vulnerable expressions by fathers during interparental conflict afford children a special experience to learn about emotions. When considering both parents' behaviors together, fathers' expressions of these tender emotions may be particularly arousing and surprising for young children, because they contradict fathers as strong and invulnerable, and require more interpretive effort for the child to make sense of (Du Rocher Schudlich & Cummings, 2003; Goeke-Morey & Cummings, 2007). This idea has received some empirical support already. Denham and Kochanoff (2002) found that fathers' expressions of fear and sadness contributed to higher levels of 4-year old emotion knowledge, but fathers reported that overall they were generally positive in their emotions and reactions toward their children. Fathers' expressions of sadness and anxiety during marital discussions may in part reflect fathers' own comfort and understanding of these negative emotions (Gottman et al., 1997). This may help fathers not only effectively manage negative emotions during conflict, but in turn may allow a greater capacity for fathers to process these emotions with their children. Thus, in the context of an overall emotionally positive environment, appropriately expressed negative emotions may provide a unique opportunity for children to learn about emotions.

It is important to note that fathers' expressions of depressive conflict were generally low, reflecting fathers who are able to express fear and sadness during conflict with both appropriate behaviors and intensity. Those fathers who are able to not only convey these emotions, but do so in a suitable manner may provide the right amount of intensity to arouse young children's curiosity, but not overwhelm them. In essence, this conflict style, if well-modulated, may facilitate children's understanding of emotions.

The beneficial effects seen here may not play out in families with higher expressions of depressive conflict or in those families who are less well-functioning to begin with, because such environments may be too demanding for children (Cummings & Davies, 2010). For example, these patterns may differ for children from hostile family environments, or for those families in which parents are withdrawn and uninvolved in family interactions. Some researchers (Denham & Kochanoff, 2002; Denham et al., 1994; Thompson & Lagattuta, 2006) have speculated that some of these family processes may operate in a curvilinear, rather than linear association with child emotional outcomes, but more research is needed to delineate this trend. Certainly, those parents who avoid discussion of emotionally challenging topics do not present the opportunity for children to learn about emotions, whereas too intense of negative emotion expression may be overwhelming to children (Denham et al., 1994; Denham & Garner, 1994; Gottman et al., 1997; Thompson & Lagattuta). Instead, there may be an optimal learning environment for children that provides exposure to these negative emotions, while simultaneously offering a supportive atmosphere in which to process them.

**The nature of constructive conflict behaviors.** In contrast, within a well-functioning family environment, fathers' constructive conflict may not present the same interpretive challenge for children. Constructive conflict behaviors tend to be less overtly emotional than negative conflict behaviors. That is, the intensity with which parents express positive emotion during conflict is somewhat muted compared to behaviors during negative conflict. For example, behaviors such as problem-solving, offering validation, and clear communication, are often times demonstrated in the midst of a calm discussion between parents. From the child's perspective, such behaviors may not differ from normal, everyday

conversations. Although these behaviors are necessary for conflict resolution, they are inherently less emotionally expressive. Constructive conflict, without sufficient emotional intensity, may not be as arousing for children or inspire the same urgency to make sense of for children. Thus, constructive conflict may in part be related to less-advanced understanding of emotion for children because this conflict style does not present the same need for interpretation that depressive conflict behaviors do.

Not only are constructive conflict behaviors less emotionally intense, but these behaviors are also more language-based. This is important to keep in mind, since in this study conflict was measured at the infant age, when children's language comprehension is relatively basic. At this age, infants may not have sufficient language capacity to glean emotional insight from this type of marital interaction, but instead may be more sensitive to the emotional expression of the interaction. Though we may conceptualize parents' constructive conflict behaviors (e.g., offering validation of others' feelings) as demonstrating an understanding of the other parent's perspective, this may be the case later in development. It is possible that if these behaviors are the primary form of conflict expression that infants witness between parents, these demonstrations may hinder children's emotion understanding, because such interactions may be expressed in a form that children cannot yet draw upon. At the preschool age when children have better language capacity and emotion knowledge, constructive conflict may show different associations with emotion understanding than these same conflict behaviors during infancy.

