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Effects of parental depressive symptoms and marital discord on parental functioning and parent-infant relationships

Clare R. White

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**Effects of Parental Depressive Symptoms and Marital Discord on
Parental Functioning and Parent-Infant Relationships**

By

Clare R. White

Accepted in Partial Completion Of the Requirements for the Degree

Master of Science

Moheb A. Ghali, Dean of the Graduate School

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Master's Thesis

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Clare R. White
November, 7, 2010

**Effects of Parental Depressive Symptoms and Marital Discord on
Parental Functioning and Parent-Infant Relationships**

A Thesis

Presented to

The Faculty of

Western Washington University

In Partial Fulfillment

Of the Requirements for the Degree

Master of Science

by

Clare R. White

November, 2010

Abstract

Mothers' and fathers' depressive symptoms were examined as predictors of parentally reported parenting distress, infant difficulty, and dysfunctional parent-infant interactions within an actor-partner interdependence model approach (Cook & Kenny, 2005).

Observed marital conflict styles were examined as mediators of associations. A community sample of 72 couples participated with their 6-14 month old infants. Path analyses using EQS (Bentler, 2005) revealed that mothers' and fathers' depressive symptoms were significantly associated with increased parenting distress. Mothers' and fathers' parenting distress was subsequently associated with increases in infant difficulty. Fathers' depressive symptoms predicted greater dysfunctional father-infant interactions, and additionally predicted greater dysfunctional mother-infant interactions. Marital conflict styles did not mediate relationships between depressive symptoms and parenting distress, infant difficulty, or dysfunctional parent-infant interactions.

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Effects of Parental Depressive Symptoms and Marital Discord on Parental Functioning and Parent-Infant Relationships

Parental depression has been linked with multiple domains of child maladjustment, including increased rates of internalizing and externalizing disorders, physical health problems, academic, and socio-emotional difficulties (Cummings, Keller, & Davies, 2005; Downey & Coyne, 1990; Elgar, Mills, McGrath, Waschbusch, & Brownridge, 2007; Goodman & Gotlib, 1999; Kouros, Merrilees, & Cummings, 2008). Research examining the mechanisms by which parental depression may lead to children's adjustment difficulties has revealed positive associations between depressive symptomatology and impaired parenting (Dix & Meunier, 2009; Elgar et al.). Less is known about how additional familial stressors interact with parental depression to affect parenting abilities. Given that parental resources may vary as a function of these broader interpersonal contexts, an examination of factors that may impede or promote depressed parents' ability to provide warm, sensitive care to their children is warranted (Belsky, 1984; Downey & Coyne, 1990). Marital discord is one such risk factor (Cummings & Davies, 1994).

Family systems theory highlights the interdependence of family sub-systems, and guides the current study's examination of joint interparental and parenting disturbance in an effort to explore the mechanisms by which maladaptive processes may influence separate but interrelated familial subsystems (Cox & Paley, 1997; Cox, Paley, & Harter, 2001). Although current theory has emphasized the importance of considering multiple family risk factors when examining threats to children's well-adjusted outcomes (Cummings, Davies, & Campbell, 2000), few empirical investigations have examined

parental depressive symptoms and marital relationship difficulties together as predictors of potentially problematic parent-child interactions. As such, little is known concerning the processes by which parental mental functioning may interact with broader familial functioning to affect parenting abilities. The current study aims to address these gaps in the research by examining multiple dimensions of family functioning in order to examine the ways in which parental depressive symptoms affects parenting stress and parent-child relationships.

Depressive symptoms and parenting. Parental adjustment is regarded as one of the determinants in a cascade of processes linked with family functioning and children's well-being (Belsky, 1984; Cummings et al., 2000). Interpersonal theory provides a conceptual framework for the study of depression and impaired parenting, and has underscored depressive symptoms as a salient predictor of heightened interpersonal stress and familial dysfunction (Hammen, 1991). These increases in familial stress have been documented to contribute to the maintenance of depressive levels over time, which may subsequently exert additional cumulative negative impacts on familial relationships, and parenting ability (Hammen, Shih, & Brennan, 2004). Effects of these processes may be particularly harmful for parent-child relationships, and are likely to contribute to children's increased risk for psychological problems and adjustment difficulties (Cummings et al.; Hammen et al., 2004).

Children of depressed parents are at increased risk for a wide variety of adjustment problems, inclusive of internalizing and externalizing behavioral disorders, academic difficulty, and increased difficulties with peers (Cummings & Davies, 1994; Downey & Coyne, 1990). Possible mechanisms by which depression has been theorized

to lead to increased child maladjustment include genetic transmission, observational learning as a result from exposure to depressive symptoms, and impaired parenting (Cummings & Davies, 1994; Downey & Coyne, 1990; Lovejoy, Graczyk, O'Hare, & Neuman, 2000). While family and twin studies have provided support for the role of genetics in the intergenerational transmission of parental psychopathology (O'Connor, McGuire, Reiss, Hetherington, & Plomin, 1998; Pike & Plomin, 1996; Thapar & McGuffin, 1996), environmental and family factors to which children of depressed parents may be additionally exposed are likely to contribute to the development of children's maladjustment (Cummings & Davies, 1994; Goodman & Gotlib, 1999; Lovejoy et al., 2000). Such factors may include disadvantaged socio-economic status, marital discord, substance abuse, and problematic parenting (Dix & Meunier, 2009; Rutter, 1990).

Parenting may be especially likely to be compromised in depressed individuals, as research has continually documented associations between depressive symptomatology and parental difficulties (Dix & Meunier, 2009). In particular, parental depression has been linked with decreased parental sensitivity and responsiveness, manipulative and inconsistent discipline, and increased intrusiveness and controlling behaviors within the parent-child relationship (Cummings & Davies 1994; Dix & Meunier, 2009; Downey & Coyne, 1990), and flat and negative emotional expression with children (Cohn, Campbell, Matias, & Hopkins, 1990). Empirical investigations of depression's impact on quality of parent-child interactions have revealed that depressed mothers tend to report more parental difficulty in their parental role than do non-depressed mothers (See Lovejoy et al., 2000 for a review; Teti & Gelfand, 1991). Additionally, observational

studies have revealed that depressed mothers tend to be less responsive to children's behavior, communicate less effectively, and have fewer positive interactions with their children (Cohn et al.; Hart, Field, del Valle, & Pelaez-Nogueras, 1998).

Conceptualizations of why depression may lead to these increased deficits in parenting have focused on three potential mechanisms (Cummings & Davies, 1994; Downey & Coyne, 1990) by which parental depression may be likely to impact the parent-child relationship. Depressive symptoms may lead to increased negative attributions regarding the child's behavior (Cummings & Davies, 1994), reduce depressed parents' tolerance for aversive situations (Dix & Meunier, 2009; Forehand, McCombs, & Brody, 1987), and may lead to a reduction in personal effort, thus resulting in parental response to situations that require the least parental effort (Cummings & Davies, 1994; Downey & Coyne, 1990; Kochanska, Kuczynski, Radke-Yarrow, & Welsh, 1987). These parental behaviors may therefore promote an increase in children's problem behavior which may further impede depressed parents' beliefs about their abilities to parent in a competent, effective manner (Hammen et al., 2004; Teti & Gelfand, 1991).

Although parental depressive symptoms have been thoroughly examined in relation to parents' own parenting capabilities, effects of spousal depressive symptoms on the parenting ability of mothers and fathers has received little attention in the research literature. Only a few studies have examined both mothers' and fathers' depressive symptoms as predictors of parenting and parent-child relations. In a study conducted by Pesonen, Raikkonen, Heinonen, Jarvenpaa, and Stranberg (2006), mothers' and fathers' depressive symptoms were examined as predictors of their 5-year-old children's

temperamental difficulty. Consistent with a family systems perspective, results indicated that spousal depressive symptoms moderated associations between parents' own depressive symptoms and perceptions of children's temperamental difficulty, such that parents with a distressed husband or wife rated children as having more temperamental difficulties, in comparison to parents whose spouses had lower levels of depressive symptomatology. Studies with younger children, however, are less clear.

Edhborg, Lundh, Seimyr and Widstrom (2003) found that fathers with a spouse scoring high in depressive symptoms indices had significantly more positive interactions with their infants in comparison to fathers whose spouses had lower depressive symptom scores, suggesting that fathers may compensate for their partners' depressive symptoms in the parent-child relationship. Contrary to Edhborg's findings, Goodman (2008) recently examined maternal and paternal depressive symptoms as predictors of parent-infant interactions among mothers exhibiting clinically significant post-partum depressive symptoms. Results indicated that maternal post-partum depression was related to fathers' increased depressive symptoms and higher parenting stress and less optimal father-infant interactions, suggesting that fathers do not compensate for their partners' depressive symptoms in the parent-child relationship. The current study will explicate these findings by examining cross-spousal effects of depressive symptoms on additional domains of the parent-child relationship, such as parenting distress and child difficulty in an effort to clarify these associations. Parental depression is unlikely to affect family processes in isolation, but rather is likely to be concurrently related to other familial risk factors that may interact to produce cumulative effects on parental capabilities and children's

adjustment (Cummings & Davies, 1994; Downey & Coyne, 1990; Goodman & Gotlib, 1999). One such risk may be marital discord.

Depressive symptoms and marital conflict. Early research investigating links between depressive symptoms and problematic marital relations have largely focused on global marital satisfaction levels as indicators of marital well-being. These efforts have produced an extensive body of literature documenting associations between depressive symptoms and impaired marital functioning. A second generation of research aims to identify specific processes underlying these associations, calling greater attention to couples' communication styles and conflict resolution patterns as predictors of marital functioning (Gottman & Notarius, 2002). Although previously discussed in relation to parent-child relationship difficulties, interpersonal theory additionally serves to scaffold understanding of depression's impact on marital relations. In particular, depressive symptomatology may promote a cascade of negative familial processes, which may result in exacerbated levels of marital difficulty and problematic couple communication behaviors. These communication processes have been theorized to not only be strongly related to global levels of marital satisfaction, but are additionally implicated in the onset and maintenance of depressive symptoms (Davila, 2001; Hammen, 1991), all of which may have deleterious effects on familial relationships and family functioning (Cummings et al., 2000).

The relationship between marital satisfaction and spousal depression is well documented, and is thought to be both bidirectional and cyclical, as robust associations have consistently been found between marital satisfaction and depressed mood (Fincham, Beach, Harold, & Osborne, 1997; Weissman, 1987; Whisman, 2001). In a meta-analysis

conducted by Whisman, medium to large effect sizes were found in an investigation of 26 studies examining relations between depression and marital satisfaction ($-.42$ for men, and $-.37$ for women, respectively). Similarly, Weissman found that individuals in maritally discordant relationships were 25 times more likely to be diagnosed with major depression than those in non-discordant relationships. The findings additionally appeared to be bidirectional, as 50% of depressed women reported serious marital difficulties, and 50% of maritally discordant women reported significant depressive symptoms.

Longitudinal investigations have additionally documented associations between depressive symptoms and problematic marital relations. Fincham and colleagues (1997) found that marital satisfaction at time 1 was predictive of depressive symptoms at time 2 for both husbands and wives in a sample of 150 newlyweds. These findings were not restricted to newly married couples, as Beach, Katz, Kim, and Brody (2003) found that level of marital satisfaction predicted change in self-reported symptoms of depression one year later within a sample of well-established intact marriages. Cano and O'Leary (2000) found that individuals who reported stressful marital events were at a six-fold increase in risk for clinical depression, even after controlling for family and previous depression history.

Expanding beyond global marital satisfaction levels, investigations of couples' communication processes have revealed a variety of problematic conflict resolution behaviors which are likely to contribute to observed associations between depressive symptoms and marital relationship quality (Gottman & Notarius, 2002). Consistent with interpersonal theory, depressive symptoms have been continually associated with an increase in problematic marital conflict behaviors such as verbal hostility, withdrawal,

and displays of negative affect (Du Rocher Schudlich, Papp, & Cummings, 2004; see Gottman & Notarius, 2002 for a review; Johnson & Jacob, 1997; McCabe & Gotlib, 1993; Troisi & Moles, 1999).

Longitudinal investigations of couples' conflict interaction patterns have suggested that the ways in which couples handle their conflict may exacerbate or ameliorate individuals' depressive symptoms over time. Specifically, Du Rocher Schudlich, Papp, and Cummings (under review) found that greater negative styles of conflict were associated with increased depressive symptoms, whereas positive conflict was associated with less depressive symptomatology. Du Rocher Schudlich and colleagues additionally controlled for marital satisfaction, suggesting that the ways in which couples handle their conflict may contribute to increases in depressive symptoms above and beyond impacts of general negative sentiment about the marital relationship.

Previous work identifying conflict resolution patterns utilized by couples when handling disagreements have elicited the following three conflict dimensions: destructive, depressive, and constructive conflict (Du Rocher Schudlich et al., 2004). Depressive conflict has been linked with greater instance of depressive symptoms, and is characterized by avoidance, emotional distress, or withdrawal from the conflict (Du Rocher Schudlich & Cummings, 2003). Destructive conflict refers to a variety of negative conflict behaviors likely to undermine effective problems solving capabilities, and includes affective behaviors reflective of anger, irritation, or hostility (Du Rocher Schudlich & Cummings, 2003), while constructive conflict refers to conflict that is well modulated, and working towards a resolution (Du Rocher Schudlich & Cummings, 2003; Goeke-Morey, Cummings, Harold, & Shelton, 2003).

Marital conflict and parenting. Family systems theory provides a framework for which to organize the understanding of marital conflict's impact on broader family processes (Cummings & Davies, 2010). In particular, marital relations and parenting have been identified as two separate but related processes influencing children's development (Cox & Paley, 1997). These systems may often interact, with hostile marital relations theorized to "spill-over" into the parent-child dyad. Framed within family systems, spill-over hypothesis posits that marital conflict may impair parents' abilities to be warm, supportive and emotionally available to their children (Cox, Puckering, Pound, & Mills, 1987; Sturge-Apple, Davies, & Cummings, 2006). Empirical investigations have provided support for this hypothesis and have reported that parents are likely to experience increased problematic interactions with children after marital disagreements (Almeida, Wethington, & Chandler, 1999; Jouriles & Farris, 1992; Mahoney, Boggio, & Jouriles, 1996). Meta-analyses have additionally confirmed these findings, with an average mean effect size of associations between marital conflict and impaired parenting estimated to be .62 (Krishnakumar & Buehler, 2000). Investigations of marital conflict styles, however, have suggested that the ways in which couples handle their marital conflict may have independent deleterious effects on the parent-child relationship and children's resulting adjustment, thus documenting the need to examine dimensional measures of conflict rather than global conflict levels (Cummings & Davies, 2010).

