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Relationship Satisfaction and Coparenting over the Transition to Parenthood: Depression, Division of Labor, and Child Temperament as Moderators

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RELATIONSHIP SATISFACTION AND COPARENTING OVER THE TRANSITION TO PARENTHOOD: DEPRESSION, DIVISION OF LABOR, AND CHILD TEMPERAMENT AS MODERATORS

by

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ABSTRACT

RELATIONSHIP SATISFACTION AND COPARENTING OVER THE TRANSITION TO PARENTHOOD: DEPRESSION, DIVISION OF LABOR, AND CHILD TEMPERAMENT AS MODERATORS

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The transition to parenthood is a uniquely important time in the human experience. New parents must reorganize their patterns of behavior and respective roles in order to include and care for a new child. Parents' ability to navigate this process has great implications for child adjustment and healthy development. The purpose of the present study was to evaluate the association of relationship satisfaction over the transition to parenthood and early coparenting interactions. The archival data utilized were collected as part of a longitudinal study of first time parents funded by the National Institute of Child Health and Human Development (NICHD) in 2011. This study assessed three dimensions of coparenting, cooperation, warmth, and verbal sparring, which were coded during videotaped family sessions at 3 months postpartum. Relationship satisfaction was measured during the 3rd trimester of pregnancy and at 1 month postpartum. Depression, division of labor in the household, and child temperament have also been associated with relationship satisfaction and coparenting. The ability of these factors to act as moderators impacting the strength of the association between relationship satisfaction and coparenting for first time parents was assessed. Findings indicated that father variables, such as father relationship satisfaction and father depression were important factors in the development of coparenting. Father depression interacted with father relationship satisfaction to predict all three coparenting variables. For fathers without depressive symptoms, relationship satisfaction

significantly predicted coparenting; however, this was not the case for the fathers with depressive symptoms. Results suggest that if a father is depressed satisfaction in his relationship may not prevent the development of poor coparenting. Mother violated expectations for the division of labor positively predicted mother relationship satisfaction and difficult child temperament negatively predicted father relationship satisfaction as expected. These variables were not found to impact the strength of the association between father or mother relationship satisfaction and coparenting. The family systems and clinical implications of these findings were discussed and future directions for research were identified.

This thesis is dedicated to my parents, Ellen and Steven Stone and Neil Block.

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CHAPTER I

INTRODUCTION

The transition to parenthood is a particularly important time period for all members of the family unit. As far back as the 1950s researchers have characterized the addition of a new family member to the family system as a crisis (LeMasters, 1957). How parents navigate this period of transition has implications for the marital relationship, as well as child adjustment (Grych & Fincham, 1990). As most divorces occur within the first 5 years of marriage, a period during which most couples have their first child, it seems that better understanding of this transition is warranted (Bramlett & Mosher, 2001). Children of parents in high-conflict marriages, whether the parents divorce or not, are more likely to display symptoms of disruptive behavior, antisocial behavior, difficulty with peers and authority figures, depression, other psychological disorders, and academic and achievement problems (Kelly, 2000). Historically, a small, but significant decline in parental relationship satisfaction has been observed over the transition to parenthood (Belsky & Rovine, 1990; Van Egeren, 2004). Although non-parents also experience a decline in relationship satisfaction, the decline many parents experience is steeper and occurs over a shorter period of time (Belsky & Pensky, 1988).

Researchers have found change in the relationship quality of new parents to be associated with coparenting behavior. Although coparenting shares important interpersonal qualities with relationship satisfaction, it is a separate construct referring to "the way parents work together in their roles as parents" (Feinberg, 2003, p.1499). Couples with low relationship satisfaction are more likely to demonstrate poorer coparenting; and this association is related to a number of individual and couple characteristics. Coparenting has been found to develop differently for mothers and fathers (Van Egeren, 2004). Factors such as paternal and maternal depression,

division of labor in the home, and child temperament can influence the association between relationship satisfaction and coparenting. Depression has shown a bidirectional association with relationship satisfaction (Bower, Jia, Schoppe-Sullivan, Mangelsdorf, & Brown , 2013; Matthey, Barnett, Ungerer, Waters, 2000), and is associated with poorer coparenting (Elliston, McHale, Talbot, Parmley, Kuersten-Hogan, 2008; Solmeyer & Feinberg, 2011). Satisfaction with the division of household and childcare tasks influences both relationship satisfaction and coparenting in different ways for mothers and fathers (Van Egeren, 2004). Child temperament appears to be an especially important factor in predicting the way paternal coparenting experiences develop (Van Egeren, 2004).

The present study sought to explore the link between relationship satisfaction during the 3rd trimester and 1 month postpartum and coparenting at 3 months postpartum for first time parents. Depression, division of labor, and child temperament were examined as moderators of this association. The purpose of the current study was to investigate how these moderators change the strength of the association between relationship satisfaction and coparenting over the transition to parenthood. Mother and father effects were examined. This may clarify individual, parent, and family contexts that change the impact of relationship satisfaction on coparenting.

Family Systems

This study is informed by family systems theory (Minuchin, 1985). Family systems theory proposes that all members of the family are interdependent and can only be understood in the context of the whole system. Subsystems, composed of two or three family members, also exist within the family system. These impact the family system through their emotional and behavioral feedback. The theory also states that families develop patterns that resist change over time. When a significant event occurs that disrupts a family's natural homeostasis, new patterns

must emerge to re-stabilize the system (Minuchin, 1985). The arrival of a baby is one such significant event, which necessitates that parents reorganize their patterns of behavior and respective roles in order to include and care for the new family member (Cox & Paley, 1997). Parents, as a subsystem of the family unit, must develop boundaries and implicit rules and patterns for interacting with the new child (Minuchin, 1985). These can be impacted by social contextual factors, such as ethnicity, income, and education (Thomson, Hanson, & McLanahan, 1994). It follows that healthy mutual adaptation to the introduction of the child would lead to successful coparenting. Differing attitudes about how childcare tasks should be divided and unfulfilled role expectations can lead to marital dissatisfaction.