The relationship found here between fathers' constructive conflict and children's emotion understanding, though unusual, may not be entirely unsubstantiated in the literature. Denham and Kochanoff (2002) discovered a somewhat similar pattern, finding that fathers'

emotion explanations and emotion coaching were both significant predictors of lower levels of emotion understanding for children. They suggested that fathers may view themselves as having a different role regarding emotions than mothers, perhaps serving to affirm or negate their children's emotions rather than to explore these emotions with their children. Again, the authors mentioned that because fathers tended to be highly supportive in their emotional interactions with children overall, perhaps these unusual associations with fathers' behaviors only hold in a generally positive environment. Although Denham and Kochanoff examined different parental behaviors than fathers' constructive conflict, their findings parallel associations found in this study in that a seemingly positive socialization process by fathers was negatively related to children's emotion understanding. In line with Denham and Kochanoff, the relation of fathers to children's emotional socialization appears complex. This role deserves further investigation across different family contexts, particularly when considering a period of such extensive emotional development for children.

**Mothers' role in children's emotion socialization.** It is somewhat surprising that mothers' behaviors in infancy were not related to children's later emotion understanding, given the strong evidence for the role that mothers play in children's emotion socialization (see Thompson, 2008, and Thompson & Lagattuta, 2006 for reviews). However, the bulk of this literature documenting such associations uses cross-sectional methods. That is, the socialization process of interest (e.g., maternal discourse, emotion expression) is measured concurrently with children's emotion understanding. But the gap between infancy and preschool spans an enormous developmental period for young children (Bretherton et al., 1986; Thompson & Lagattuta). The reason researchers have demonstrated such strong associations between concurrent measures of mothers' socialization techniques and

children's emotion understanding may be precisely because children have matured enough to maximize these exchanges. Indeed, Ontai and Thompson (2002) found that mothers' elaborate discourse was not predictive of children's emotion understanding at age three, but was at age five, concluding that five year-olds may be better-able to draw on these conversations with mothers. Consequently, the manner in which mothers contribute to children's emotion understanding may be most effective at the age in which this understanding is maturing, when children have developed sufficient language and theory of mind to utilize mothers' interactions.

In contrast, fathers' socialization efforts may be particularly meaningful at the infant age when young children are first learning to interact with their social world. Whereas mothers may be more important in their emotional discourse with children, fathers may play an influential part in their children's emotion comprehension through their emotional demonstrations over time. There is some evidence that fathers' conflict expressions may be more arousing to young children than mothers' (Cummings et al., 2010; Goeke-Morey & Cummings, 2007). As such, fathers' emotional expressions during conflict may be especially noteworthy at the infant age, when children are more sensitive to emotional expressions than emotion talk (Bretherton et al., 1986; Thompson & Lagattuta, 2006).

### **Aim 2: Parenting Processes as a Mediator**

Although more positive parenting by fathers was associated with increased understanding of total and negative emotions for children, fathers' parenting was not a significant predictor when considering children's vocabulary ability. Parenting behaviors also failed to mediate the links between conflict behaviors and children's emotion understanding. In this study, this may be partially due to lower power from an insufficient sample size, given

that some of the pathways for fathers were close to statistical significance. Further, parents also demonstrated relatively low levels of negative conflict styles during the marital interaction. As a result, the negative behaviors seen here may not have been of sufficient intensity to disturb parents' parenting behaviors.

Other parental processes may mediate the links between interparental conflict and children's emotion understanding that were not measured here. Parents' emotion expressions directed toward the child or parents' reactions to children's emotions may be important to consider in how interparental conflict may spill over into parent-child interactions. Further, although the emotional tone of parent-child interactions is important to examine in relation to children's emotion understanding, such an emotional climate may be specifically meaningful to emotion comprehension because of the quality of other parental socialization processes that this affords young children (Thompson, 2008). For example, the emotional tone of these early parent-child interactions in infancy may benefit children's emotion understanding through later conversations about emotion during the preschool years, once children become active conversation partners (Thompson & Lagattuta, 2006).