Sturge-Apple, Davies, and Cummings (2006) recently examined differential dimensions of conflict, parental hostility and withdrawal, as predictors of parental emotional availability and children's adjustment difficulties over a 3-year period. Results indicated that parental emotional unavailability mediated relations between interparental

hostility, and children's subsequent adjustment difficulties. Interparental withdrawal however, influenced children's adjustment directly, and was associated with increases in children's internalizing and externalizing symptoms and scholastic adjustment difficulties. Given that dysphoric individuals may be especially likely to engage in hostile and withdrawing types of conflict behavior, it is probable that marital conflict styles may mediate relations between depressive symptoms and problematic parent-child interactions.

Depressive symptoms, marital conflict, and parenting. As mentioned previously, marital conflict has been identified as one factor contributing to observed links between parental depression and children's maladjustment (Cummings & Davies, 2010; Downey & Coyne, 1990). Not surprisingly, work examining marital conflict and depressive symptoms together has found that while both paternal and maternal marital and psychological functioning individually related to children's maladjustment, the combination of poorer marital functioning and higher levels of maternal psychological symptoms exacerbated effects of marital conflict on children's adjustment problems (Papp, Goeke-Morey, & Cummings, 2004). Studies examining the mechanisms responsible for these associations, however, have yielded differential findings with regard to the role of parenting as a mediator of relations between marital conflict, parental depressive symptoms, and children's adjustment.

To date, previous studies examining marital conflict and parenting ability within the context of depression have most often conceptualized measurements of parent-child relationships through global assessments of parenting capabilities, or parenting *style*, such as warmth and autonomy granting. Du Rocher Schudlich and Cummings (2007)

examined associations between parental dysphoria, marital conflict styles, global levels of parenting capabilities, and children's emotional security concerning parental conflict as predictors of children's adjustment. Results indicated that dysphoria was related to conflict, problematic parenting, and children's increased adjustment difficulties.

However, mediation analyses revealed that parenting mediated between dysphoria and child adjustment, but failed to mediate between *marital conflict* and child adjustment.

Studies examining dimensional components of parenting such as autonomy granting and warmth have revealed differential findings. Cummings, Keller, and Davies (2005) examined associations between parental depressive symptoms, marital functioning, parenting, and children's adjustment in a low risk, community sample. Results revealed that increased parental depressive symptomatology was related to increased marital conflict, less parental warmth, more psychological control in parenting, and increased child maladjustment. Interestingly however, while marital conflict mediated pathways between parental depression and children's outcomes, parenting behavior did not. Differences in the studies' results could potentially stem from the differential measures used to assess marital conflict and parenting. With regard to marital functioning, Du Rocher Schudlich and Cummings (2007) observationally assessed couples' dimensional conflict behaviors, while Cummings et al. used self-report measures to assess global levels of marital conflict and spousal attachment. Parenting measurements across the two studies additionally differed; Du Rocher Schudlich and Cummings assessed global levels of positive parenting while Cummings et al. examined parenting dimensionally in terms of emotional availability and psychological control.

While global dimensions of parental behavior have been implicated as important components of well-adjusted parent-child and parent-adolescent relations (Stolz, Barber, & Olsen, 2005), recent theory has additionally highlighted the importance of examining more specific parenting dimensions in order to delineate processes underlying these indirect pathways (Cummings & Davies, 2010). Measures of parental autonomy granting and behavioral control used with older children in previous studies may additionally fail to be developmentally appropriate measures for assessing quality of the parent-child relationship in infancy. Dimensions of parenting stress, however, may be particularly useful in the first three years of life, when stress may have particularly salient impacts on children's emotional-behavioral development, and parent-child relationships (Loyd & Abidin, 1985). In particular, elevated stress is likely to undermine parents' capabilities to respond to young children in a warm sensitive manner, and has been previously associated with low levels of parental warmth, unhealthy parenting styles, and harsh discipline (Haskett, Ahern, Ward, & Allaire, 2006; Rogers, 1993). Parenting stress additionally tends to be high in parents who abuse and neglect their children (Dopke, Lundahl, Dunsterville, & Lovejoy, 2003), and thus may serve as a particularly useful conceptualization by which to assess problematic parent-child relations.

The current study will advance previous research in a number of ways. Much of the previously conducted work has only examined relations between parental depressive symptoms and marital conflict in the context of *maternal* depressive symptoms. Fathers are understudied in developmental research, especially in relation to depressive symptoms and parent-child relationships. The current study will examine both mothers' and fathers' depressive symptoms and marital conflict resolution styles in an effort to

further explicate effects of parental depressive symptoms on parenting stress, and parent-child relationships. The current study will additionally examine cross spousal effects of parental depressive symptoms on parenting stress and parent-child interactions in an effort to delineate the mechanisms by which maternal and paternal depressive symptoms may influence global levels of family functioning. Finally, the current study will examine parental depressive symptoms in the context of observed marital conflict styles in an effort to consider broader interpersonal contexts that may be concurrently related to parenting stress and parent-child relations. Given that couples may not be able to provide unbiased reports of their communication behavior (Christensen, Sullaway, & King, 1983), the current study's utilization of observational techniques may clarify whether marital conflict mediates relations between parental depressive symptoms, parenting stress, and problematic parent-child relations.

Aims and Hypotheses

Aims of the current research study are as follows: 1) to examine associations between parental depressive symptoms, parenting stress, parental reports of child difficulty, and problematic parent-child interactions to delineate which aspects of the parent-child relationship may be most affected by parental depressive symptoms. Based on current theory (Cummings & Davies, 1994; Hammen, 2004), as well as previous empirical investigations documenting positive associations between parental depressive symptoms and parenting stress (See Dix & Meunier, 2009; Lovejoy et al., 2000), it is hypothesized that an increase in actor depressive symptoms will be associated with increased parenting distress, dysfunctional parent-child interactions, as well as increased parental reports of child difficulty for both mothers and fathers. 2) To assess cross-

spousal effects of depressive symptoms on the parenting capabilities of mothers and fathers. Based on previous limited work documenting positive associations between spousal depressive symptoms, dysfunctional parent-child interactions, and perceived child difficulty (Goodman, 2008; Pesonen et al., 2006) it is hypothesized that increased spousal depressive symptoms will be associated with increased parenting distress, dysfunctional parent-child interactions, and parentally reported child difficulty for both mothers and fathers. 3) To explore the ways in which conflict resolution styles differ with increased parental depressive symptoms in an effort to examine whether parents' abilities to handle conflict appropriately and effectively may ameliorate or exacerbate relations between parental depressive symptoms and parenting difficulties. Based upon previous theory concerning parental depressive symptoms impact on family process (Cummings et al., 2000), as well as previously documented relationships between parental depressive symptoms, parenting and negative marital conflict resolution behaviors (Du Rocher Schudlich & Cummings, 2007), it is anticipated that destructive and depressive conflict will mediate relationships between parental depressive symptoms and parenting distress, dysfunctional parent-child interactions, and child-difficulty.

Method

Participants

The following study utilized a multi-method approach and was part of a larger examination concerning marital conflict, family process, and child development. Participants were from a community sample and consisted of 72 nuclear families (mothers' M age = 29.42, SD = 5.44; fathers' M age = 31.5, SD = 5.83) with infants aged 6.20 to 14.48 months old (M age = 9.27 months, SD = 2.04). Participants were recruited

from the Whatcom County, Washington birth records database, and from referrals from other families. In order to meet criteria for eligibility for participation in the study, couples had to speak and read comfortably in English, and had to have been living together since the birth of the infant, regardless of marital status. Demographic information was collected using mothers' reports. Sixty-four of the parent couples (85%) were married (M length of marriage = 4.83 years, SD = 3.15 years) and were living together for an average 5.69 years (SD = 3.26). Mothers reported having an average of 1.65 children (SD = .75). Additionally, 8.3% of mothers completed high school as their highest level of education, 38.9% attended some college or trade school, 37.5% held a bachelors' degree, and 15.3% held a master's degree or higher. For fathers, 1.3% did not complete high school, 15.3% completed high school as their highest level of education, 43.1% attended some college or trade school, 25% held a bachelor's degree, and 15.3% held a master's degree or higher. Mothers and fathers indicated a modal family income of \$40,001 - \$65,000 per year. For mothers, 87.5% self-identified their ethnicity as Caucasian, 1.4% Hispanic, 1.4% Native American, 1.4% Asian or Pacific Islander, 8.4% self-identified as Biracial or other. Finally, 90.3% of fathers self-identified their ethnicity as Caucasian, 1.4% Hispanic, 1.4% Native American, 1.4% Asian or Pacific Islander, and 5.6% self-identified as Biracial or other.

Measures and Procedure

Parents consenting to participate were mailed consent forms and questionnaires assessing parental depressive symptoms, anxiety, parenting stress and dysfunctional parent-infant interactions to complete at home prior to the laboratory visit. Questionnaires were subsequently returned when parents came to the lab to complete their problem

solving interaction tasks, which was scheduled at the convenience of the participants. Upon completion of the lab interaction tasks, parents were debriefed, thanked, and compensated \$50 for their time. Visits took approximately 1.5-2 hours.

Parental depressive symptoms. Scores on the Center for Epidemiological Studies Depression Inventory (Radloff, 1977) were used to assess parental depressive symptoms. The Center for Epidemiological Studies Depression Inventory is a widely used 20-item measure designed to measure depressive symptoms in the general population. Respondents were asked to rate the frequency of various depressive symptoms over the past week on a 4-point likert scale ranging from 0 (*less than 1 day*) to 3 (*5-7 days*) to items such as, “How many days during the past week did you feel bothered by things that don’t usually bother you?” Scores are calculated by adding the number of days for which depressive symptoms were reported. Higher scores are indicative of higher levels of depressive symptoms. Four items were stated in such a manner that required recoding before total scores were calculated. Scores of 16 or higher are considered to be indicative of potentially clinical depression. Reliability analyses indicated that this scale had high internal consistency in the current sample, $\alpha = .88$.

Parenting stress. Quality of the parent-infant relationship was assessed using parental self-report on the 36 item Parenting Stress Index-Short Form (Abidin, 1995). The Parenting Stress Index is a widely used measure developed to identify parenting stress and dysfunctional parent-infant relationships that may place the child at risk for emotional disturbance (Bigras, LaFreniere, & Dumas, 1996; Goodman, 2008; Haskett et al., 2006; Reitman, Currier, & Stickle, 2002). The 36-item PSI- Short Form was developed based on factor analyses of the full length 120-item PSI (Loyd & Abidin,

1985). Responses were scored on a likert type scale with responses ranging from 1 (*strongly disagree*) to 5 (*strongly agree*), with higher scores indicating higher levels of parenting stress. Four items were stated in such a manner that required recoding before total scores were calculated. Three subscales were utilized to assess parenting distress, dysfunctional parent-infant interactions, and parental ratings of infant difficulty. The parenting distress subscale was formed by the summation of 12 items from the Parenting Stress Index and consisted of questions such as, “I feel trapped by my responsibilities as a parent”. Higher scores on this subscale are indicative of greater levels of parenting distress, potentially resulting from personal factors such as depression or conflict with a partner, and from increased stress due to demands of child-rearing (Haskett et al.). Reliability analyses indicated that this scale had high internal consistency in the current sample, $\alpha = .86$. The parent-child dysfunctional interactions subscale consists of 12 items from the Parenting Stress Index, with higher scores indicating greater dysfunction in the parent-child relationship. The parent-child dysfunctional interactions subscale additionally assesses the degree to which parents are dissatisfied with their children, and the degree to which parents find their child to be disappointing. A sample item from this subscale is, “Most times, I feel that my child does not like me and does not want to be close to me.” Reliability analyses additionally indicated that this scale had high internal consistency for the current sample, $\alpha = .83$. The last subscale was comprised of 12 items, designed to assess parental ratings of child difficulty, and children’s self-regulatory abilities. A sample item from this particular scale is, “My child easily gets upset over the smallest thing.” Higher scores on this subscale reflect more perceived child difficulty.

Reliability analyses additionally indicated that this scale had high internal consistency, $\alpha = .88$.

Problem solving resolution task. Couples were presented with a list of common conflict topics, and asked to separately indicate four topics that were most typically problematic in their relationship. Couples were told that they were free to choose topics that were not on the list, as the list was merely presented to aid couples in potential discussion topics. Upon completion of their individual lists, couples were then asked to choose a topic together that they would feel comfortable discussing. Couples were then asked to discuss their chosen topic as if they were discussing it at home, were encouraged to share their feelings and perspectives on the topic in an effort to come to a resolution to the issue that they could both be confident in. Couples discussed two separate issues, each for approximately 8 minutes each. Couples were allowed up to 12 minutes if needed to finish the discussion. Couples were informed that they would be videotaped with a camera system before each of their discussions. Videotaped couple interactions were subsequently coded for specific behaviors and emotions of each parent. Videotaped problem-solving interaction tasks are commonly used in the field to assess partners' marital interaction behaviors and emotions (Caughlin & Vangelisti, 1999; Cox, Owen, Lewis, & Henderson, 1989; Du Rocher et al., 2004; Nelson & Beach, 1990; Schoppe-Sullivan, Mangelsdorf, Frosch, & McHale, 2004) and are superior to self-reported questionnaires since reporters may not be able to provide unbiased reports of their communication behavior (Christensen, Sullaway, & King, 1983). Additionally, observational coding can additionally allow for a more fine-tuned analysis of desired behaviors (Cummings, Goekey-Morey, & Dukewich, 2001).