Relationship Satisfaction

When following couples over the transition to parenthood, researchers have generally found a small, but significant drop in relationship satisfaction (Belsky & Pensky, 1998; Cowan & Cowan, 1995). It is assumed that intimacy and communication levels decline with the arrival of a child, leading to decreased marital quality (Belsky & Rovine, 1990). Belsky and Rovine (1990) found that wives experienced a greater negative change in satisfaction than husbands from the last trimester of pregnancy through three years postpartum. Specifically, wives reported greater declines in love for their spouse, increased ambivalence in the relationship, and increased conflict. Importantly, however, about 30% of spouses experienced a decrease in amount of conflict and disagreement over the study time period, and more than 40% experienced no change in feelings of love over time. Shapiro, Gottman, and Carrere (2000) also found that for about one third of couples with their first child, marital satisfaction stayed stable or increased over the transition to parenthood. It appears that the actual amount of change in satisfaction varies greatly

for individual couples, depending on various characteristics of the husbands and/or wives, their relationship, and characteristics of their child (explored in the discussion of moderators below).

Many studies assessing relationship satisfaction during this time period have been criticized for methodological choices, such as cross-sectional designs, timing of data collection, failure to include a non-parent control group, and failure to assess for planned/unplanned pregnancy (Doss, Rhoades, Stanley, & Markman, 2009). Recent studies have utilized longitudinal designs with data collection beginning prior to marriage or during the first year of marriage (Doss et al., 2009; Lawrence, Rothman, Cobb, Rothman, & Bradbury, 2008). In this way, trajectories can be compared for couples who become parents and those who do not, as well as for couples who plan their pregnancies and those who do not. Lawrence et al. (2008) found that compared to nonparents, parents displayed greater declines in marital satisfaction; however, pre-pregnancy marital satisfaction protected couples from this decline, as did having planned the pregnancy for husbands, but not for wives. Other studies have found no difference between parents and nonparents in the overall magnitude of change in relationship quality. Following couples for eight years, starting before marriage, Doss et al. (2009) found that compared to those who did not become parents, those who became parents experienced more sudden decreases in positive aspects of relationship functioning, as well as more sudden increases in negative aspects. These changes tended to last over the study period. By the end of the eight years, nonparents showed a decline in relationship quality similar in magnitude to parents, only reached more gradually. Although there have been slightly different findings depending on the methods and variables studied, most evidence on the topic suggests that the transition to parenthood is marked by significant changes in relationship quality.

Coparenting

Previous research has established relationship satisfaction and coparenting as related, but separate constructs (McHale, 1995; Margolin, Gordis, & John, 2001). Aspects of relationship satisfaction, such as problem solving, trust, and perceived support, are similar to aspects of coparenting (Hatton, Conger, Larsen-Rife, Ontai, 2010); however, the focus of the marital relationship is on the functioning of the dyad, whereas the focus of the coparenting relationship is on the wellbeing of the child (Margolin et al., 2001). In 2004, Van Egeren and Hawkins drew from previous attempts by Feinberg (2002, 2003) to develop a comprehensive definition of coparenting. They identified four dimensions: *coparenting solidarity, coparenting support, undermining coparenting, and shared parenting*.

Coparenting solidarity is the affective aspect of coparenting, in which parents grow to create a unified dyad with the mutual goal of raising their child (Van Egeren & Hawkins, 2004). This dimension includes expressions of warmth and positive emotion (McHale, 1995). A high degree of coparenting solidarity is evidenced by reports of parents growing closer as a result of parenthood and having similar childrearing values (Van Egeren & Hawkins, 2004). *Coparenting support* is evidenced by behavior or the perception of behaviors that facilitate the partner's parenting goals (Van Egeren & Hawkins, 2004). In triadic interactions parents may demonstrate coparenting support by building on the other's lead or by assisting one another in play with the child. One parent passively observing the other interact with the child is not supportive parenting; that parent must be reinforcing the other's parenting goal in some way. *Undermining coparenting* involves implicit or explicit attempts to thwart the partner's parenting goals (Van Egeren & Hawkins, 2004; Belsky, Crnic, & Gable, 1995). This includes expressions of emotionally tinged criticism or lack of respect, as well as more subtle displays, such as interrupting when the partner is talking to the child. Parents may also express competing

emotional messages to the child or competing directions. Feinberg (2003) notes that key aspects of supportive and undermining coparenting are partner cooperation and conflict.

Shared parenting is the broadest of the four coparenting dimensions (Van Egeren & Hawkins, 2004). It includes the extent of the division of childcare labor by reports of how much time each parent spends on childcare tasks. It also includes the degree of balance in limit setting (one parent's versus other's responsibility for limit setting) and on each parent's perception of fairness about how responsibilities are divided. McHale (1995) describes two ways to measure shared parenting during family interaction: *balance of involvement* refers to how involved in parenting one partner is in relation to the other and *mutual involvement* refers to the amount of time both parents are simultaneously involved with the child.

Association between Relationship Satisfaction and Coparenting

A variety of studies have looked at the association between relationship satisfaction and coparenting. Many show spouse and/or child gender differences, and some explore moderators, such as parent mental health, child temperament, and division of childcare. Belsky, Youngblade, Rovine, and Vollins (1991) followed 100 families over 3 years, assessing marital quality at 3, 9, and 36 months. Parenting was observed during free play and teaching sessions. Results indicated that father parenting interactions were more influenced by the marital relationship than mother parenting interactions, such that low marital satisfaction for men was associated with more negative and intrusive father-child interaction. This association was not seen in mothers. The authors hypothesized that for men the marital relationship and parent-child relationship may be regarded as one construct meriting involvement or not, while for women the two relationships are differentiated. They went on to suggest that when there is strain in the marital relationship some mothers may compensate by being more involved with the child, which accounts for the

association of a deteriorating marriage and positive mother-child interaction observed in some couples (Belsky et al., 1991).

McHale (1995) observed couples, the majority of who were first time parents, interacting with infants in their first year. He classified coparenting interaction patterns along three dimensions – hostility-competitiveness, family harmony, and parenting discrepancy. These patterns were not related to self-reported marital distress, but were related to observed marital distress. Observed marital distress was measured with a semi-structured couple interview and rated according to six dimensions: intimacy of communication, leadership/power, autonomy, warmth, problem-solving, and conflict. Parents in distressed marriages were more likely to display hostile-competitive interactions with infant boys, but to display discrepant levels of parenting involvement with infant girls. Hostile-competitive coparenting was associated with marital conflict, while parenting discrepancy was associated was unequal marital leadership/power. Interestingly, some couples demonstrating marital distress did not demonstrate hostile-competitive coparenting, but they did score low on family harmony indicating that there is some spillover even if they try to keep the marital relationship and the coparenting relationship separate (McHale, 1995). These results suggest that observed variability in coparenting can be linked back to specific deficiencies in the marital relationship.