### **Aim 3: Indirect Parental Socialization**

Some researchers (Denham & Kochanoff, 2002) have found evidence for fathers' indirect role in shaping children's emotion understanding through fathers' influence of mothers' behaviors, but such indirect associations were not supported in this study. Rather, fathers' conflict behaviors were directly linked to children's emotion understanding. Fathers in this study demonstrated relatively high involvement both during the interparental conflict discussion and with their children during the triadic play task, suggesting that fathers may have more of a direct impact on their children when they are highly involved in the family.

This role may become more indirect when fathers view it as mothers' job to socialize their children (Goeke-Morey & Cummings, 2007). Fathers' involvement may also modify over time as children develop. That is, as children become more active in their social environment, fathers may be more influential through their support of mothers' socialization techniques (Denham & Kochanoff). Despite the lack of support for indirect socialization roles in this study, this possibility deserves further attention from researchers especially when considering the family as a dynamic system.

### **Limitations**

Despite the strengths this study offers over previous designs, these results must be interpreted with caution. The sample size in this study was smaller than ideal for testing these family processes, and may have resulted in insufficient power to detect effects of interest (Howell, 2010). Children's emotional development is a complex and multi-faceted process. Often times these effects are quite meaningful, but small, and therefore difficult to detect without a sufficiently-sized sample. Larger samples may lend the power to test more complex models needed to consider multiple processes at once, to look at these processes longitudinally and concurrently, and examine if patterns hold across boys and girls.

Additionally, several of the composite variables suffered from low reliabilities. Not only were some of the interrater reliabilities low for the conflict and parenting interactions, but parents' depressive conflict composites, in particular, were low as well. I initially created composites based on the full sample at Time 1 ( $N = 73$ ). These variables demonstrated acceptable reliabilities using the full sample at Time 1, but were lower for parents' depressive conflict composites when examined separately for only those parents who

returned at Time 2. Results with parents' depressive conflict variables should be interpreted with this in mind.

Many of parents' negative conflict behaviors demonstrated limited variability. This is not altogether surprising, because parents in this sample tended to manage their conflict quite constructively. However, this resulted in a somewhat restricted range in these negative constructs, which may have hampered successful detection of associations between these types of behaviors and children's emotion understanding.

Further, these interparental conversations topics may have been less-salient for children. Some research indicates that parental discussion of child-related issues are particularly challenging for children (Cummings & Davies, 2010; Davies & Cummings, 1994), and it may be in these discussions surrounding child-rearing issues that children are more curious to decipher the emotional content. Such a paradigm in the lab may elicit more negative conflict tactics for parents, and also be more relevant to children. For ethical reasons, parents were not allowed to discuss these topics, but it is safe to assume such conversations happen among couples outside of the lab (Cummings & Davies, 2010), which may present more motivating situations for children to understand.

In a similar vein, the triadic play interaction may not have elicited the full range of negative parenting tactics of interest with these families. In fact, some parents demonstrated no negative behaviors at all during the course of this interaction. Future researchers should continue to explore these associations with a more heterogeneous sample to increase variability in parenting behaviors and to assess such interactions using a multi-method approach.



Finally, although this was a longitudinal design these data are still correlational. As such, we can determine temporal precedence of parental behaviors but we cannot deduce causality. Other family factors may have contributed to children's emotion understanding that were not accounted for, such as parent-child attachment (Laible & Thompson, 1998; Thompson, 2008) and parent-child conversations about emotion (Laible, 2004; Laible & Thompson, 1998). Given the complexity of children's emotional development, other family processes may be important to consider in delineating these links between interparental conflict and children's emotion understanding.