Coding of the marital interaction. An adapted version of the Marital Daily Records (MDR; Cummings, Goeke-Morey, Papp, & Dukewich, 2002) protocol was used to code couples' behavior during the marital interaction tasks. The MDR Coding system has good convergent validity with widely used self-report measures of marital conflict and marital relations (Du Rocher Schudlich & Cummings, 2003) such as the Short Marital Adjustment Test (SMAT; Locke & Wallace, 1959), the Conflict Tactics Scale (CTS; Strauss, 1979) and the O'Leary Porter Scale (Du Rocher Schudlich et al., 2004; OPS; Porter & O'Leary, 1980). The MDR focuses dimensions found to be important in theory and in past research on marital conflict (Cummings & Davies, 2010; Gottman, 1994). It includes the following dimensions of marital conflict along with others: level of positive and negative emotion expression, specific positive and negative conflict tactics, and degree of resolution upon termination of the problem solving interaction task.

Conflict behaviors were defined as follows: (1) conflict, the level of tension, hostility, dissension or antagonism displayed by the individual; (2) defensiveness, self-protective behaviors that are avoidant of blame or responsibility; (3) contempt, behaviors that convey a general lack of respect for the thoughts and feelings of the listener, inclusive of derision, mockery, sarcasm, or insult of the other person; (4) withdrawal, avoidance of the interaction or of the problem in some way, the individual may evade the issue or may seem to pull him/herself out of the interaction; (5) demand, behaviors that evidence a desire to continue to discuss the topic further, evidenced by verbal cues such as nagging or hounding the partner, disregard for whether the spouse has communicated that they do not want to discuss the issue further; (6) anger, frustration expressed about the topic or directed at the partner, cold stare, sneering looks of disgust, shaking of head

with disapproval, raised or yelling voice; (7) sadness, presence of sad or depressed feelings as evidence by behaviors such as downcast eyes, lack of eye contact, tearfulness or crying, blunted affect, slow movement or lethargy; (8) anxiety, genuinely felt concern, anxiousness, or fearfulness, evidenced by behavior such as shrinking away from the partner, cowering, tearfulness related to worry, labored breathing or shortness of breath; (9) positive affect, emotional tone of the voice, facial expression, and position of the body during the interaction, scored based on the persistent level of positivity that the individual displays; (10) communication skills, level of positive and appropriate skills, evidenced by individuals ability to express emotions about their partner appropriately, regardless of the valence of the emotion, expressing opinions in a clear direct manner, summarizing mutual opinion or decision; (11) support validation, appropriate and positive listening and speaking skills designed to convey supportive and validation to positively reinforce the partner's preceding statements; (12) problem solving, individuals' ability to define and a problem in the relationship and work towards a mutually satisfactory solution for the problem in a constructive manner; (13) resolution, ability of individuals to find a solution to the problem including level of satisfaction with and confidence in the solution.

Scores were inclusive of both affect and content cues in order to gain a comprehensive measure of couples' behavior and emotionality. For each of the behaviors, frequency and degree of behavior intensity were considered and coded on a scale from 1-9, with 1 indicating the complete absence of the expression; 3 indicating low range levels (a few mild instances of the behavior that are not intense or pervasive); 5 indicating mid-range levels (multiple notable, strong, intense examples, with 1 or 2

strong instances of the behavior possible); 7 indicating high range levels (strong clear, consistent examples inclusive of both affect and content cues); 9 indicative of the most intense expressions (multiple notable, strong, intense examples, with the levels of the behavior remaining high throughout the interaction). The primary adaptation to the coding system included coding behaviors on a 1-9 scale, based on the Couples' Interaction Global Coding System (Julien, Markman, Lindahl, Johnson, & Van Widenfelt, 1987) rather than a 0-2 scale.

Each discussion was coded once by one of five undergraduate and graduate research assistants. The coders received extensive training by the project's principal investigator. Codes from the principal investigator served as the "gold standard" to assess coding reliabilities using Intraclass Correlation Coefficient (ICC) (3, k), which is equivalent to Cronbach's α (Shrout & Fleiss, 1979). Alphas for conflict expressions ranged from .60 - .98, with a mean alpha of .91. A subset of 25 interactions were additionally coded twice to assess inter-rater agreement using Cronbach's α . Alphas ranged from .66 - .90, with a mean alpha of .80. Based on previous theoretical and empirical findings conflict codes were combined into the following dimensions: destructive, depressive, and constructive conflict behavior (Du Rocher Schudlich & Cummings, 2003; Goeke-Morey et al., 2003). Destructive conflict scores were formed from taking the mean of summed observed conflict, defensiveness, contempt, demand, and anger observed behavioral codes, while depressive conflict was calculated by taking the mean of summed observed sadness and anxiety observed behavioral codes. Withdrawal was examined as a separate conflict style in the present study (see factor analyses results detailed below). A constructive conflict summary variable was

additionally formed from taking the mean of summed observed positive affect, communication skills, support/validation, problem solving behaviors, and degree of resolution upon completion of the problem-solving interaction task. Each of the conflict composites had adequate internal consistency: alphas for mothers and fathers were .88 and .93 for destructive conflict, .47 and .66 for depressive conflict, and .93 and .92 for constructive conflict.

The coded marital conflict data were additionally subjected to 2 exploratory factor analyses for both mothers and fathers using principal axis factoring within SPSS to confirm the existence of destructive, depressive, and constructive conflict dimensions. A promax rotation was used to allow for correlated factors. Both factor analyses utilized the correlational matrix of associations. For mothers, Bartlett's Test of Sphericity, which tests the null hypothesis that the data correlation matrix comes from a population in which the variables are non-collinear, was significant, $\chi^2 = 1275.67, p < .001$, indicating the data had enough variance to conduct a factor analysis. Additionally, the overall Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was .878 and all items measures of sampling adequacy were greater than .753. For fathers, the Bartlett's Test of Sphericity was significant, $\chi^2 = 1236.29, p < .001$, indicating that fathers' observed conflict codes additionally had enough variance to conduct a factor analysis. The overall KMO measure of sampling adequacy was .876 and all items measures of sampling adequacy were greater than .853 with the exception of fathers' sadness and anxiety codes, which had sampling adequacy values of .652 and .567, respectively. Although fathers' anxiety code had a sampling adequacy value that is less than desirable, it was not dropped

from the analyses, due to previous theoretical notions regarding its inclusion under depressive conflict (Du Rocher Schudlich & Cummings, 2003).

For both fathers and mothers, three factors emerged with eigen-values greater than 1, and an examination of the scree plots also supported a three-factor solution. For mothers, the three factors explained 70.49% of the observed variance. For fathers, the three factors explained 71.70% of the observed variance. As shown in Table 1, for mothers, with the exception of demand and anxiety, each item loaded onto its respective factor with a factor coefficient of at least .41 and no more than .13 on any of the other factors. Mothers' demand loaded onto its respective factor with a factor coefficient of .32, and -.38 and -.48 on the other factors. Mothers' anxiety failed to load clearly onto one factor. An examination of the structure coefficients revealed similar results. With the exception of mothers' anxiety and demand, items loaded onto their respective factors with a structure coefficient of at least .76 on its respective factor, and no more than .41 on any other factor. Mothers' demand yielded a structure coefficient of .41 on its respective factor, while mothers' anxiety failed to load clearly onto one factor. For fathers, with the exception of withdrawal, each item loaded onto its respective factor with a factor coefficient of at least .64 on its respective factor and no more than .15 on the other factors. Fathers' withdrawal, however, loaded onto its respective factor with a factor coefficient of .02, and loaded onto the other factors with a factor coefficient of -.29 and -.78 on the other factors. Interpretation of the fathers' structure coefficients were more differentiated than the pattern coefficients and with the exception of withdrawal, all items loaded onto their respective factors with a coefficient of at least .65 on their respective factor, and no more than .14 on any of the other factors. Withdrawal failed to load clearly

onto one factor. Analyses were also examined without the utilization of a rotation, therefore maintaining factor orthogonality, and with a varimax oblimin rotation. Similar findings were obtained across analytic procedures. The three factors that emerged generally coincided with previous theoretical and empirical findings and supported the existence of destructive, depressive, and a constructive conflict factors. Given that fathers' withdrawal failed to load onto the depressive conflict factor, it was examined as a separate conflict dimension for both fathers and mothers. See Tables 1 and 2 for a summary of factor pattern, structure, and communality coefficients for mothers and fathers. See Tables 3 and 4 for a summary of factor correlations.

Data Analysis Plan

In order to investigate hypothesis 1 and 2, fathers' and mothers' depressive symptoms were simultaneously entered as predictors of parenting distress, infant difficulty, and dysfunctional parent-infant interactions in three separate models. The models were estimated using EQS 6.1 (Bentler, 2005) using the maximum likelihood (ML) method for estimating parameters in accordance with the Actor-Partner Interdependence Model procedures detailed in Cook and Kenny (2005). As originally outlined by Kenny and colleagues (Kashy & Kenny, 2000; Kenny, 1990; 1996; Kenny & Cook, 1999), the Actor-Partner Interdependence Model (APIM) utilizes the dyads as the unit of analysis, and suggests that a person's independent variable score affects both his or her own dependent variable score (referred to as the actor effect), and also his or her partner's dependent variable score (referred to as the partner effect). Correlational statistics between fathers' and mothers' depressive symptoms were additionally allowed to be estimated in all models. Given that it was of theoretical interest to examine

differential effects of depressive symptoms on parenting distress, infant-difficulty, and dysfunctional parent-infant interactions for fathers and mothers, as opposed to solely estimating global actor and partner depressive symptom effects within the dyad, fathers' and mothers' actor and partner paths were not constrained to be equal, as outlined in Cook and Kenny (2005). Because differential effects of fathers' and mothers' depressive symptoms on individuals' and partners' parenting abilities were of interest, our models were just identified. Therefore, model fit statistics were unable to be estimated due to insufficient degrees of freedom. In order to investigate hypothesis three, path analysis was utilized to assess whether observed destructive, depressive, withdrawal, and constructive conflict styles mediated actor-partner effects using EQS 6.1 (Bentler, 2005).

Results

Preliminary Analyses

Table 5 presents means, standard deviations of parental depressive symptoms, parenting distress, parentally reported dysfunctional parent-infant interactions, parentally reported infant difficulty, and parents' observed composite conflict scores. Correlational analyses revealed multiple significant relationships in the expected directions. See Table 6 for a summary of correlations among key variables.

Hypothesis 1 and 2

Fathers' and mothers' depressive symptoms as predictors of fathers' and mothers' parenting distress. In an examination of actor and partner depressive symptoms as predictors of fathers' and mothers' parenting distress, results revealed that the overall model explained 50% of the variability in fathers' parenting distress scores. Results revealed a significant actor effect for fathers, such that fathers' depressive

symptoms significantly predicted greater parenting distress for fathers, $\beta = .63, p < .05$. Partner effects failed to emerge as a significant predictor of fathers' parenting distress, such that mothers' depressive symptoms were not significantly related to fathers' parenting distress, $\beta = .15, p > .05$. In an examination of actor and partner effects as predictors of mothers' parenting distress, results revealed that the overall model explained 41% of the variability in mothers' parenting distress. Results additionally revealed a significant actor effect for mothers, such that mothers' depressive symptoms were significantly associated with greater parenting distress for mothers, $\beta = .62, p < .05$. Partner effects failed to emerge as a significant predictor of mothers' parenting distress, such that fathers' depressive symptoms failed to be significantly associated with mothers' parenting distress, $\beta = .04, p > .05$. See figure 1 for summary of path analysis results.

Fathers' and mothers' depressive symptoms as predictors of fathers' and mothers' infant difficulty. In an examination of actor and partner depressive symptoms as predictors of fathers' and mothers' ratings of infant difficulty, results revealed that the overall model explained 6.5% of the variability in fathers' ratings of infant difficulty. Results failed to yield a significant actor effect for fathers, such that fathers' depressive symptoms did not significantly predict fathers reported infant difficulty, $\beta = .20, p > .05$. Partner effects additionally failed to emerge as a significant predictor of fathers' reported infant difficulty, such that mothers' depressive symptoms were not significantly related to fathers' reported infant difficulty, $\beta = .09, p > .05$. In an examination of actor and partner effects as predictors of mothers' reported infant difficulty, results revealed that the overall model explained 2.4% of the variability in mothers' reported infant difficulty. Results failed to yield a significant actor effect for mothers, such that mothers' depressive

symptoms did not significantly predict mothers' reported infant difficulty, $\beta = .17, p > .05$. Partner effects additionally failed to emerge as a significant predictor of mothers' infant difficulty, such that fathers' depressive symptoms failed to be significantly associated with mothers' reported infant difficulty, $\beta = .09, p > .05$. See figure 2 for summary of path analysis results.

Indirect effect of fathers' and mothers' depressive symptoms on fathers' and mothers' infant difficulty through parenting distress. Given that parental depressive symptoms failed to significantly predict parental reports of infant difficulty, it was of interest to examine whether parental depressive symptoms indirectly affected parents' reported infant difficulty through parenting distress. Fathers' and mothers' depressive symptoms were used to predict parent-reported parental distress, and parenting distress was subsequently used to predict fathers' and mothers' infant difficulty within an actor-partner model.

In an examination of actor and partner depressive symptoms as predictors of fathers' parenting distress, results revealed that the overall model explained 49.7% of the variability in fathers' parenting distress scores. A significant actor effect emerged, such that fathers' depressive symptoms significantly predicted greater parenting distress for fathers, $\beta = .63, p < .05$. Result failed to yield a significant partner effect, however, such that mothers' depressive symptoms failed to significantly predict fathers' distress, $\beta = .15, p > .05$. In an examination of fathers' and mothers' parenting distress as predictors of fathers' reported infant difficulty, the overall model explained 25.3% of the variability in fathers' reported infant difficulty. Results revealed a significant actor effect, such that fathers' greater parenting distress significantly predicted greater infant difficulty for

fathers, $\beta = .42, p < .05$. Results failed to yield a significant partner effect however, such that mothers' parenting distress failed to significantly predict fathers' reported infant difficulty, $\beta = .14, p > .05$.