Coparenting has been associated with relationship satisfaction prenatally, postnatally, and with change across the transition to parenthood. Van Egeren (2004) examined self-reports of marital and coparenting experiences with observed marital and coparenting interactions over the transition to parenthood. Only first time parents participated in the study. Coparenting experiences measured the extent to which each parent felt that their partner 1) supported them in their parenting judgments, 2) was concerned with the well-being of the child, and 3) was

committed to cooperation in the parental and family units. Van Egeren (2004) found that pre-birth self-reported marital experiences were associated with the overall level of self-reported coparenting experiences at 1, 3, and 6 months postpartum. However, pre-birth observed marital interactions were not associated with trajectories of improved or deteriorating reported coparenting experiences. Post-birth marital experiences were positively related to both parents' overall level of coparenting experiences. Surprisingly, however, as post-birth linear trajectories of marital experiences improved, experiences of coparenting deteriorated. Similar to the findings of McHale (1995), it is possible that one relationship is maintained at the expense of another. These results show a clear association between relationship satisfaction and coparenting; yet, the association appears to vary over time. This association was also shown to vary as a result of parent gender, division of childcare, and child temperament. Fathers' observed marital interactions significantly influenced the extent that both parents felt supported and validated in coparenting. Father positive interactions in the pre-birth marital relationship may be especially important to the development of later coparenting for both spouses.

Depression

The psychological resources of the parent are important to consider in any model of parental functioning (Belksy, 1984). In Belksy's model (1984) a bidirectional relationship is posited between parents' contextual stress and support and their psychological states, such that one affects the other and vice versa. One of the most important sources of support for parents is the marital relationship, which Belsky saw as important enough to describe separately from other contextual sources of support and strain. Following this idea of a bidirectional relationship, it follows that relationship quality can contribute to a parent's depression, and a parent's depression can contribute to relationship quality (Whisman, 2001). Feinberg (2003) includes

psychological factors in his ecological model of coparenting under the factor of parental adjustment. Parental adjustment includes parental self-efficacy, as well as depression related to the pressures of parenthood. Feinberg (2003) posits that the coparenting relationship may influence parenting and child outcomes indirectly through parental adjustment, which is a construct partially determined by the marital relationship and parent depression.

Many studies have found an association between mental health and relationship satisfaction over the transition to parenthood. Both women's and men's depression and anxiety have been linked to relationship quality and satisfaction (Figueiredo et al., 2008). Figueiredo et al. (2008) found from the second trimester to two weeks postpartum, women and men self-reporting a more negative relationship with their partner showed higher depression and anxiety than those with a less negative relationship with their partner. The authors also found that women and men participants who rated their relationship more negatively had partners with higher depression than participants who rated their relationship less negatively (Figueiredo et al., 2008). It appears that the relationship satisfaction of one partner can impact not only his/her mental health, but also the mental health of his/her partner.

Bower et al. (2013) assessed first time parents during the third trimester of pregnancy and at three and six months. Similar to Figueiredo et al. (2008), they found that those more satisfied with their relationship during pregnancy had partners low in negative emotionality. Mothers saw greater declines in relationship satisfaction than fathers. Declines in relationship satisfaction predicted higher levels of depression over the study period. Some studies show the association between relationship satisfaction and depression varies depending on the time of postpartum assessment (Matthey et al., 2000). Matthey et al. (2000) examined depression with personality, parent relationships, and partner relationships as risk factors. They found that at 6 months

postpartum depression was associated with the couples' relationship with their own parents, as well as personality variables such as neuroticism. It was only by one year that depression was associated with the partner relationship, especially for mothers.

Depression and relationship satisfaction have also been examined in the context of coparenting. Elliston et al. (2008) successfully tested the utility of a negotiation task to measure coparenting withdrawal, which was rated according to the extent that parents drew back from active communication and collaboration. They found that fathers' prenatal marital distress marginally predicted their coparenting withdrawal; however, this was not the case for mothers. Further, along these lines, they found that men's increased depressive symptomology was significantly correlated with their increased coparenting withdrawal; this pattern was not seen for women (Elliston et al., 2008). Hughes, Gordon, and Gaertner (2004) found that marital consensus was a significant predictor of parenting alliance for both parents, and that depression was a significant predictor for wives. Analyses using both spouses' data indicated that wives' perceptions of consensus, as well as wives' depression, significantly predicted both spouses' parenting alliance.

Other studies have demonstrated the association of depression with undermining and supportive coparenting. Bronte-Tinkew et al. (2010) found a negative association between paternal aggravation and stress in parenting and fathers' supportive coparenting and engagement. Depression was a significant covariate in this model (Bronte-Tinkew et al., 2010). Solmeyer and Feinberg (2011) found coparenting support was negatively associated with depression for fathers, while in the same direction but not significant for mothers. Undermining coparenting was associated with depression and parenting stress for men and women, as well as lower levels

of parental self-efficacy. The interaction of child temperament and coparenting predicted depression (Solmeyer & Feinberg, 2011).

Division of Labor and Child Temperament

One of the most tangible adjustments that must be made with the arrival of a new child is how to divide household and childcare tasks between the two parents. Research has shown that the division of labor following childbirth tends to become more traditional with mothers taking on more of the responsibilities than prior to childbirth (Belsky, 1985; MacDermid, Huston, McHale, 1990; Khazan, McHale, & Decourcey, 2008). However, both parents routinely overestimate the degree to which the division of labor will be equal between the two parties (Belsky, 1985; Khazan et al., 2008). Violated expectations about how tasks will be divided following childbirth negatively impacts the marital relationship (Belsky, 1985; Hackel & Ruble, 1992; Khazan et al., 2008). During the third trimester, Belsky (1985) measured expectations of how parents' lives would change with the addition of a child and then measured actual experiences at 3 and 9 months. He found that violated expectations, including expectations about the division of childcare, contributed significantly more to negative marital feelings at 3 months than at 9 months. This was especially the case for mothers, who were more involved in childcare than expected particularly during the first 3 months. Fathers also experienced a decline in marital satisfaction with violated expectations, but to a lesser extent than mothers.

Van Egeren (2004) found that violated expectations about the division of childcare impacted coparenting experiences, even after controlling for the marital relationship. Both mothers and fathers who did less childcare experienced coparenting more positively. It was most common that mothers' expectations were violated such that they did more childcare, and fathers' expectations were violated such that they did less childcare. Therefore, mothers experienced

coparenting more negatively. Notably, fathers who increased childcare responsibilities over the first 6 months postpartum did not experience coparenting more negatively. Their experience essentially became in line with their expectations. Initially, number of hours worked by mothers significantly predicted negative coparenting experiences for mothers and fathers. However, when mothers' expectations about the division of childcare were not violated and included in the model, maternal employment became an insignificant predictor. This finding suggests that the division of childcare is more important than maternal employment status in the development of coparenting experiences (Van Egeren, 2004).