### **Conclusion**

In summary, the associations found here may only hold for those families in which the overall climate is fairly positive. These relations may also be different depending on the developmental stage of the child and family (Cox et al., 2001; Cummings & Davies, 2010). Despite these limitations, this study is a step toward closing the gap in how processes early in children's lives help shape their later emotion understanding. In particular, these results emphasize the importance that fathers can directly have in their children's development, not just indirect influences through their contributions to mothers' socialization efforts. Although these findings cannot be applied broadly to families of different cultures or status, we may see important implications here for how families who are generally well-functioning can aide in their children's developing social understanding.

We must be mindful of the particular sample characteristics here before applying these results broadly. That is, should parents alter their conflict behaviors based on the results of this study? Should fathers, in particular, demonstrate more depressive styles of conflict, or reduce their constructive behaviors in an effort to enhance children's emotion understanding?

It is important to remember that emotion understanding is one aspect of many that children are developing at this age, and to consider the child as a whole. There is overwhelming evidence in the literature supporting that constructive conflict benefits children across a number of domains (Cox, Paley, & Harter, 2001; Cummings & Davies, 2010; Davies & Cummings, 1994; McCoy et al., 2009). Although there is some variability as to when or how completely children will acquire an understanding of emotions, all normally developing children will achieve this capacity. Rather, what may be important to emphasize for parents is that when such conflicts do arise, parent's ability to express negative emotion in a non-threatening manner for children, in the context of an overall positive and safe environment, may be particularly beneficial for children's understanding of their social world. Future researchers should continue to consider these processes and how they relate to children's growing understanding of their emotional world, examining for which children, under what circumstances, and in what context these behaviors impact children.

## References

- Belsky, J., Spritz, B., & Crnic, K. (1996). Infant attachment security and affective-cognitive information processing at age 3. *Psychological Science, 7*, 111-114.  
doi:10.1111/j.1467-9280.1996.tb00339.x
- Bennett, D. S., Bendersky, M., & Lewis, M. (2005). Antecedents of emotion knowledge: Predictors of individual differences in young children. *Cognition and Emotion, 19*, 375-396. doi:10.1080/02699930441000201
- Bosacki & Moore (2004). Preschoolers' understanding of simple and complex emotions: Links with gender and language. *Sex Roles, 50*, 659-675.
- Bretherton, I., Fritz, J., Zahn-Waxler, C., & Ridgeway, D. (1986). Learning to talk about emotions: A functionalist perspective. *Child Development, 57*, 529-548. doi: 10.2307/1130334
- Brody, G. H., Pellegrini, A. D., & Sigel, I. E. (1986). Marital quality and mother-child and father-child interactions with school-aged children. *Developmental Psychology, 22*, 291-296. doi:10.1037/0012-1649.22.3.291
- Brown, J. R., & Dunn, J. (1996). Continuities in emotion understanding from 3-6 yrs. *Child Development, 67*, 789-802. doi:10.2307/1131861
- Cox, M. J., & Crnic, K. (2003). Qualitative ratings for parent-child interaction at 3-15 months of age. Bethesda, MD: NICHD SECCYD.
- Cox, M.J., Heilbron, N., Pressel, A., Du Rocher Schudlich, T.D. (2005). *Marital observational coding*. Manuscript in preparation.

- Cox, M. J., & Paley, B. (1997). Families as systems. *Annual Review of Psychology*, 48, 243-267. doi:10.1146/annurev.psych.48.1.243
- Cox, M. J., & Paley, B. (2003). Understanding Families as Systems. *Current Directions in Psychological Science*, 12, 193-196. doi:10.1111/1467-8721.01259
- Cowan, P. A., & Cowan, C. P. (1987, April). *Couple's relationships, parenting styles and the child's development at three*. Paper presented at the Society for Research in Child Development, Baltimore, MD.
- Crockenberg, S., & Covey, S. L. (1991). Marital conflict and externalizing behavior in children. In D. Cicchetti, S. L. Toth (Eds.), *Rochester Symposium on Developmental Psychopathology, Vol. 3: Models and Integrations* (pp. 235-260). Rochester, NY US: University of Rochester Press.
- Cummings, E. M., Cummings, J. S., Goeke-Morey, M. C., Du Rocher Schudlich, T. D., & Cummings, C. M. (2004). *Coding manual for behavioral observations on interparental interactions in the lab*. Manuscript in preparation.
- Cummings, E. M., & Davies, P. T. (2002). Effects of marital conflict on children: Recent advances and emerging themes in process-oriented research. *Journal of Child Psychology and Psychiatry*, 43, 31-63. 10.1111/1469-7610.00003
- Cummings, E. M., & Davies, P. T. (2010). *Marital conflict and children: An emotional security perspective*. New York: The Guilford Press.
- Cummings, E., Merrilees, C. E., & George, M. (2010). Fathers, marriages, and families: Revisiting and updating the framework for fathering in family context. In M. E. Lamb (Ed.), *The role of the father in child development (5th ed.)* (pp. 154-176). Hoboken, NJ US: John Wiley & Sons Inc.