In an examination of actor and partner depressive symptoms as predictors of mothers' parenting distress, results revealed that the overall model explained 41.1% of the variability in mothers' parenting distress scores. A significant actor effect emerged, such that mothers' depressive symptoms were significantly associated with mothers' greater parenting distress, $\beta = .62, p < .05$. Results failed to yield a significant partner effect, however fathers' depressive symptoms failed to significantly predict mothers' parenting distress, $\beta = .04, p > .05$. In an examination of fathers' and mothers' parenting distress as predictors of mothers' reported infant difficulty, the overall model explained 15.1% of the variability in mothers' reported infant difficulty. Results revealed a significant actor effect, such that mothers' greater parenting distress significantly predicted greater levels of infant difficulty for mothers, $\beta = .46, p < .05$. Results failed to yield a significant partner effect however, such that fathers' parenting distress failed to significantly predict mothers' reported infant difficulty, $\beta = -.22, p > .05$. See figure 3 for a summary of path analysis results.

Fathers' and mothers' depressive symptoms as predictors of fathers' and mothers' dysfunctional parent-infant interactions. In an examination of actor and partner depressive symptoms as predictors of fathers' and mothers' reported dysfunctional parent-infant interactions, results revealed that the overall model explained 25% of the variability in fathers' reported dysfunctional parent-infant interactions. Results revealed a significant actor effect for fathers, such that fathers' depressive

symptoms significantly predicted greater reported dysfunctional parent-infant interactions for fathers, $\beta = .41, p < .05$. Partner effects failed to emerge as a significant predictor of fathers' dysfunctional parent-infant interactions, such that mothers' depressive symptoms were not significantly related to fathers' reported dysfunctional parent-infant interactions, $\beta = .18, p > .05$. In an examination of actor and partner effects as predictors of mothers' reported dysfunctional parent-infant interactions, results revealed that the overall model explained 18% of the variability in mothers' reported dysfunctional parent-infant interactions. Results failed to yield a significant actor effect, mothers' depressive symptoms were not associated with mothers' reported dysfunctional parent-infant interactions, $\beta = .13, p > .05$. Results did, however, reveal a significant partner effect, such that fathers' depressive symptoms were associated with greater dysfunctional parent-infant interactions for mothers, $\beta = .36, p < .05$. See figure 4 for a summary of path analysis results.

Simple slope tests were subsequently conducted in order to investigate whether mothers' and fathers' actor and partner effect slopes testing the relationship between mothers' and fathers' depressive symptoms and mothers' and fathers' individual and spousal dysfunctional parent-infant interactions were statistically significantly different from one another. Because standardized slopes are not normally distributed and have problematic standard errors, it is necessary that they be transformed before they can be used in an analysis (Lipsey & Wilson, 2001). Thus, Fisher's r to Z transformation was applied to each of the standardized slope weights. The difference between the Z statistics was then calculated, and subsequently divided over the pooled standard error of the slopes. Results revealed that the difference in mothers' and fathers' actor effect slopes

showed a trend towards statistical significance ($Z = 1.79, p = .07$), suggesting that strength of the association between fathers' depressive symptoms and dysfunctional parent-infant interactions was marginally stronger than the strength of the association between mothers' depressive symptoms and mothers' resulting dysfunctional parent-infant interactions. The strength of the association between fathers' and mothers' partner effect slopes, however, were not statistically significantly different from one another ($Z = 1.14, p = .25$), suggesting that the strength of the relationship between fathers' depressive symptoms and mothers' dysfunctional interactions were not significantly different from the strength of the association between mothers' depressive symptoms and fathers' dysfunctional parent-infant interactions.

Hypothesis 3

Conflict styles as a mediator between fathers' depressive symptoms and fathers' parenting distress. EQS 6.1 (Bentler, 2005) was subsequently used in order to investigate the role of observed conflict styles as a mediator between parental depressive symptoms and parenting distress, infant difficulty, and dysfunctional parent-infant interactions in separate models for fathers and mothers. A baseline model estimating causal associations between parental depressive symptoms and conflict styles, and conflict styles and parenting dependent variables served as the standard for which to investigate more sophisticated models. Correlational statistics were additionally allowed to be estimated between destructive, depressive, withdrawal, and constructive conflict, and additionally parental depressive symptoms and the parenting dependent variables. Because models were just identified, model fit indices were not able to be estimated due to insufficient degrees of freedom. Results revealed that for fathers' parenting distress,

parental depressive symptoms failed to significantly predict fathers' use of destructive, depressive, and withdrawal conflict ($\beta = .19, p > .05$; $\beta = .15, p > .05$; and $\beta = .09, p > .05$, respectively). Fathers' parental depressive symptoms did, however, significantly negatively predict fathers' use of constructive conflict ($\beta = -.27, p < .05, R^2 = .072$). Fathers' use of destructive, depressive, withdrawal, and constructive conflict failed to significantly predict fathers' parenting distress ($\beta = -.07, p > .05$; $\beta = .10, p > .05$; $\beta = .18, p > .05$; $\beta = .03, p > .05, R^2 = .048$). In order to investigate whether conflict styles partially mediated the relationship between parental depressive symptoms and parenting distress, a second model allowing for an additional causal path between fathers' parental depressive symptoms and parenting distress was estimated.

Results revealed that fathers' depressive symptoms failed to significantly predict fathers' use of destructive, depressive, and withdrawal conflict ($\beta = .19, p > .05$; $\beta = .15, p > .05$; and $\beta = .09, p > .05$, respectively). Fathers' parental depressive symptoms did, however, significantly negatively predict fathers' use of constructive conflict ($\beta = -.27, p < .05, R^2 = .072$). Results revealed that allowing for the estimation of causal paths between fathers depressive symptoms and conflict styles, conflict styles and parenting distress, and parental depressive symptoms and parenting distress accounted for 52% of the variability in fathers parenting distress scores. Fathers' use of destructive, depressive, withdrawal, and constructive conflict failed to significantly predict fathers' parenting distress ($\beta = -.07, p > .05$; $\beta = .10, p > .05$; $\beta = .18, p > .05$; $\beta = .03, p > .05$). However, fathers' depressive symptoms did significantly positively predict fathers' parenting distress, such that fathers' depressive symptoms were related to fathers' greater parenting

distress ($\beta = .68, p < .05$). See figure 5 for a summary of path analysis results for the final model.

The previous model was additionally investigated without allowing for the estimations of correlational statistics between the observed conflict variables in order to gain sufficient degrees of freedom to estimate the model's fit indices. All of the direct causal path statistic estimates were identical to the model in which correlational statistics for the conflict codes were allowed to be estimated. An evaluation of the model revealed that the traditional Chi-Square was statistically significant, $\chi^2 (6, N = 72) = 80.99, p < .05$, thus indicating that the overall model did not fit well. However, given that the Chi-Square statistic may be particularly influenced by sample size, several additional indicators of model fit were examined. For the χ^2 / df ratio, which adjusts for model complexity, values between 1 and 3 indicate an acceptable fit (Arbuckle & Wothke, 1999). The Comparative Fit Index (CFI) compares model goodness of fit while correcting for fit statistic underestimation, potentially due to small sample size, while the Root Square Mean of Approximation (RMSEA) estimates model fit within the context of the population parameter (Byrne, 2006). When the Comparative Fit Index is greater than .90, and the Root Mean Square Error of Approximation is less than .08, then the hypothesized model fits the observed data adequately (See Byrne, 2006 for a review). The model did not fit the data well according to the previously mentioned guidelines of model-fit acceptability, χ^2 / df ratio = 13.50, CFI = .42, RMSEA = .42 (90% C. I. = .34 - .50).

Conflict styles as a mediator between fathers' depressive symptoms and fathers' infant difficulty. Results revealed that fathers' depressive symptoms failed to significantly predict fathers' use of destructive, depressive, and withdrawal conflict ($\beta =$

.19, $p > .05$; $\beta = .15$, $p > .05$; and $\beta = .09$, $p > .05$, respectively). Fathers' parental depressive symptoms did, however, significantly negatively predict fathers' use of constructive conflict ($\beta = -.27$, $p < .05$, $R^2 = .072$). Fathers' use of destructive, depressive, withdrawal, and constructive conflict failed to significantly predict infant difficulty, however ($\beta = -.04$, $p > .05$; $\beta = .04$, $p > .05$; $\beta = -.10$, $p > .05$; $\beta = -.05$, $p > .05$, $R^2 = .01$). In order to investigate whether conflict styles partially mediated the relationship between parental depressive symptoms and infant difficulty, a second model allowing for an additional causal path between fathers' parental depressive symptoms and parenting distress was estimated.

Results revealed that fathers' depressive symptoms failed to significantly predict fathers' use of destructive, depressive, and withdrawal conflict ($\beta = .19$, $p > .05$; $\beta = .15$, $p > .05$; and $\beta = .09$, $p > .05$, respectively). Fathers' parental depressive symptoms did, however, significantly negatively predict fathers' use of constructive conflict ($\beta = -.27$, $p < .05$, $R^2 = .072$). Results revealed that allowing for the estimation of causal paths between fathers' depressive symptoms and conflict styles, conflict styles and infant difficulty, and parental depressive symptoms and infant difficulty accounted for 6.7% of the variability in fathers' infant difficulty scores. Fathers' use of destructive, depressive, withdrawal, and constructive conflict failed to significantly predict infant difficulty ($\beta = -.04$, $p > .05$; $\beta = .04$, $p > .05$; $\beta = -.10$, $p > .05$; $\beta = -.05$, $p > .05$). However, fathers' depressive symptoms did significantly predict fathers' greater reported infant difficulty ($\beta = .24$, $p < .05$). See figure 6 for a summary of path analysis results for the final model.

The previous model was additionally investigated without allowing for the estimations of correlational statistics between the observed conflict variables in order to

gain sufficient degrees of freedom to estimate the model's fit indices. All of the direct causal path statistic estimates were identical to the model in which correlational statistics for the conflict codes were allowed to be estimated. An evaluation of the model revealed that the traditional Chi-Square was statistically significant, $\chi^2 (6, N = 72) = 80.99, p < .05$, thus indicating that the overall model did not fit well. The model additionally did not fit the data well according to the previously mentioned guidelines of model-fit acceptability, χ^2 / df ratio = 13.50, CFI = .08, RMSEA = .42 (90% C. I. = .34 - .50).

Conflict styles as a mediator between fathers' depressive symptoms and fathers' dysfunctional parent-infant interactions. Results revealed that fathers' depressive symptoms failed to significantly predict fathers' use of destructive, depressive, and withdrawal conflict ($\beta = .19, p > .05$; $\beta = .15, p > .05$; and $\beta = .09, p > .05$, respectively). Fathers' parental depressive symptoms did, however, significantly negatively predict fathers' use of constructive conflict ($\beta = -.27, p < .05, R^2 = .072$). Fathers' use of destructive, depressive, withdrawal, and constructive conflict failed to significantly predict fathers' reported dysfunctional parent-infant interactions, however ($\beta = .00, p > .05$; $\beta = .08, p > .05$; $\beta = .05, p > .05$; $\beta = -.02, p > .05, R^2 = .01$). In order to investigate whether conflict styles partially mediated the relationship between parental depressive symptoms and dysfunctional parent-infant interactions, a second model allowing for an additional causal path between fathers' parental depressive symptoms and dysfunctional parent-infant interactions was estimated.

Results revealed that fathers' depressive symptoms failed to significantly predict fathers' use of destructive, depressive, and withdrawal conflict ($\beta = .19, p > .05$; $\beta = .15, p > .05$; and $\beta = .09, p > .05$, respectively). Fathers' parental depressive symptoms did,

however, significantly negatively predict fathers' use of constructive conflict ($\beta = -.27, p < .05, R^2 = .07$). Results revealed that allowing for the estimation of causal paths between fathers' depressive symptoms and conflict styles, conflict styles and dysfunctional parent-infant interactions, and parental depressive symptoms and dysfunctional parent-infant interactions accounted for 23.9% of the variability in fathers' reported dysfunctional parent-infant interaction scores. Fathers' use of destructive, depressive, withdrawal, and constructive conflict tactics failed to significantly predict fathers' reported dysfunctional parent-infant interactions ($\beta = -.00, p > .05$; $\beta = .08, p > .05$; $\beta = .05, p > .05$; $\beta = -.02, p > .05$). However, fathers' depressive symptoms did significantly predict fathers' greater reported dysfunctional parent-infant interactions ($\beta = .45, p < .05$). See figure 7 for a summary of path analysis results for the final model.

The previous model was additionally investigated without allowing for the estimations of correlational statistics between the observed conflict variables in order to gain sufficient degrees of freedom to estimate the model's fit indices. All of the direct causal path statistic estimates were identical to the model in which correlational statistics for the conflict codes were allowed to be estimated. An evaluation of the model revealed that the traditional Chi-Square was statistically significant, $\chi^2 (6, N = 72) = 80.99, p < .05$, thus indicating that the overall model did not fit well. The model additionally did not fit the data well according to the previously mentioned guidelines of model-fit acceptability, χ^2 / df ratio = 13.50, CFI = .22, RMSEA = .42 (90% C. I. = .34 - .50).

Conflict styles as a mediator between mothers' depressive symptoms and mothers' parenting distress. Results revealed that for mothers' parenting distress, parental depressive symptoms failed to significantly predict mothers' use of destructive,

depressive, withdrawal, and constructive conflict ($\beta = .09, p > .05$; $\beta = .15, p > .05$; and $\beta = .10, p > .05$, and $\beta = -.13, p > .05$ respectively). Mothers' use of destructive, depressive, withdrawal, and constructive conflict failed to significantly predict parenting distress ($\beta = -.13, p > .05$; $\beta = -.21, p > .05$; $\beta = .04, p > .05$; $\beta = -.11, p > .05, R^2 = .01$). In order to investigate whether conflict styles partially mediated the relationship between mothers' depressive symptoms and parenting distress, a second model allowing for an additional causal path between mothers' depressive symptoms and parenting distress was estimated.