Van Egeren (2004) also found that fathers who perceived their children to have more difficult temperaments reported worse coparenting relationships; however, mothers with similar perceptions did not report worse coparenting. The author suggests that when an infant has a more difficult temperament a father may, by necessity, be more involved in childcare and find it a struggle.

Khazan et al. (2008) examined the impact of violated wishes for the division of household and childcare labor on marital satisfaction and coparenting processes in playful and mildly stressful situations. Families in which there was a greater discrepancy between ideal and actual division of labor reported lower marital satisfaction. The violation of mothers' ideal division of labor predicted more observed coparenting conflict during stress-inducing situations, whereas the violation of fathers' ideal predicted less collaboration during the stress-inducing situations and more conflict on the playful situations. It appears that during stressful situations mothers whose wishes were violated tend to get angry and create conflict, whereas fathers whose wishes were violated tend to withdraw.

Although the division of labor is included in many coparenting models (Feinberg, 2003; Van Egeren & Hawkins, 2004), I chose to consider it separately in this study (as did the studies above) so that self-reported variables associated with division of labor could be examined apart from observed coparenting behaviors. Belsky and Hsieh (1998), similarly, considered observed division of labor separately from observed coparenting dynamics in order to determine the relative importance of each. They found that coparenting expressions of support vs. undermining played a larger role than division of labor in distinguishing between marriages that deteriorated over a 5-year period from those that stayed positive. However, division of labor was measured without the inclusion of childcare tasks and was only measured by limited observation, not self-report. Data about ideal vs. actual partner involvement was not collected. Belsky and Hsieh (1998) concluded that coparenting processes related to how the child is parented play a larger role in determining relationship functioning than how tasks are divided in the household, but more evidence is needed.

The effect of child temperament on family processes varies for mothers and fathers and according to contextual factors. Burney and Leerkes (2010) found that mothers who perceived their infants as more reactive only reported poorer coparenting when the infant had difficulty being soothed and expectations about the division of parenting were violated. On the other hand, fathers reported more negative coparenting when they reported both their infant as reactive and their marital quality as low. It appears that child temperament affects the coparenting relationship through interactions with division of labor and the marital relationship.

The Current Study

The current study aims to understand the association between relationship satisfaction and coparenting over the transition to parenthood in first time parents. Relationship satisfaction

typically declines over the transition to parenthood, particularly for first time parents, making the transition an especially relevant time to study effects on coparenting (Belsky & Rovine, 1990; Van Egeren, 2004). Relationship satisfaction has been found to predict coparenting (McHale, 1995). Previous research has found that this association is greatest for fathers, who tend to regard the marital relationship and the coparenting relationship as more interconnected constructs (Belsky et al., 1991; Van Egeren, 2004). Other factors have been linked to both relationship satisfaction and coparenting. Depression, in particular, demonstrates a bidirectional relationship with relationship satisfaction (Bower et al., 2013; Matthey et al., 2000), and is associated with more dysfunctional coparenting (Elliston et al., 2008; Solmeyer & Feinberg, 2011). Violated expectations for the division of household labor and childcare are also associated with deficits in relationship satisfaction and coparenting, particularly for mothers who typically experience greater violated expectations (Belsky, 1985; Van Egeren, 2004; Khazan et al., 2008). Lastly, difficult child temperament has been specifically linked to father coparenting interactions and relationship satisfaction (Van Egeren, 2004; Burney & Leerkes, 2010). Nevertheless, there is not a comprehensive understanding of how these variables interact with relationship satisfaction and coparenting for mothers and fathers. Therefore, this study proposes to examine depression, division of labor, and child temperament as they impact or change the association between relationship satisfaction and coparenting.

In the present study, I analyzed archival data from a longitudinal study of first time parents funded by the National Institute of Child Health and Human Development (NICHD) in 2011. The specific hypotheses presented are original to the current author and representative measures were chosen accordingly. I examined how relationship satisfaction during the 3rd trimester and at 1 month postpartum predicts coparenting at 3 months postpartum. I also used the

change in relationship satisfaction from the 3rd trimester to 1 month to predict coparenting. I analyzed three representative dimensions of coparenting from observed triadic family interactions: family cooperation, family warmth, and verbal sparring. These were analyzed in three separate models, although they are described in conjunction below for the sake of parsimony. The following moderators of the association between relationship satisfaction and coparenting will be tested: depression, division of labor, and child temperament. I examined father and mother effects.

All analyses controlled for age, education, race, and work status as these have been linked to relationship quality and coparenting in past research. Greater father and mother age and education have been associated with positive marital change across the transition to parenthood (Belsky & Rovine, 1990). Experience and knowledge about parenting may account for this (Stright & Bales, 2003). Burney & Leerkes (2010) found that white fathers rated their coparenting relationship more positively than minority fathers, but white mothers did not. Feinberg (2003) includes both race and work status in his ecological model of coparenting.

Hypothesis 1. It was hypothesized that higher levels of relationship satisfaction (RS) for both parents would predict healthier coparenting (CP; higher warmth, cooperation, and lower verbal sparring). Father RS was expected to show a larger effect than mother RS. In addition, it was hypothesized that there would be an interaction between mother RS and father RS, such that low levels of father RS would predict CP when mother also has low levels of RS.

Hypothesis 2. It was hypothesized that worsening RS from the 3rd trimester to 1 month postpartum would predict less healthy CP at 3 months postpartum.

Hypothesis 3. It was hypothesized that higher levels of depression for both parents would predict lower levels of RS. For mothers, it was hypothesized that there would be an interaction

between depression and RS in predicting CP, such that CP would be at its strongest when depression levels were at their lowest and RS levels were at their highest. With this interaction, I expected that CP would be moderately poor when depression was higher OR RS was lower, but markedly poor when there were high levels of depression AND low levels of RS.

Hypothesis 4. It was hypothesized that mother *violated expectations* for the division of labor would predict lower levels of RS. It was also hypothesized that mother *violated expectations* for the division of labor would predict less healthy CP. In addition, it was predicted that mother *violated expectations* would interact with RS in predicting CP, such that CP would be at its strongest when there were low *violated expectations* and high levels of RS. With this interaction, I expected that CP would be moderately poor when there were high *violated expectations* OR low levels of RS, but markedly poor when there were high levels of *violated expectations* AND low levels of RS.