- Cummings, E., Simpson, K. S., & Wilson, A. (1993). Children's responses to interadult anger as a function of information about resolution. *Developmental Psychology, 29*, 978-985. doi:10.1037/0012-1649.29.6.978
- Dadds, M. R., & Powell, M. B. (1991). The relationship of interparental conflict and global marital adjustment to aggression, anxiety, and immaturity in aggressive and nonclinic children. *Journal of Abnormal Child Psychology, 19*, 553-567.  
doi:10.1007/BF00925820
- Davies, P.T., & Cummings, E.M. (1994). Marital conflict and child adjustment: An emotional security hypothesis. *Psychological Bulletin, 116*, 387-411. 10.1037/0033-2909.116.3.387
- Denham, S. (1986). Social cognition, prosocial behavior, and emotion in preschoolers: Contextual validation. *Child Development, 57*, 194-201. doi:10.2307/1130651
- Denham, S. A., & Auerbach, S. (1995). Mother-child dialogue about emotions and preschoolers' emotional competence. *Genetic, Social, and General Psychology Monographs, 121*, 313-337.
- Denham, S., Blair, K., Schmidt, M., & DeMulder, E. (2002). Compromised emotional competence: Seeds of violence sown early? *American Journal of Orthopsychiatry, 72*, 70-82.
- Denham, S., & Couchoud, E. A. (1990). Young preschoolers' understanding of emotions. *Child Study Journal, 20*, 171-192.
- Denham, S., & Grout, L. (1993). Socialization of emotion: Pathway to preschoolers' emotional and social competence. *Journal of Nonverbal Behavior, 17*, 205-227.  
doi:10.1007/BF00986120

- Denham, S., & Kochanoff, A. T. (2002). Parental contributions to preschoolers' understanding of emotion. *Marriage & Family Review, 34*, 311-343.  
doi:10.1300/J002v34n03\_06
- Denham, S., Mason, T., Caverly, S., Schmidt, M., Hackney, R., Caswell, C., et al (2001). Preschoolers at play: Co-socialisers of emotional and social competence. *International Journal of Behavioral Development, 25*, 290-301.
- Denham, S. A., Mitchell-Copeland, J., Strandberg, K., Auerbach, S., & Blair, K. (1997). Parental contributions to preschoolers' emotional competence: Direct and indirect effects. *Motivation and Emotion, 21*, 65-86. doi:10.1023/A:1024426431247
- Denham, S. A., Zoller, D., & Couchoud, E. A. (1994). Socialization of preschoolers' emotion understanding. *Developmental Psychology, 30*, 928-936.
- Dunn, J., Brown, J., Slomkowski, C., & Tesla, C. (1991). Young children's understanding of other people's feelings and beliefs: Individual differences and their antecedents. *Child Development, 62*, 1352-1366. doi:10.2307/1130811
- Dunn, D. M., & Dunn, L. M. (2007). *Peabody Picture Vocabulary Test, Fourth Edition, manual*. Minneapolis, MN: NCS Pearson, Inc.
- Du Rocher Schudlich, T. D., & Cummings, E. M. (2003). Parental Dysphoria and Children's Internalizing Symptoms: Marital Conflict Styles as Mediators of Risk. *Child Development, 74*, 1663-1681. doi:10.1046/j.1467-8624.2003.00630.x