Results revealed that mothers' depressive symptoms failed to significantly predict mothers' use of destructive, depressive, withdrawal, and constructive conflict ($\beta = .09, p > .05$; $\beta = .15, p > .05$; $\beta = .10, p > .05$; and $\beta = -.13, p > .05$ respectively). Results revealed that allowing for the estimation of causal paths between mothers' depressive symptoms and conflict styles, conflict styles and parenting distress, and parental depressive symptoms and parenting distress accounted for 46% of the variability in mothers' parenting distress scores. Mothers' use of destructive, depressive, withdrawal, and constructive conflict tactics failed to significantly predict parenting distress ($\beta = -.13, p > .05$; $\beta = -.21, p > .05$; $\beta = .04, p > .05$; $\beta = -.11, p > .05$). However, mothers' depressive symptoms did significantly predict greater parenting distress ($\beta = .67, p < .05$). See figure 8 for a summary of path analysis results for the final model.

The previous model was additionally investigated without allowing for the estimations of correlational statistics between the observed conflict variables in order to gain sufficient degrees of freedom to estimate the model's fit indices. All of the direct causal path statistic estimates were identical to the model in which correlational statistics

for the conflict codes were allowed to be estimated. An evaluation of the model revealed that the traditional Chi-Square was statistically significant, $\chi^2 (6, N = 72) = 105.09, p < .05$), thus indicating that the overall model did not fit well. The model additionally did not fit the data well according to the previously mentioned guidelines of model-fit acceptability, χ^2 / df ratio = 17.65 CFI = .28, RMSEA = .48 (90% C. I. = .40 - .56).

Conflict styles as a mediator between mothers' depressive symptoms and mothers' infant difficulty. Results revealed that for mothers' infant difficulty, mothers' depressive symptoms failed to significantly predict mothers' use of destructive, depressive, withdrawal, and constructive conflict ($\beta = .09, p > .05$; $\beta = .15, p > .05$; and $\beta = .10, p > .05$, and $\beta = -.13, p > .05$ respectively). Mothers' use of destructive, depressive, withdrawal, and constructive conflict tactics failed to significantly predict infant difficulty ($\beta = -.15, p > .05$; $\beta = -.14, p > .05$; $\beta = .17, p > .05$; $\beta = .08, p > .05, R^2 = .068$). In order to investigate whether conflict styles partially mediated the relationship between mothers' depressive symptoms and infant difficulty, a second model allowing for an additional causal path between mothers' depressive symptoms and infant difficulty was estimated.

Results revealed that mothers' depressive symptoms failed to significantly predict mothers' use of destructive, depressive, withdrawal, and constructive conflict ($\beta = .09, p > .05$; $\beta = .15, p > .05$; $\beta = .10, p > .05$; and $\beta = -.13, p > .05$ respectively). Results revealed that allowing for the estimation of causal paths between mothers' depressive symptoms and conflict styles, conflict styles and infant difficulty, and mothers' depressive symptoms and infant difficulty accounted for 9% of the variability in infant difficulty scores. Mothers' use of destructive, depressive, withdrawal, and constructive

conflict tactics failed to significantly predict infant difficulty ($\beta = -.15, p > .05$; $\beta = -.14, p > .05$; $\beta = .17, p > .05$; $\beta = .08, p > .05$). Mothers' depressive symptoms did not significantly predict infant difficulty ($\beta = .15, p > .05$). See figure 9 for a summary of path analysis results for the final model.

The previous model was additionally investigated without allowing for the estimations of correlational statistics between the observed conflict variables in order to gain sufficient degrees of freedom to estimate the model's fit indices. All of the direct causal path statistic estimates were identical to the model in which correlational statistics for the conflict codes were allowed to be estimated. An evaluation of the model revealed that the traditional Chi-Square was statistically significant, $\chi^2 (6, N = 72) = 105.07, p < .05$, thus indicating that the overall model did not fit well. The model additionally did not fit the data well according to the previously mentioned guidelines of model-fit acceptability, χ^2 / df ratio = 17.51, CFI = .02, RMSEA = .48 (90% C. I. = .40 - .56).

Conflict styles as a mediator between mothers' depressive symptoms and mothers' dysfunctional parent-infant interactions. Results revealed that for dysfunctional parent-infant interactions, mothers' depressive symptoms failed to predict mothers' use of destructive, depressive, withdrawal, and constructive conflict ($\beta = .09, p > .05$; $\beta = .15, p > .05$; and $\beta = .10, p > .05$, and $\beta = -.13, p > .05$ respectively). Mothers' use of destructive, depressive, withdrawal, and constructive conflict failed to significantly predict mothers' reported dysfunctional parent-infant interactions ($\beta = .16, p > .05$; $\beta = -.09, p > .05$; $\beta = .20, p > .05$; $\beta = .22, p > .05, R^2 = .034$). In order to investigate whether conflict styles partially mediated the relationship between mothers' depressive symptoms and dysfunctional parent-infant interactions, a second model allowing for an additional

causal path between mothers' depressive symptoms and mothers' reported dysfunctional parent-infant interactions was estimated.

Results revealed that mothers' depressive symptoms failed to significantly predict mothers' use of destructive, depressive, withdrawal, and constructive conflict ($\beta = .09, p > .05$; $\beta = .15, p > .05$; $\beta = .10, p > .05$; and $\beta = -.13, p > .05$ respectively). Results revealed that allowing for the estimation of causal paths between mothers' depressive symptoms and conflict styles, conflict styles and dysfunctional parent-infant interactions, and mothers' depressive symptoms and dysfunctional parent-infant interactions accounted for 10.2% of the variability in mothers' reported dysfunctional parent-infant interaction scores. Mothers' use of destructive, depressive, withdrawal, and constructive conflict tactics failed to significantly predict dysfunctional parent-infant interactions ($\beta = .16, p > .05$; $\beta = -.09, p > .05$; $\beta = .20, p > .05$; $\beta = .22, p > .05$). Mothers' depressive symptoms significantly predicted greater dysfunctional parent-infant interactions, $\beta = .26, p < .05$. See figure 10 for a summary of path analysis results for the final model.

The previous model was additionally investigated without allowing for the estimations of correlational statistics between the observed conflict variables in order to gain sufficient degrees of freedom to estimate the model's fit indices. All of the direct causal path statistic estimates were identical to the model in which correlational statistics for the conflict codes were allowed to be estimated. An evaluation of the model revealed that the traditional Chi-Square was statistically significant, $\chi^2 (6, N = 72) = 105.07, p < .05$, thus indicating that the overall model did not fit well. The model additionally did not fit the data well according to the previously mentioned guidelines of model-fit acceptability, χ^2 / df ratio = 17.52, CFI = .03, RMSEA = .48 (90% C. I. = .40 - .56).

Discussion

Building on previous limited work examining impacts of fathers' depressive symptoms on paternal parenting distress and father-infant relationships, the current study utilized a community sample to examine impacts of mothers' and fathers' depressive symptoms on individual and spousal reported parenting distress, infant difficulty, and dysfunctional parent-infant interactions within the context of an actor-partner interdependence model. Observed marital conflict styles were additionally examined as potential mediators of the aforementioned associations. The current study advanced previous research in a number of ways. By simultaneously examining both mothers' *and* fathers' depressive symptoms as predictors of parenting stress, infant-difficulty, and dysfunctional parent-infant interactions, I was able to simultaneously assess impacts of individual and spousal depressive symptoms on mothers' and fathers' perceived parenting abilities, child difficulty, and parent-infant relationship quality. By allowing the models to be unconstrained, I was able to assess differential impacts of actor and partner depressive symptoms for both husbands and wives. Additionally, following previous work with older children (Du Rocher Schudlich & Cummings, 2003; Du Rocher Schudlich & Cummings, 2007), in order to evaluate the contribution of broader familial contexts to the observed relationships, multiple dimensions of marital conflict were assessed and subsequently examined as mediators of associations between parental depressive symptoms and parenting distress, infant-difficulty, and dysfunctional parent-infant relationships.

My hypotheses surrounding the deleterious effects of depressive symptoms on fathers' and mothers' parenting distress, infant difficulty, and dysfunctional parent-infant interactions were partially supported. Findings revealed significant actor effects for both mothers and fathers, such that mothers' and fathers' depressive symptoms significantly

predicted their own greater parenting distress. Results are consistent with previous work documenting deleterious effects of depressive symptoms on parenting ability and competence (Dix & Meunier, 2009). The current study additionally adds to the limited work concerning effects of depressive symptoms on fathers' parenting ability, and coincides with much of the work conducted on maternal depressive symptoms and decreased parental functioning (Cummings & Davies, 1994; Dix & Meunier, 2009; Lovejoy et al., 2000). Contrary to previously conducted work by Pesonen and colleagues (2006), mothers' and fathers' depressive symptoms failed to be directly associated with infant difficulty. Depressive symptoms did, however, indirectly affect parentally reported infant difficulty through parenting distress for both fathers and mothers, such that depressive symptoms were a direct positive predictor of parenting distress, which was subsequently associated with greater infant difficulty. Results are consistent with a family systems perspective (Cox & Paley, 1997; Cox et al., 2001) as well as interpersonal theory (Hammen, 2004) and provides additional support for the deleterious role that depressive symptoms have on both maternal *and* paternal parenting competence and perceptions of infant difficulty.

Increases in depressive symptoms were only associated with increases in dysfunctional parent-infant interactions for fathers, however. These findings support previous literature that has suggested that the negative impact of depressive symptoms on parent-child interactions may be exacerbated for fathers, as compared to mothers (Wilson & Durbin, 2009). Specifically, previous empirical examinations have suggested that depressed fathers are less likely to read, sing songs to their babies than depressed mothers as well as non-depressed fathers (Paulson, Dauber, & Leiferman, 2006). Previous meta-

analyses have confirmed these findings, suggesting that depression's deleterious impacts on dimensions of *positive* parenting may be greater for men, as compared to women (Wilson & Durbin, 2009). Thus for women, engaging in positive, warm parental responding may weaken the deleterious effects of depressive symptoms on parent-child relationship quality, and may potentially enable mothers to compartmentalize their interpersonal difficulties to a greater degree than fathers.

My hypotheses surrounding effects of partner depressive symptoms on spousal parenting distress, infant difficulty, and dysfunctional parent-infant interactions were additionally partially supported, as fathers' depressive symptoms were associated with greater dysfunctional parent-infant interactions for mothers. Previous literature has suggested that there may be important gender differences in the interpersonal behavior of depressed men and women (Troisi & Moles, 1999). Specifically, men are more likely to use less prosocial coping strategies (Hobfoll et al., 1994), and additionally may be more prone to angry and aggressive outbursts in comparison to depressed women (Winkler, Pjerk, & Kasper, 2005). These differences may contribute to increased negative global family climate, or relationship difficulties, which may subsequently be responsible for the observed relationships between fathers' depressive symptoms and greater levels of maternal dysfunctional parent-infant interactions.

Contrary to previous research, maternal depressive symptoms failed to be a significant predictor of fathers' parenting distress, infant difficulty, or dysfunctional parent-infant interactions. Previous research has suggested that men may have difficulty compensating for their partners' post-partum depression, thus resulting in less optimal father-infant interactions (Goodman, 2008). Additional theorists have proposed that

father-child interactions may be more negatively impacted by family stressors than mother-infant interactions (Cummings, Merrilees, & Ward, 2010). In our study, it was *mothers'* parent-infant interactions that were negatively affected by their partners' depressive symptoms, rather than fathers. Previous research has suggested that fathers may function as an important support person for depressed mothers in the parent-child relationship (Holopainen, 2002). Our study supports these findings; when fathers' emotional well-being was compromised, mothers reported less optimal mother-infant interactions with their children.

Although a majority of parents' self-reported depressive symptoms were not related to observed conflict styles, fathers' depressive symptoms were negatively associated with constructive marital conflict. Findings partially support previous work examining effects of depressive symptoms on conflict resolution behaviors, as paternal depressive symptoms have been previously linked with increased impairments in positive and productive conflict resolution strategies, as well as more depressive and angry conflict resolution behaviors (Du Rocher Schudlich, Papp, & Cummings, 2004). Given the extensive previous literature surrounding depressive symptoms and impaired marital communication processes (Du Rocher Schudlich, Papp, & Cummings, 2004; Gottman & Notarius, 2002; Johnson & Jacob, 1997; McCabe & Gotlib, 1993; Troisi & Moles, 1999), it is surprising that mothers' depressive symptoms were not associated with mothers' use of observed conflict techniques. Contrary to our hypotheses, fathers' and mothers' use of destructive, depressive, withdrawal, or constructive conflict tactics did not mediate relations between fathers' and mothers' depressive symptoms and parenting distress, child difficulty, or dysfunctional parent-infant interactions, but rather replicated previous

examinations documenting the deleterious direct effects of depressive symptoms on parenting abilities (Lovejoy et al., 2000) for both mothers and fathers.

Implications

The current study has several implications with regard to children's well-being stemming from exposure to parental depressive symptoms. The link between parental depressive symptoms and compromised parenting has been well established in the literature, and have subsequently been linked to children's increased risk for poor developmental outcomes such as increased internalizing and externalizing difficulties, physical health problems, and socio-emotional and academic difficulties (Cummings, Keller, & Davies, 2005; Downey & Coyne, 1990; Elgar, Mills, McGrath, Waschbusch, & Brownridge, 2007; Goodman & Gotlib, 1999; Kouros, Merrilees, & Cummings, 2008). Furthermore, rates of depressive symptoms are likely to be highest for parents with infants (Dix & Meunier, 2009).

Fathers' depressive symptoms in particular may have greater impacts on very young children's behavioral and emotional development than what has been previously thought and have been linked with increases in cognitive delays in infants (Wanless, Rosenkoetter, & McClelland, 2008) as well as older children's increased behavioral adjustment difficulties (Ramchandani & Stein, 2008). Additionally, although limited, support exists for the ameliorative role that fathers may have in moderating long term negative impacts of maternal depressive symptoms on children's internalizing difficulties (Mezulis, Hyde, & Clark, 2004). Thus, family wide interventions should be targeted at reducing parental depressive symptoms and parenting stress for mothers *and* fathers in an effort to mitigate risk factors for young children. Interventions should additionally target

improving constructive conflict resolution behaviors, particularly for fathers. Given previous literature documenting longitudinal relationships between couples' marital communication behaviors and depressive symptoms (Du Rocher Schudlich & Cummings, under review) and given that marital conflict levels are thought to be the highest during the infant years (Belsky & Rovine, 1990), interventions targeting the use of couples' constructive conflict techniques may help to decrease depressive symptoms and parenting stress.