Hypothesis 5. It was hypothesized that difficult child temperament would predict lower levels of CP. It was hypothesized that child temperament would interact with father RS, such that CP would be at its strongest when temperament was easier and father RS was high. With this interaction, I expected that CP would be moderately poor when temperament was more difficult OR father RS was low, but markedly poor when temperament was more difficult AND father RS was low.

CHAPTER II

METHOD

Participants

Seventy-eight mother-father pairs and their babies participated in this study. Data were collected as part of a longitudinal study funded by the National Institute of Child Health and Human Development (NICHD) in 2011 with a main aim to examine perinatal depression in both mothers and fathers. All participants were first time parents pregnant with their first child. They were recruited during the third trimester of pregnancy and assessed at 1, 3, and 6 months postpartum. The mean age of fathers was 31.5 years (*SD* = 5.5), and the mean age of mothers was 29.7 years (*SD*= 5.1). The majority of participants were white (81.4%) and married (86.4%). Most participants were employed full time (73% of fathers and 60% of mothers). Reported annual income was equal to or exceeded $75,000 for 43% of couples.

Inclusion Criteria

To be enrolled in this study, participants had to be adult heterosexual couples. This criterion was defined as individuals who maintain an ongoing relationship, cohabitate, plan to cohabitate with the expected child, and together act as primary caregivers for the child. Couples were eligible if they were between 6 and 9 months pregnant with their first biological child. Parents who had children with other partners or through adoption or foster parenting were not eligible to participate if those other children were expected to be living with them for more than 2 days per week at the time of the infant's birth. Also, if either parent was expected to be absent for the child's first 6 months couples were not eligible. Parents who reported plans to leave the area in the next year, had a history of chronic mental illness (including bipolar disorder or any

history of psychotic symptoms), or who reported being unable to complete lengthy paper and pencil questionnaires and interviews were not included.

Procedures

Recruitment was conducted at 11 sites: 2 large-catchment prenatal education groups, 2 prenatal home visiting programs, and 7 OB/GYN practices. Study enrollment began in June 2010 and closed in June 2011. Because of the aims of the study, the sample (N=78) was selected to over-represent depressed parents. Determined by screening, participants were recruited from depression strata: (a) neither screened positive (n=27), (b) father only screened positive (n=18), (c) mother only screened positive (n=15), and (d) both screened positive (n=18). The study obtained a greater number of participants in group (a); however, the later groups represent lower population base rates. A similar number of participants were obtained for these clinical groups.

A total of 508 individually-completed screenings (219 complete couples) were completed. Out of those 219, 162 (74%) of the couples were eligible to participate in the study. Of those eligible couples, 6 (3.7%) declined enrollment and 75 (46%) were rejected due to various enrollment constraints (i.e., the couple reported a due date occurring after the closing of study enrollment [n = 7], the study was closed to enrollment by the time screening packet was received, enrollment for non-depressed (control) couples was closed [n = 64], or no couple response after numerous contact attempts [n = 4]). Eighty of the eligible couples (49%) were enrolled. One enrolled couple was withdrawn by the PI after completing Visit 1 (one parent did not meet the English language comprehension requirement; evident only after the completion of Visit 1) and replaced with another eligible couple (randomly selected from the same depression stratum as the withdrawn couple) to maintain a final sample size of 80. All enrolled participants had healthy singleton births (37 boys, 43 girls). After the initial screening, the attrition rates were

much lower than expected. Of the 80 couples enrolled in the study, two requested to be withdrawn from the study due to personal scheduling conflicts (one withdrew after completing Visit 2; the other after Visit 3). This pattern represents a 2.5% attrition rate. The remaining 78 families completed all four study visits.

The study was fully explained to all participants. They were encouraged to ask any questions relevant to the study or to information contained in the consent form. Informed consent was obtained from all couples that chose to participate and both partners signed Institutional Review Board approved forms. Couples were reimbursed $50 per person for each of the first two visits, $75 per person for the third visit, and $100 per person for the fourth visit.

The Lausanne Triadic Play (LTP) is the semi-structured procedure that was used to assess mother-father-infant interactions (Fivaz-Depeursinge & Corboz-Warner, 1999). A major objective of this study was to observe and code live coparenting interactions. These interactions were videotaped during participants' third visit with the study at 3 months postpartum. There are four parts to the semi-structured interaction. In the first part, the first parent plays with the infant, while the other is simply present. In the second part, the second parent plays with the infant, while the other is simply present. In the third part, both parents play with the infant as a unit. And lastly, the parents are observed interacting with one-another in the presence of the infant. Family interactions were observed in one of three locations: the home of the participants, designated laboratory space at Eastern Virginia Medical School, or at the Early Family Laboratory at Old Dominion University. The Coparenting Family Rating System (CRFS) is the measure that corresponds with the LTP procedure.

Measures

Coparenting

Coparenting Family Rating System (CFRS). The Coparenting Family Rating System (CFRS) is a tool developed for the purpose of quantifying the everyday behavior displayed in family interactions (McHale, Kuersten-Hogan, & Lauretti, 2001). The system allows for coding of child-parent, parent-parent, and triadic family interactions, such as those displayed in the LTP protocol. Three of the McHale et al. (2001) seven subscales, assessed in the larger NICHD study, were used in the present analysis. These are family cooperation, family warmth, and verbal sparring (see appendix B for descriptions of the observational coding scales). These dimensions are central to family system dynamics and are central to the factors McHale (1995) used to derive his subscales, which he called coparenting harmony, hostility-competitiveness, and coparenting discrepancy. Each dimension is coded on a scale from 1 to 7. For example, a family cooperation score of 4 "describes the 'average' cooperative coparenting pair. Such partners will politely wait turns, watch the ongoing interaction with interest, and on one or two occasions say something affirming, build on the partner's activities, make an attempt at co-action. At other times, momentary miscoordination, interference, boredom, or disengagement may be seen, but it is in the context of cooperative engagement qualitatively different from polite non-connection." Families with high scores on verbal sparring demonstrate "more than one back-and-forth exchange unquestionably hostile or contentious in nature." High scores on family warmth occur when "both parents were exceptionally warmth with the baby and consistently warm with one another."

Graduate and undergraduate students were trained and employed for the purposes of coding the interaction data. In prior samples of infants, toddlers, and preschoolers, McHale et al. (2001) found the Cronbach's alpha reliability coefficients that measure inter-rater reliabilities for the triadic interactions to range from .69 to .83 for cooperation, .73 to .87 for warmth, and .71 to

.87 for verbal sparring. In this particular study, inter-rater reliability ranged from adequate (.64 for warmth and .68 for verbal sparring) to excellent (.79 for cooperation). The cooperation, verbal sparring, and warmth subscales demonstrated the highest reliabilities of the seven assessed in the NICHD study, further substantiating their examination in this work.