- Du Rocher Schudlich, T. D., White, C. R., Fleischhauer, E. A., & Fitzgerald, K. A. (2011). Observed infant reactions during live interparental conflict. *Journal of Marriage And Family, 73*, 221-235. doi:10.1111/j.1741-3737.2010.00800.x
- Emery, R. E., & O'Leary, K. (1982). Children's perceptions of marital discord and behavior problems of boys and girls. *Journal of Abnormal Child Psychology, 10*, 11-24. doi:10.1007/BF00915948
- Erel, O., & Burman, B. (1995). Interrelatedness of marital relations and parent-child relations: A meta-analytic review. *Psychological Bulletin, 118*, 108-132. doi:10.1037/0033-2909.118.1.108
- Garner, P. W., Jones, D., & Miner, J. L. (1994). Social competence among low-income preschoolers: Emotion socialization practices and social cognitive correlates. *Child Development, 65*, 622-637. doi:10.2307/1131405
- Goeke-Morey, M. C., & Cummings, E. (2007). Impact of father involvement: A closer look at indirect effects models involving marriage and child adjustment. *Applied Developmental Science, 11*, 221-225.
- Goeke-Morey, M. C., Cummings, E. M., Harold, G. T., & Shelton, K. H. (2003). Categories and continua of destructive and constructive marital conflict tactics from the perspective of Welsh and US children. *Journal of Family Psychology, 17*, 327-338. 10.1046/j.1467-8624.2003.00646.x
- Gottman, J., Katz, L., & Hooven, C. (1997). *Meta-emotion: How families communicate emotionally*. Hillsdale, NJ England: Lawrence Erlbaum Associates, Inc.

- Grych, J. H., & Fincham, F. D. (1990). Marital conflict and children's adjustment: A cognitive-contextual framework. *Psychological Bulletin, 108*, 267-290.  
doi:10.1037/0033-2909.108.2.267
- Hildebrand, D. K. (1986). *Statistical thinking for behavioral scientists*. Boston: Duxbury.
- Howell, D. C. (2010). *Statistical Methods for Psychology*. Belmont, CA: Cengage Wadsworth.
- Izard, C. E. (2001). Emotional intelligence or adaptive emotions? *Emotion, 1*, 249-257. doi: 10.1037/1528-3542.1.3.249
- Johnston, J. R., González, R., & Campbell, L. E. (1987). Ongoing postdivorce conflict and child disturbance. *Journal of Abnormal Child Psychology, 15*, 493-509.  
doi:10.1007/BF00917236
- Jouriles, E. N., Murphy, C. M., & O'Leary, K. (1989). Interspousal aggression, marital discord, and child problems. *Journal of Consulting and Clinical Psychology, 57*, 453-455. doi:10.1037/0022-006X.57.3.453
- Katz, L., & Gottman, J. M. (1996). Spillover effects of marital conflict: In search of parenting and coparenting mechanisms. In J. P. McHale, P. A. Cowan (Eds.), *Understanding how family-level dynamics affect children's development: Studies of two-parent families* (pp. 57-76). San Francisco, CA: Jossey-Bass.
- Katz, L., & Woodin, E. M. (2002). Hostility, hostile detachment, and conflict engagement in marriages: Effects on child and family functioning. *Child Development, 73*, 636-651.  
doi:10.1111/1467-8624.00428