Limitations and Future Directions

Although the current study utilized a strong multi-method approach, several limitations should be addressed. First, the correlational nature of the current study prohibits the determination of causality among the observed associations. Specifically, it is unknown whether parenting distress, dysfunctional parent-infant relationships, and infant difficulty were causally related to parental depressive symptoms. Future longitudinal research is needed to better understand the directionality of these associations, particularly in relation to impacts of fathers' depressive symptoms on marital difficulties, parenting, and parent-infant relationships. It should additionally be noted that although our study utilized observed measures of conflict resolution measures, self-report measures were used to assess parents' depressive symptoms and parenting behaviors. Depressed individuals may have distorted perceptions of their parenting abilities and competence, which may be discordant with their actual behavior (Lovejoy et al., 2000). Future examinations should seek to replicate these findings using observed measures of parent-infant interaction. It should additionally be noted that mothers' depressive conflict composite had lower internal consistency than desired ($\alpha = .47$). It is

probable, however, that the lower internal consistency could have been due to the small number of observed conflict items used to form the scale ($N = 2$). Future examinations should seek to replicate our findings using observed measures of depressive conflict with additional indicators of depressive symptoms, such as withdrawal, included in the depressive conflict scale. Additionally, relations among the variables may differ among clinically depressed samples. Future examinations should investigate depressive symptom severity as a moderator of variable associations. Finally, it should be noted that the current study utilized a primarily white, middle class, community-based sample, which may limit generalizability. Future examinations should examine these associations in ethnically and economically diverse populations.

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Table 1

*Factor Pattern, (Structure), and Communality Coefficients of Coded Conflict Dimension**Items for Mothers (N = 72)*

Item	Destructive Conflict	Constructive Conflict	Depressive Conflict	h^2
Conflict	.886 (.888)	-.045 (-.641)	-.080 (.269)	.794
Defensiveness	.919 (.887)	.046 (-.620)	.003 (.315)	.787
Contempt	.654 (.772)	-.106 (-.641)	.114 (.412)	.620
Demand	.315 (.410)	-.376 (-.341)	-.481 (-.161)	.335
Anger	.885 (.832)	.100 (-.568)	.052 (.322)	.696
Withdrawal	-.078 (.254)	-.067 (-.433)	.775 (.783)	.616
Sadness	.064 (.323)	-.008 (-.432)	.693 (.721)	.523
Anxiety	.079 (.269)	-.256 (-.320)	.012 (.180)	.105
Positive Affect	-.178 (-.605)	.413 (.733)	-.352 (-.643)	.637
Communication Skills	-.064 (-.676)	.769 (.900)	-.154 (-.597)	.828
Support- Validation	-.151 (-.642)	.591 (.795)	-.175 (-.553)	.664
Problem Solving	.002 (-.650)	.941 (.898)	.076 (-.436)	.810
Resolution	.128 (-.493)	.877 (.765)	.035 (-.396)	.594

Note. Uses principal axis factoring with a promax rotation.

Table 2

*Factor Pattern, (Structure), and Community Coefficients of Coded Conflict Dimension**Items for Fathers (N = 72)*

Item	Destructive Conflict	Constructive Conflict	Depressive Conflict	h^2
Conflict	.944 (.911)	.035 (-.521)	-.080 (.056)	.837
Defensiveness	.827 (.846)	-.043 (-.534)	-.045 (.087)	.719
Contempt	.760 (.786)	-.055 (-.505)	-.046 (.078)	.621
Demand	.678 (.656)	.057 (-.367)	.083 (.175)	.438
Anger	.915 (.905)	.044 (-.527)	.105 (.236)	.830
Withdrawal	-.290 (.185)	-.782 (-.611)	.019 (.111)	.426
Sadness	-.095 (.119)	-.185 (-.246)	.677 (.695)	.505
Anxiety	.105 (.136)	.121 (-.063)	.690 (.685)	.479
Positive Affect	-.116 (-.518)	.652 (.731)	-.050 (-.182)	.546
Communication Skills	-.058 (-.605)	.941 (.951)	.144 (-.029)	.926
Support- Validation	-.125 (-.566)	.725 (.805)	-.023 (-.168)	.658
Problem Solving	-.163 (-.591)	.704 (.806)	-.019 (-.167)	.667
Resolution	-.079 (-.480)	.640 (.705)	-.096 (-.220)	.510

Note. Uses principal axis factoring with a promax rotation.

Table 3

*Correlation Between Destructive, Constructive, and Depressive Factors for Mothers**(N = 72)*

	1	2	3
1. Destructive	-	-.723	.366
2. Constructive	-	-	-.546
3. Depressive	-	-	-

Table 4

*Correlation Between Destructive, Constructive, and Depressive Factors for Fathers**(N = 72)*

	1	2	3
1. Destructive	-	-.604	.151
2. Constructive	-	-	-.174
3. Depressive	-	-	-

Table 5

Means, Standard Deviations, and Range of Scores for Key Variables (N = 72)

Variables	M	SD	Range of Scores	Range of Possible Scores
Observed Interparental Conflict				
Father Destructive	2.70	1.39	1 - 8.10	1 - 9
Father Depressive	1.55	.84	1 - 4.75	1 - 9
Father Withdrawal	1.82	1.10	1 - 6	1 - 9
Father Constructive	5.43	1.67	1.70 - 8.40	1 - 9
Mother Destructive	2.90	1.30	1 - 5.90	1 - 9
Mother Depressive	2.06	1.01	1 - 6.25	1 - 9
Mother Withdrawal	1.68	1.11	1 - 6	1 - 9
Mother Constructive	5.44	1.65	1.90 - 9	1 - 9
Depressive Symptoms				
Father Depressive Symptoms	8.24	7.02	0 - 31	0 - 60
Mother Depressive Symptoms	9.41	7.18	0 - 33	0 - 60
Parenting Stress Scales				
Father Parenting Distress	26.35	7.01	15 - 43	12 - 60
Mother Parenting Distress	27.16	6.88	16 - 56	12 - 60
Father Dysfunctional Parent-Infant Interactions	16.56	4.66	12 - 29	12 - 60
Mother Dysfunctional Parent-Infant Interactions	15.79	3.63	12 - 26	12 - 60

Father Infant Difficulty	21.53	6.71	12 - 37	12 - 60
Mother Infant Difficulty	21.87	6.56	12 - 48	12 - 60

Table 6

Correlations Between Fathers' and Mothers' Depressive Symptoms, Parenting Distress, Infant Difficulty, and Dysfunctional Parent-Infant Interactions, and Observed Conflict Styles (N = 72)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1. Fathers' Depressive Symptoms	—	.69**	.24*	.48**	.19	.15	.09	-.27**	.39**	.29*	-.02	.41**	.20	.16	.15	-.21
2. Fathers' Parenting Distress		—	.49**	.58**	.10	.21	.21	-.23	.40**	.53**	.02	.29*	.09	-.05	.04	-.10
3. Fathers' Infant Difficulty			—	.59**	.02	.07	-.05	-.03	.16	.36**	.40**	.17	-.07	-.10	-.11	.09
4. Fathers' Dysfunctional Interactions				—	.13	.16	.12	-.19	.33**	.33**	-.01	.26*	.16	.21	.08	-.10
5. Fathers' Destructive Conflict					—	.14	.25*	-.64**	.03	-.16	-.07	.05	.59**	.51**	.45**	-.59**
6. Fathers' Depressive Conflict						—	.15	-.17	.43**	.31**	-.09	.23	.29*	.35**	.25*	-.21
7. Fathers' Withdrawal Conflict							—	-.64**	.13	-.03	-.15	-.11	.29*	.05	.10	-.36**
8. Fathers' Constructive Conflict								—	-.20	-.02	.10	.01	-.55**	-.41**	-.32**	.84**
9. Mothers' Depressive Symptoms									—	.64**	.12	.26*	.09	.15	.10	-.13
10. Mothers' Parenting Distress										—	.34**	.41**	-.08	-.09	.02	-.01
11. Mothers' Infant Difficulty											—	.41**	-.21	-.15	-.03	.16
12. Mothers' Dysfunctional Interactions												—	.05	.01	.12	.01
13. Mothers' Destructive Conflict													—	.46**	.28*	-.70**
14. Mothers' Depressive Conflict														—	.51**	-.56**
15. Mothers' Withdrawal Conflict															—	-.51**
16. Mothers' Constructive Conflict																—

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

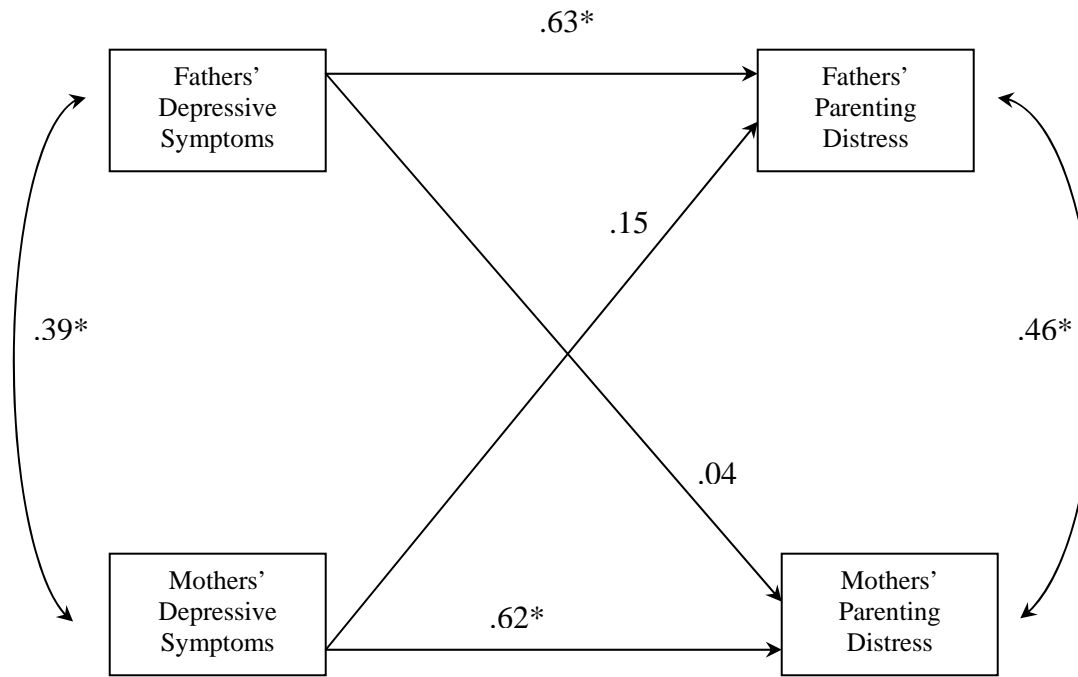


Figure 1. Model Examining Fathers' and Mothers' Depressive Symptoms as Predictors of Parenting Distress.

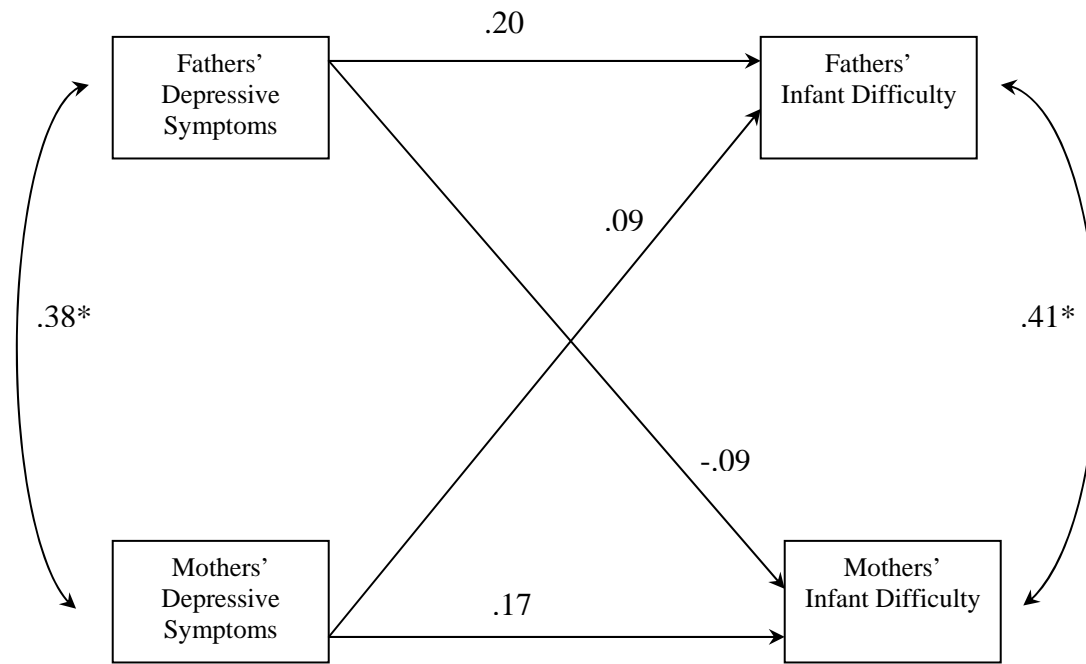


Figure 2. Model Examining Fathers' and Mothers' Depressive Symptoms as Predictors of Infant Difficulty.