McHale et al. (2001) acknowledge that deriving construct validity for observational ratings of whole-family processes, such as the CFRS, is a difficult task. It is difficult for self-report measures to capture the patterns that emerge when a family in its entirety interacts. However, several studies have demonstrated modest, but significant construct validity for the CFRS by comparing scores to measures of marital functioning and family processes. In a study of families of toddlers, observed coparenting competition and verbal sparring was associated with fathers' greater reported differences with their partner in parenting ideology and mothers' greater reported frequency of coparental disagreements (McHale et al., 2001). In families of 4-year-olds demonstrating higher levels of warmth on the CFRS, both mothers and fathers reported their families as more cohesive, expressive, and lower in conflict (McHale et al., 2001).

Despite the above evidence, the ecological validity of the CFRS must always be considered. For instance, although the CFRS was developed to pick up on subtle cues demonstrated by parents, it is certain that social desirability would play some role in interactions, especially when being taped. Despite these limitations, it appears that the CFRS is capturing important systemic processes that other means of evaluation would not be able to detect.

Relationship Satisfaction

The Dyadic Adjustment Scale (DAS). The DAS is one of the most widely used measures of adjustment and relationship quality and satisfaction of cohabitating and married couples (Spanier, 1976). Participants completed the measure at all four time points. Participants

in the NICHD study also completed the PAIR Inventory (Schaefer & Olson, 1981) as a relationship measure; however, the PAIR focuses on intimacy and can be used with individuals in a variety of relationships. The current study was designed to focus on satisfaction in married or cohabiting couples as seen in the subsequent paragraph and for that reason utilizes the DAS. The DAS has a total of 32-items on four subscales: Dyadic Satisfaction, Dyadic Cohesion, Dyadic Consensus, and Affectional Expression. A score can be derived from each subscale or from all items as a total dyadic adjustment score. Sample items include "Do you confide in your mate?" and "How often do you and your mate get on each other's nerves?" The Cronbach's alpha within each subscale ranges from .73 to .94, with the full scale having $\alpha = .96$ (Spanier, 1976). Supporting its validity, the DAS has been found to distinguish between married and divorced couples (Spanier, 1976). The DAS has also demonstrated predictive validity by predicting theoretically correlated constructs, such as child behavior problems and coparenting disagreement (Jouriles et al., 1991).

In contrast to the above information, a large meta-analysis across 91 published studies found the DAS total score reliability range to be between .58 and .96 (Graham, Liu, & Jezioeski, 2006). This wide range led the authors to call into question the generalizability of the full scale's use. In contrast, the Dyadic Satisfaction subscale had a Cronbach's alpha of .85 according to Grahm et al. (2006). This subscale measures the extent to which partners are satisfied with their relationship, which is the particular area of interest for this project. Therefore, only the Dyadic Satisfacton subscale was used for the present study. The alpha for the current sample was .73 for females and .72 for males.

Depression

The Center for Epidemiologic Studies Depression Scale (CES-D). The CES-D is a self-report scale designed to measure depression in the general (non-clinical) population (Radloff, 1977). The Edinburgh Postnatal Depression Scale (EPDS; Cox, Holden, & Sagovsky, 1987) was also used to measure depression in the NICHD study; however, the EPDS has less research support over time, particularly with fathers. Parents completed the CES-D at all four time points in the current study. It consists of 20 items answered on a 4-point Likert scale based on how often the respondent has experienced depressive mood symptoms in the past week. The scale ranges from 0 (rarely or none of the time [less than 1 day]) to 3 (most or all of the time [5 to 7 days]). Items come from 6 scales: depressed mood, feelings of guilt and worthlessness, feelings of helplessness and hopelessness, psychomotor retardation, loss of appetite, and sleep disturbance. Negative and positive statements are included. Sample items include, "I thought my life had been a failure" and "I enjoyed life". The CES-D has been found reliable across gender, age, and race (Knight, Williams, McGee & Olaman, 1997; Radloff, 1977; Roberts, Vernon, & Rhoades, 1989). Internal consistency measured with Cronbach's alpha ranged from .90 in a clinical sample to .85 in the general population (Radloff, 1977). In the present study internal consistency ranged from acceptable to good (fathers $\alpha = .72$; mothers $\alpha = .89$). The CES-D has demonstrated validity in a variety of contexts. The scale has demonstrated construct validity by discriminating between clinical and non-clinical sub-groups, as well as by being sensitive to negative life events (Radloff, 1977). The CES-D also correlates well with other measures of depression and general psychopathology (Radloff, 1977). CES-D scores have been found to predict marital satisfaction (Walker, Isherwood, Burton, Kitwe-Magambo, & Luszcz, 2013), subject matter similar to the present work.

Division of Labor

The Who Does What (WDW). The WDW is a self-report scale that measures the actual and ideal division of family tasks between husbands and wives (Cowan & Cowan, 1988). Both spouses completed the survey at all study time points. It consists of three subscales with 12 items each, including household and family tasks, family decisions, and child-related tasks. Examples from the household and family tasks subscale include cleaning and laundry. Examples from the family decisions subscale include deciding how time together is spent and financial planning. Examples from the child-related tasks subscale include feeding the baby and changing the baby's diapers. Items are rated twice on a 9-point Likert scale according to "How it is now" and "How I would like it to be". A rating of a 1 indicates that the wife does it all, a rating of a 9 indicates that the husband does it all, and a rating of a 5 indicates that they do an equal share. An index of satisfaction can be computed for each of the 3 subscales reflecting the absolute discrepancy between "How it is now" and "How I would like it to be" (Cowan & Cowan, 1988). This index represents how close the division of labor comes to meeting the partner's ideal and was utilized in the present study.

Cowan and Cowan (1988) demonstrated good internal consistency (Cronbach's alpha) for the WDW (α=.92). In 1999, they also found Cronbach's alpha and Spearman-Brown's split-half reliabilities to range from .92 to .99. In the present study, alphas of the three scales of the WDW ranged from .65 to .73 for mothers and from .65 to .84 for fathers. Demonstrating conclusion validity, paternal scores on the household tasks subscale of the WDW have been associated with less child neglect (Dubowitz, Black, Kerr, Starr, & Harrington, 2000). McHale et al. (2004) found that maternal scores on the child-related tasks subscale predicted future coparenting cooperation and warmth. Scores on the WDW have also been associated with marital satisfaction.