- Krishnakumar, A., & Buehler, C. (2000). Interparental conflict and parenting behaviors: A meta-analytic review. *Family Relations: An Interdisciplinary Journal of Applied Family Studies*, *49*, 25-44. doi:10.1111/j.1741-3729.2000.00025
- LaBounty, J., Wellman, H. M., Olson, S., Lagattuta, K., & Liu, D. (2008). Mothers' and fathers' use of internal state talk with their young children. *Social Development*, *17*, 757-775. doi:10.1111/j.1467-9507.2007.00450
- Laible, D. (2004). Mother-child discourse in two contexts: Links with child temperament, attachment security, and socioemotional competence. *Developmental Psychology*, *40*, 979-992. doi: 10.1037/0012-1649.40.6.979
- Laible, D. J., & Thompson, R. A. (1998). Attachment and emotional understanding in preschool children. *Developmental Psychology*, *34*, 1038-1045. doi:10.1037/0012-1649.34.5.1038
- MacKinnon, D. P., Lockwood, C. M., Hoffman, J. M., West, S. G., & Sheets, V. (2002). A comparison of methods to test mediation and other intervening variable effects. *Psychological Methods*, *7*, 83-104. doi:10.1037/1082-989X.7.1.83
- McCoy, K., Cummings, E., & Davies, P. T. (2009). Constructive and destructive marital conflict, emotional security and children's prosocial behavior. *Journal of Child Psychology and Psychiatry*, *50*, 270-279. doi:10.1111/j.1469-7610.2008.01945.x
- McElwain, N. L., Halberstadt, A. G., & Volling, B. L. (2007). Mother- and father-reported reactions to children's negative emotions: Relations to young children's emotional understanding and friendship quality. *Child Development*, *78*, 1407-1425. doi:10.1111/j.1467-8624.2007.01074.x

- Melby, J. N., Conger, R., Conger, D., Kerig P. K., Lindahl, K. M. (Eds.). (2001). *The Iowa family interaction rating scales: Instrument summary*. Mahwah, NJ: Lawrence Erlbaum Associates Publishers.
- Nixon, C., & Watson, A. C. (2001). Family experiences and early emotion understanding. *Merrill-Palmer Quarterly: Journal of Developmental Psychology*, *47*, 300-322.  
doi:10.1353/mpq.2001.0011
- Parke, R. D., & Tinsley, B. J. (1987). Family interaction in infancy. In J. Osofsky (Ed.), *Handbook of Infant Development (2nd ed.)* (pp. 579-641). Oxford England: John Wiley & Sons.
- Saarni, C. (1993). Socialization of emotion. In M. Lewis, J. M. Haviland (Eds.), *Handbook of emotions* (pp. 435-446). New York, NY US: Guilford Press.
- Schacht, P. M., Cummings, E., & Davies, P. T. (2009). Fathering in family context and child adjustment: A longitudinal analysis. *Journal of Family Psychology*, *23*, 790-797.  
doi:10.1037/a0016741
- Shrout, P. E., & Fleiss, J. L. (1979). Intraclass correlations: Uses in assessing rater reliability. *Psychological Bulletin*, *86*, 420-428. doi:10.1037/0033-2909.86.2.420
- Sturge-Apple, M. L., Davies, P. T., & Cummings, E. (2006a). Hostility and withdrawal in marital conflict: Effects on parental emotional unavailability and inconsistent discipline. *Journal of Family Psychology*, *20*, 227-238. doi:10.1037/0893-3200.20.2.227

- Sturge-Apple, M. L., Davies, P. T., & Cummings, E. (2006b). Impact of hostility and withdrawal in interparental conflict on parental emotional unavailability and children's adjustment difficulties. *Child Development, 77*, 1623-1641.  
doi:10.1111/j.1467-8624.2006.00963.x
- Sullivan, M., Carmody, D., & Lewis, M. (2010). How neglect and punitiveness influence emotion knowledge. *Child Psychiatry and Human Development, 41*, 285-298.  
doi:10.1007/s10578-009-0168-3.
- Thompson, R. A. (2008). Early attachment and later development: Familiar questions, new answers. In J. Cassidy, & P. R. Shaver (Eds.), *Handbook of attachment: Theory, research, and clinical applications (2nd ed.)* (pp. 348-365). New York, NY: Guilford Press.
- Thompson, R. A., & Lagattuta, K. H. (2006). Feeling and Understanding: Early Emotional Development. In K. McCartney & D. Phillips (Eds.), *Blackwell handbook of early childhood development* (pp. 317-337). Malden: Blackwell Publishing.