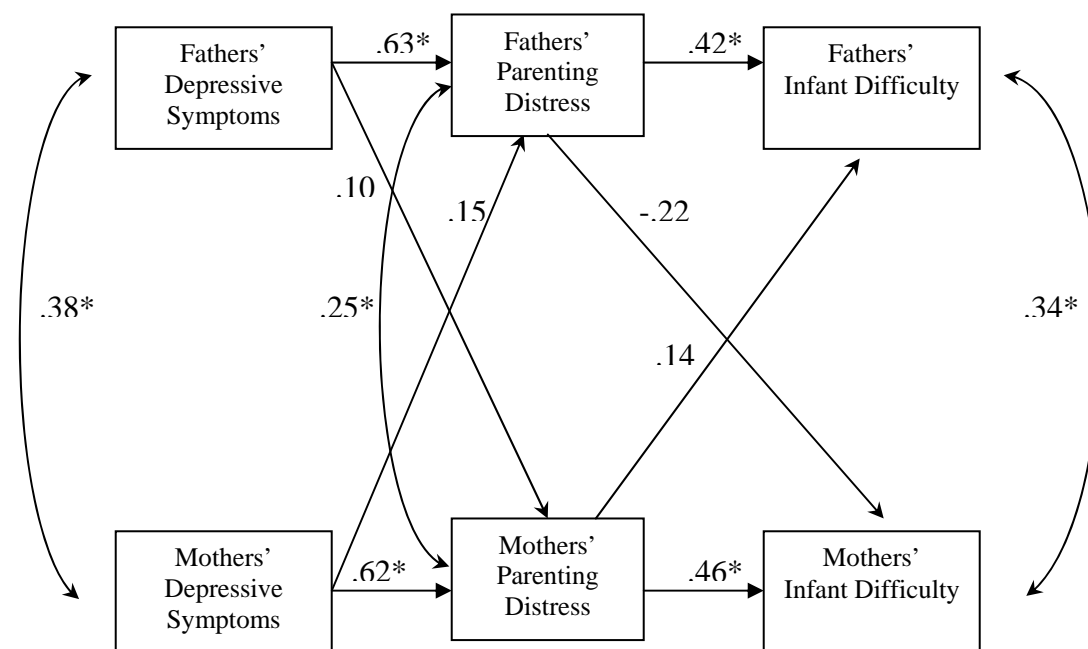


Figure 3. Model Examining Fathers' and Mothers' Depressive Symptoms as Indirect Predictors of Infant Difficulty.

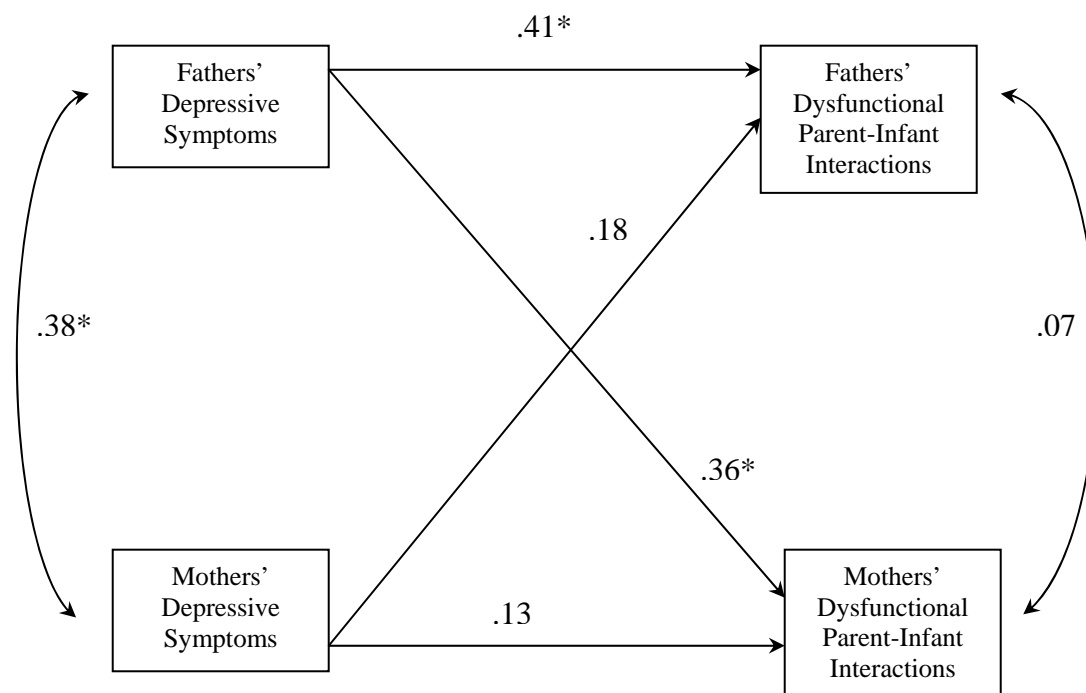


Figure 4. Model Examining Fathers' and Mothers' Depressive Symptoms as Predictors of Dysfunctional Parent-Infant Interactions.

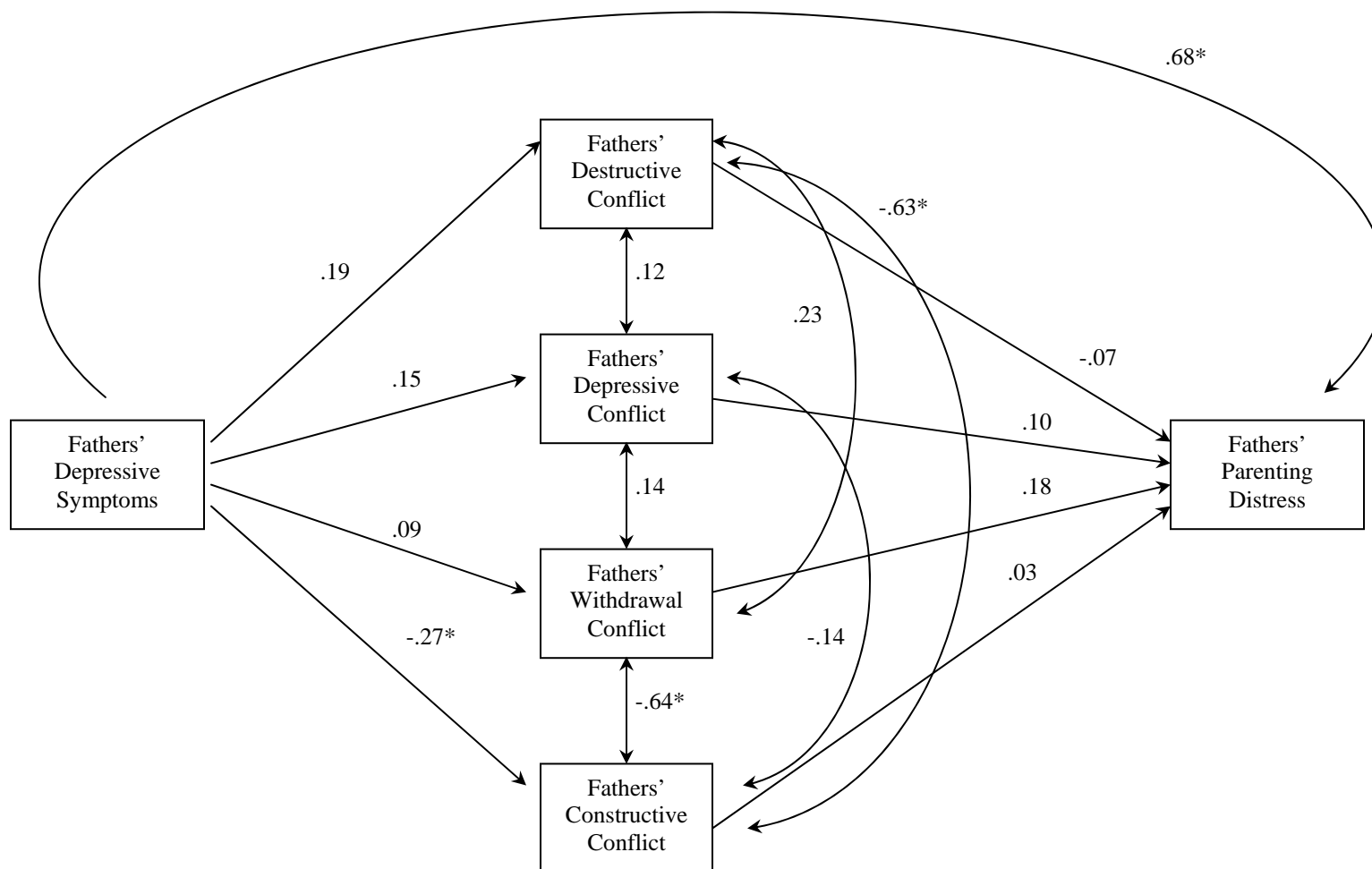


Figure 5. Model Examining Fathers' Conflict Styles as Mediators of Relationships Between Fathers' Depressive Symptoms and Parenting Distress.

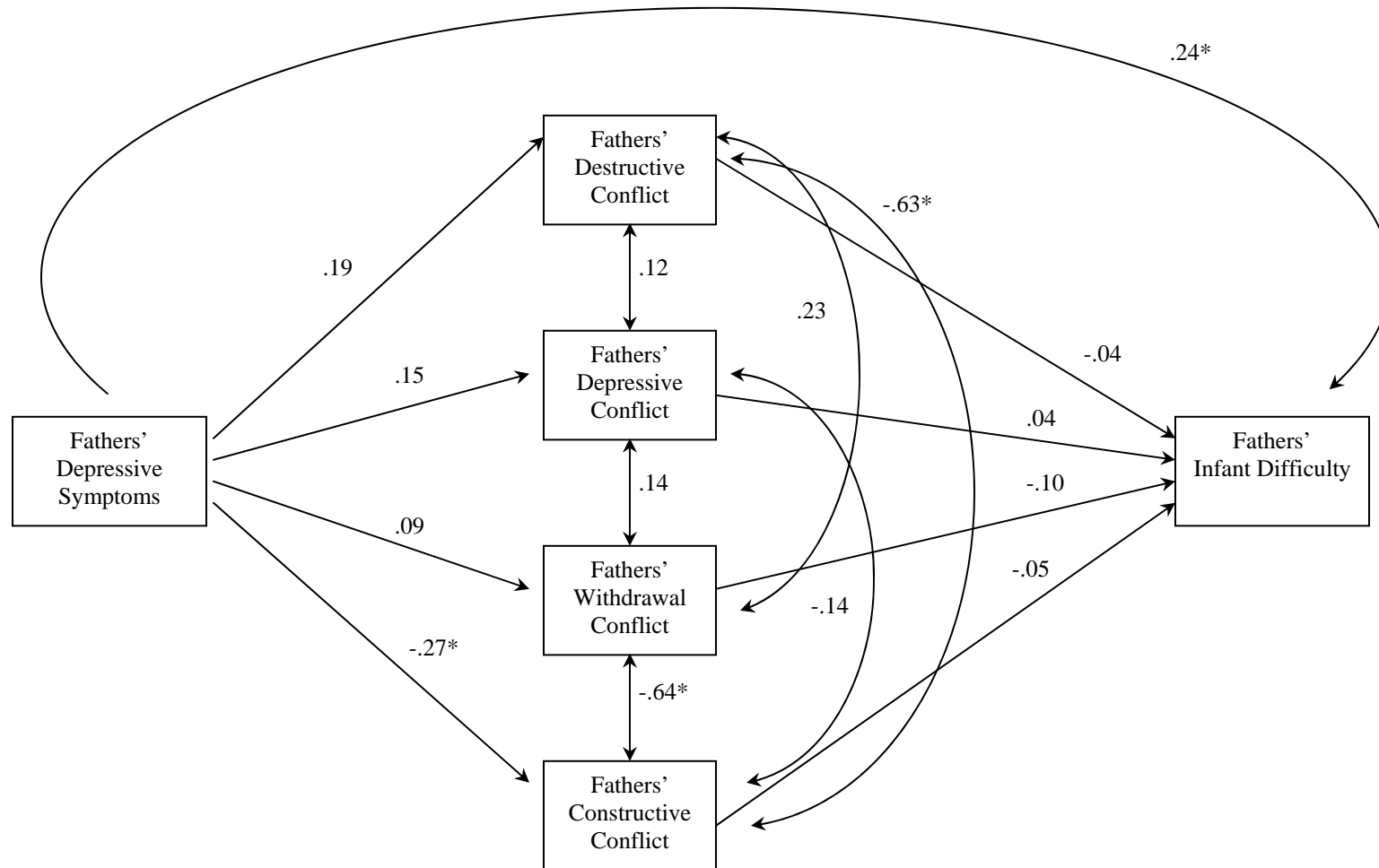


Figure 6. Model Examining Fathers' Conflict Styles as Mediators of Relationships Between Fathers' Depressive Symptoms and Infant Difficulty.