Infant Temperament

The Early Infancy Temperament Questionnaire (EITQ). The EITQ was designed to assess the temperament of infants from 1 to 4 months of age (Medoff-Cooper, Carey, & McDevitt, 1993). Participants completed the EITQ at 3 months postpartum in the current study. It is composed of 76 items, which fall in 9 categories. Categories include activity, rhythmicity, approach/withdrawal, adaptability, intensity, mood, persistence/attention span, distractibility, and sensory threshold. The following is an example of a mood item: "The infant cries when awake and left alone." One example of an activity items is "The infant lies still (little kicking, splashing) in the bath." Items are scored on a 6-point scale based on frequency of occurrence ("almost never" to "almost always"). Scores in categories/subscales can be summed for a measure of global positive-negative emotional reactivity (NICHD Early Child Care Research Network, 1998).

Cronbach's alpha ranged from .42 to .46 for the 9 categories (Medoff-Cooper et al., 1993). Test-retest reliability ranged from .43 to .87, with higher reliability for older infants. Cronbach's alpha in the present study for the overall scale was .68. Medoff-Cooper et al. (1993) found no significant differences between scores based on gender. The EITQ was developed from the Revised Infant Temperament Questionnaire (Carey & McDevitt, 1978), which measures infant temperament from 4 to 8 months, and shows high correlations with this measure. Early maternal ratings of temperament on the EITQ were found to be related to maternal depression independent of other factors normally associated with depressed mood (Britton, 2011).

Context and Covariates

A multi-purpose questionnaire was used to collect demographic, health, and background information on each parent. Mothers and fathers were asked to report full-time, part-time,

unemployed work status. Mother work status was controlled for in all analyses. Father work status was controlled for in the division of labor analyses. I also controlled for age, race, and mother education.

Reliability Table

Below is a table showing the reliability of all measures in the present study ($N = 78$):

	Reliability Table	**Gender** (if relevant)	**Cronbach's Alpha**
CFRS			
	Cooperation		0.79
	Warmth		0.64
	Verbal Sparring		0.68
DAS			
		Females	0.73
		Males	0.72
CES-D			
		Females	0.89
		Males	0.72
WDW			
	Family Tasks		
		Females	0.65
		Males	0.70
	Family Decisions		
		Females	0.73
		Males	0.65
	Childcare		
		Females	0.67
		Males	0.84
EITQ			0.68

Proposed Analyses

Post-hoc power analysis, using the entire 78 couple sample, conducted with the G*Power 3 computer program (Faul, Erdfelder, Lang, & Buchner, 2007) indicated that I would be able to detect an effect size of .15 (small effect) given power at .80 and alpha at .05 [one tailed].

The hypotheses were tested with a series of hierarchical regression analyses. Three separate models were run for each hypothesis (warmth, cooperation, and verbal sparring respectively), although they are described in conjunction below for the sake of parsimony. For all hypotheses age, race, mother education, and mother work status were held constant. The dependent variable (DV) was most often coparenting (CP) and at times relationship satisfaction (RS). The variables of RS, depression, violated expectations, and child temperament were examined for mothers and fathers in the context of CP.

Hypothesis 1. It was hypothesized that higher levels of RS for both parents would predict healthier CP (higher warmth, cooperation, and lower verbal sparring). Father RS was expected to show a larger effect than mother RS. In addition, it was hypothesized that there would be an interaction between mother RS and father RS, such that low levels of father RS would only predict CP when mother also has low levels of RS.

Analysis 1. CP was entered as the DV. For Step 1, age, education, income, and work status were entered as covariates. For Step 2, mother RS and father RS were entered as main effect predictors. For Step 3, the interaction term *motherRS*fatherRS* was entered.

Hypothesis 2. It was hypothesized that worsening RS from the 3rd trimester to 1 month postpartum would predict less healthy CP at 3 months postpartum.

Analysis 2. CP was entered as the DV. For Step 1, all covariates were entered. A change score was computed for change in RS from the 3rd trimester to 1 month. Then, for Step 2, change in mother RS and change in father RS were entered as main effect predictors.

Hypothesis 3. It was hypothesized that higher levels of depression for both parents would predict lower levels of RS. For mothers, it was hypothesized that there would be an interaction between depression and RS in predicting CP, such that CP would be at its strongest when

depression levels are at their lowest and RS levels are at their highest. With this interaction, I expected that CP would be moderately poor when depression is higher or RS is lower, but markedly poor when there are high levels of depression and low levels of RS.

Analysis 3. Part 1. Mother RS and father RS were entered as the DVs. For Step 1, all covariates were entered. For Step 2, mother depression and father depression were entered as main effect predictors. *Part 2.* CP was entered as the DV. For Step 1, all covariates were entered. For Step 2, mother depression and mother RS were entered as main effect predictors. For Step 3, the interaction term *motherdepression*motherRS* was entered.

Hypothesis 4. It was hypothesized that mother *violated expectations* for the division of labor would predict lower levels of RS. It was also hypothesized that mother *violated expectations* for the division of labor would predict less healthy CP. In addition, it was predicted that mother *violated expectations* would interact with RS in predicting CP, such that CP would be at its strongest when there are low *violated expectations* and high levels of RS. With this interaction, I expected that CP would be moderately poor when there are high *violated expectations* or low levels of RS, but markedly poor when there are high levels of *violated expectations* and low levels of RS.

Analysis 4. Part 1. Mother RS was entered as the DV. For Step 1, all covariates were entered. A difference score was computed for mother expectations – reality. Then, for Step 2, mother violated expectations were entered as a main effect predictor. *Part 2.* CP was entered as the DV. For Step 1, all covariates were entered. For Step 2, mother *violated expectations* and mother RS were entered as main effect predictors. For Step 3, the interaction term *motherexpectations*motherRS* was entered.

Hypothesis 5. It was hypothesized that difficult child temperament would predict lower levels of CP. It was hypothesized that child temperament would interact with father RS, such that CP would be at its strongest when temperament is easier and father RS is high. With this interaction, I expected that CP would be moderately poor when temperament is more difficult or father RS is low, but markedly poor when temperament is more difficult and father RS is low.

Analysis 5. CP was entered as the DV. For Step 1, all covariates were entered. For Step 2, child temperament and father RS were entered as main effect predictors. For Step 3, the interaction term *childtemperament*fatherRS* was entered.