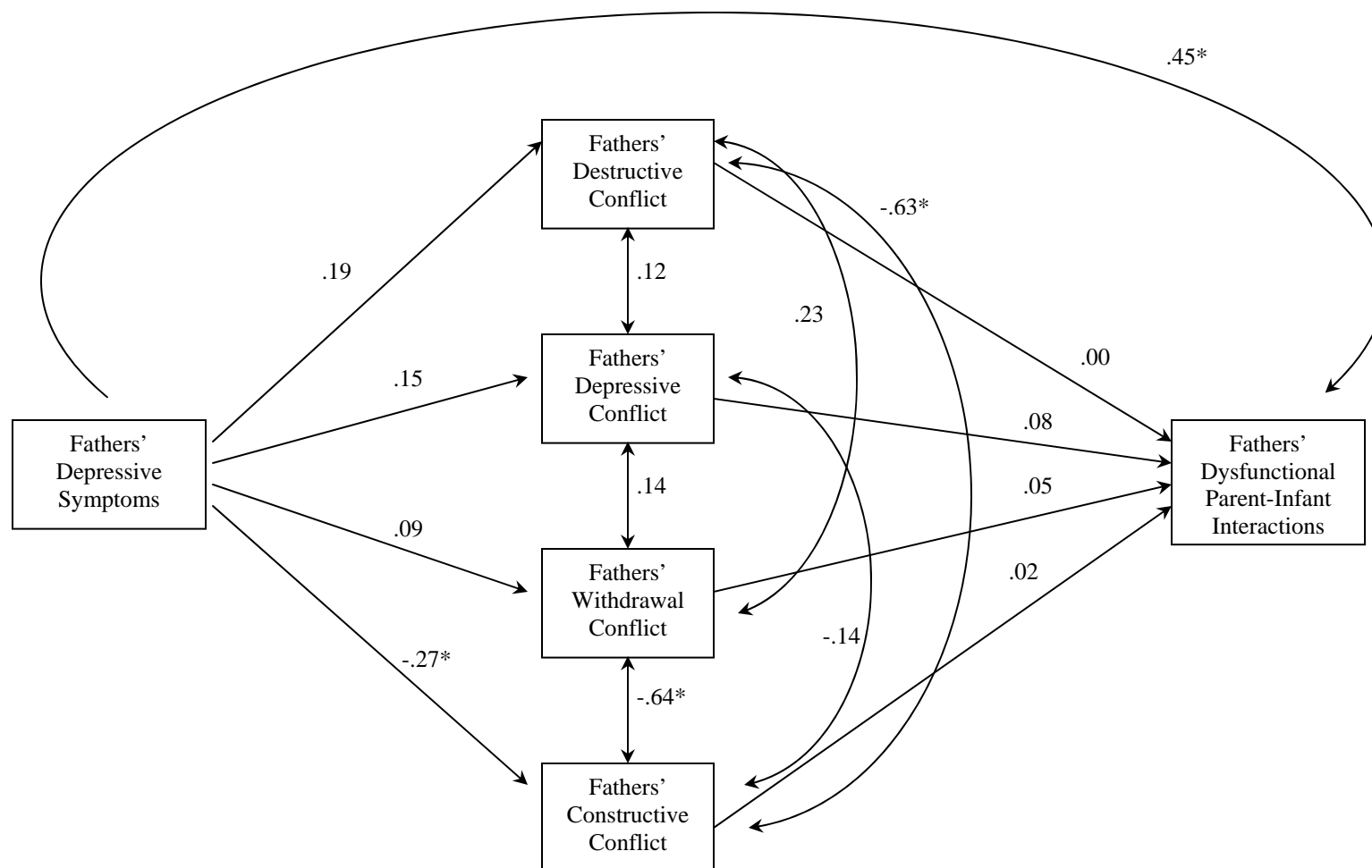


Figure 7. Model Examining Fathers' Conflict Styles as Mediators of Relationships Between Fathers' Depressive Symptoms and Dysfunctional Parent-Infant Interactions.

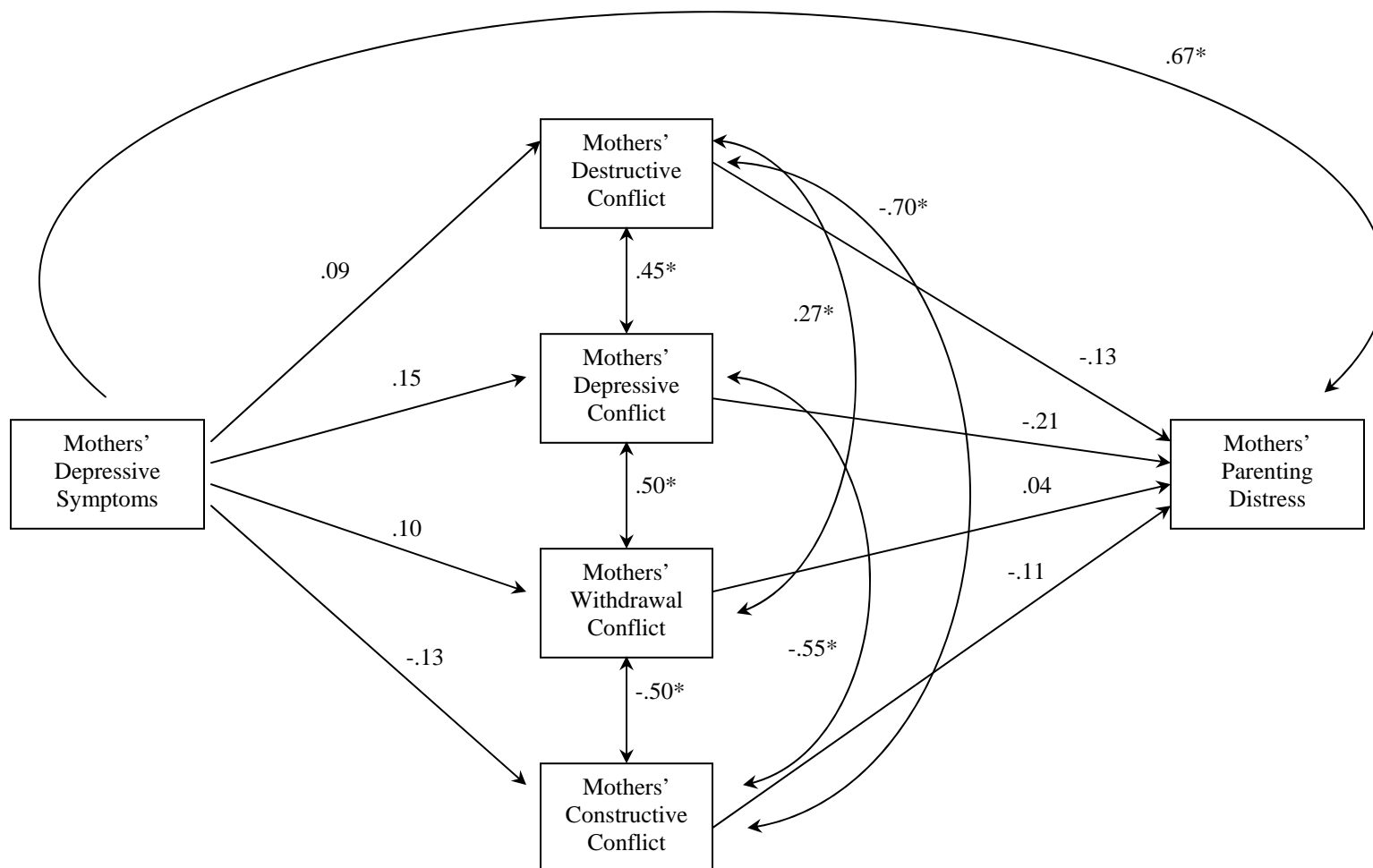


Figure 8. Model Examining Mothers' Conflict Styles as Mediators of Relationships Between Mothers' Depressive Symptoms and Parenting Distress.

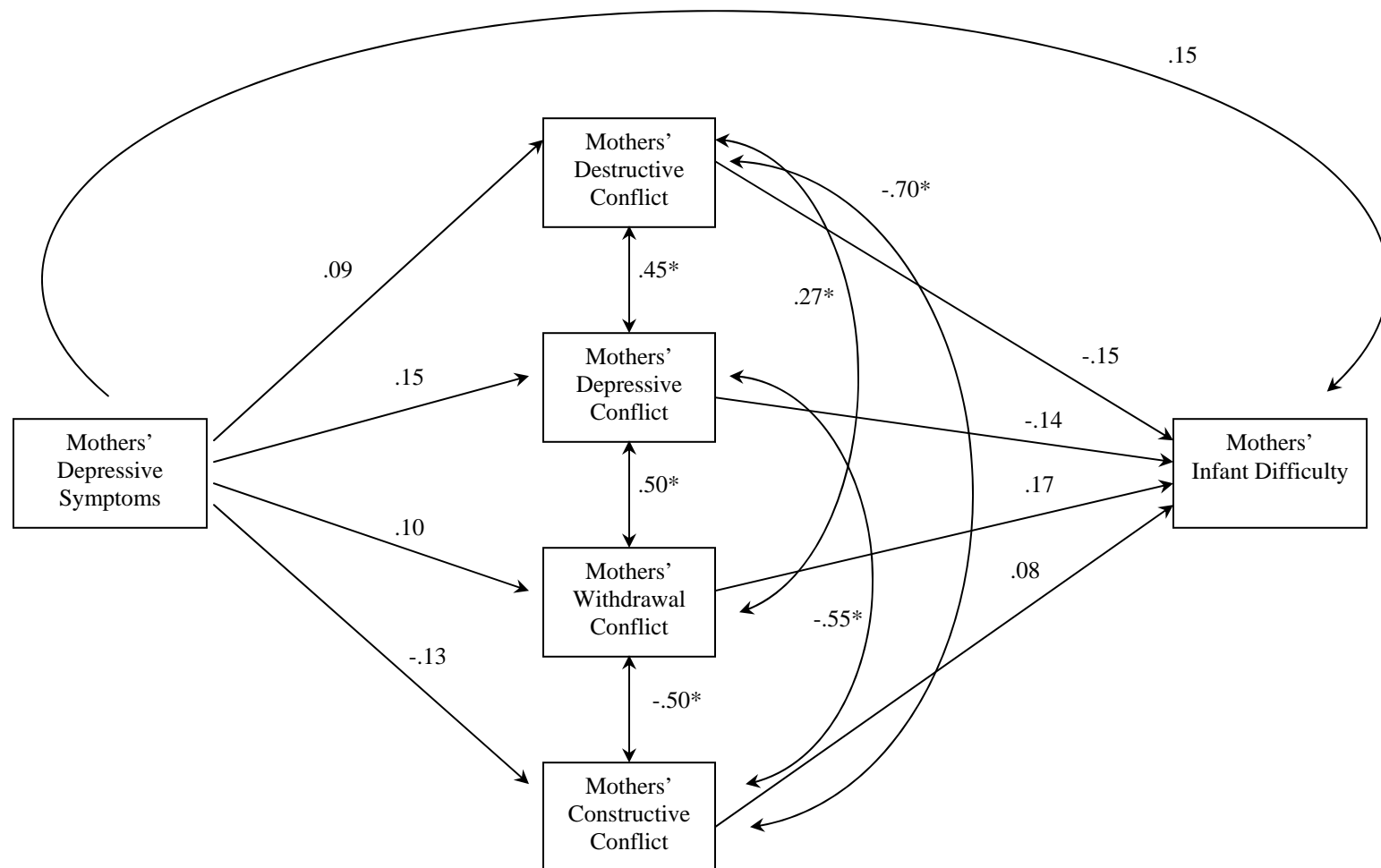


Figure 9. Model Examining Mothers' Conflict Styles as Mediators of Relationships Between Mothers' Depressive Symptoms and Infant Difficulty.

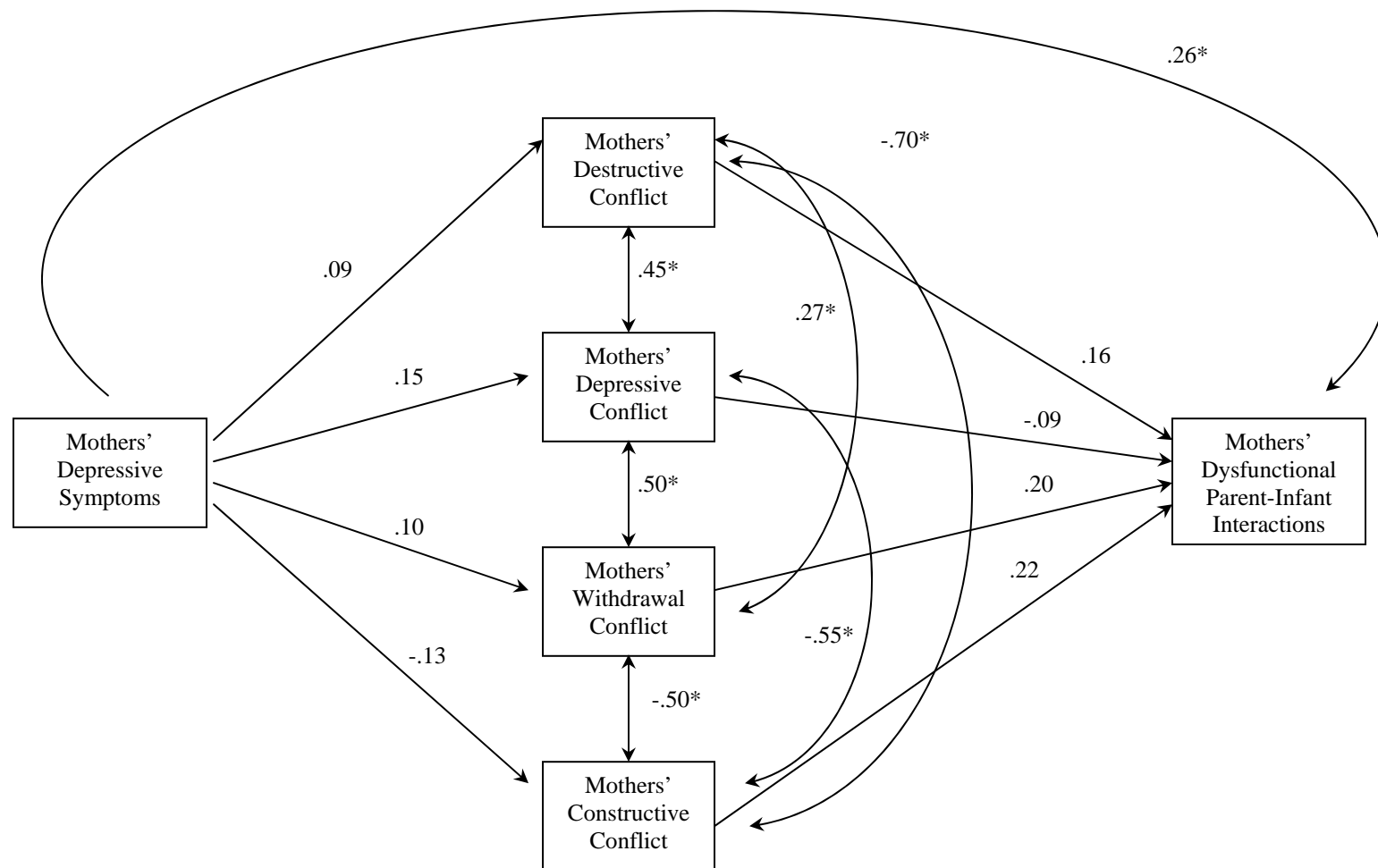


Figure 10. Model Examining Mothers' Conflict Styles as Mediators of Relationships Between Mothers' Depressive Symptoms and Dysfunctional Parent-Infant Interactions.