CHAPTER III

RESULTS

Hierarchical multiple regression analyses were conducted for all hypotheses to better understand the context of the *Relationship Satisfaction* and *Coparenting* association. SPSS Statistics Version 21 was utilized to accomplish this goal. The variables of *Depression, Violated Expectations in the Division of Childcare,* and *Child Temperament* were examined in this framework as moderators of the association between *Relationship Satisfaction* and *Coparenting*. These variables were examined by their influence alone, as well as by their influence in interaction terms with *Relationship Satisfaction*.

Preliminary analyses examined the associations between demographic variables and independent and dependent study variables. Demographic variables including education, income, and age, and mother work status showed significant correlations with study variables. Income and father education demonstrated multicollinearity with mother education and so were not utilized. Race was not proposed as a covariate, however, was included after a significant association was found with coparenting scores, especially for fathers. Final covariates included mother age, father age, mother race, father race, mother education, and mother work status. Father work status was included for the *Division of Childcare* analyses. Age was coded as a continuous variable. Race, education, and work status were coded dichotomously as white/minority, bachelor's degree/no bachelor's degree, and full-time work status/non-full-time work status, respectively. Demographics are listed in Table 1 and a correlation matrix with variables used in the study is shown in Table 2. Marginally significant findings are included in these results, despite the low sample size of the study, in order to distinguish potentially

meaningful outcomes that should be explored further in future research. Caution should be utilized when interpreting marginally significant results.

Table 1
Demographic Characteristics of Sample

Variables	***Female***	***Male***
Gender	78 (50%)	78 (50%)
Age	29.7 (*SD* 5.1)	31.5 (*SD* 5.5)
Race		
African-American	8 (10.2%)	7 (8.9%)
White	61 (78.2%)	66 (84.6%)
Hispanic	8 (10.2%)	5 (6.4%)
Other	1 (1.2%)	0 (0%)
Education		
High School Diploma or GED	4 (5.1%)	10 (12.8%)
Trade School	2 (2.6%)	4 (5.1%)
Some College	26 (33.3%)	23 (29.5%)
Bachelor's Degree	21 (26.9%)	20 (25.6%)
Master's Degree	16 (20.5%)	18 (23.1 %)
Doctoral Degree	9 (11.5%)	2 (2.6%)
Income		
≤ $ 20,000	5 (6.4%)	6 (7.7%)
$20,001-40,000	18 (23.1%)	16 (20.5%)
$40,001 – 75,000	21 (27.0%)	18 (23.1%)
≥ $75,001	33 (42.3%)	37 (47.4%)
Marital Status		
Married	70 (89.7%)	70 (89.7%)
Non-married	8 (11.4%)	8 (11.4%)

Note. These values reflect the participant demographics at first wave of data collection.

Table 2

Bivariate Correlations and Statistics

Measure	**1. F RS at Pre**	**2. M RS at Pre**	**3. F RS at 1 mo.**	**4. M RS at 1 mo.**	**5. F RS at 3 mo.**	**6. M RS at 3 mo.**	**7. F Cg in RS**	**8. M Cg in RS**	**9. F Dp Pre**	**10. M Dp Pre**	**11. F Dp 1 mo.**	**12. M Dp 1 mo.**	**13. VE**	**14. CT**	**15. CP Co**	**16. CP Wa**	**17. CP VS**
1	-	.55**	.76**	.53**	.61**	.62**	.31**	.18	**.40****	**.27***	**.40****	**.31****	**.34****	**.17**	.39**	.38**	**.09**
2		-	.42**	.83**	.42**	.69**	.17	.54**	**.16**	**.34****	**.09**	**.32****	**.36****	**.11**	.20	.22	.06
3			-	.55**	.77**	.57**	.38**	.09	**.47****	**.21**	**.67****	**.30****	**.29***	**.33****	.26*	.31**	**.04**
4				-	.56**	.80**	.04	.02	**.15**	**.37****	**.14**	**.42****	**.32****	**.17**	.24*	.27*	**.03**
5					-	.68**	.27*	.09	**.25***	**.21**	**.50****	**.29***	**.36****	**.29***	.36**	.40**	.17
6						-	**.07**	**.03**	**.18**	**.28***	**.19**	**.27***	**.36****	**.21**	.30**	.29*	**.11**
7							-	.37**	**.13**	.07	**.40****	**.02**	.06	**.23***	**.17**	**.11**	.08
8								-	.07	.06	**.06**	**.05**	.16	**.05**	**.00**	.02	**.15**
9									**-**	.33**	.64**	.27*	.19	.12	**.28***	**.30****	.13
10										**-**	.28*	.70**	.33**	.14	**.17**	**.32****	.06
11											**-**	**.28***	.15	**.38****	**.30****	**.38****	.06
12												**-**	.35**	.11	**.17**	**.25***	.08
13													**-**	.16	**.16**	**.19**	.15
14														**-**	**.19**	**.17**	**.04**
15															-	.86**	**.34****
16																-	**.38****
17																	-
Mean	48	47	48	48	48	47	0	0	8	11	7	9	14	3	5	5	1
SD	3.8	5.0	3.9	4.2	4.7	5.0	2.7	2.8	7.4	7.3	6.1	7.3	11	0.4	1.3	1.2	0.8
N	78	78	77	78	77	78	77	78	78	78	77	78	77	78	77	77	77

Note. *Correlation is significant at the 0.05 level (2-tailed); **Correlation is significant at the 0.01 level (2-tailed); **Bold = Negative**; F = Father; M = Mother; RS = Relationship Satisfaction; Pre = Prenatal; Cg = Change; Dp = Depression; VE = Violated Expectations; CT = Child Temperament; CP = Coparenting; Co = Cooperation; Wa = Warmth; VS = Verbal Sparring.

Relationship Satisfaction and Coparenting

For Hypothesis 1, hierarchical multiple regressions were conducted to see if father and mother *Relationship Satisfaction (RS)* at prenatal and 1 month postpartum were predictive of *Coparenting* at 3 months. Six analyses were run for the three *Coparenting DVs* (*Cooperation, Warmth,* and *Verbal Sparring*) at 3 months, which remained the same in each set of analyses for *IVs* at the two time points (prenatal and 1 month). For Step 1, covariates father and mother age, father and mother race, mother education, and mother employment were entered. For Step 2, *Father RS* and *Mother RS* were entered. For Step 3, the interaction term *Father RS*Mother RS* was entered. *Father RS* and *Mother RS* were centered prior to placing them in the analyses, as were the *IVs* utilized in all hypotheses for the purpose of making the results more easily interpretable and reducing multicollinearity.

For both *Coparenting Cooperation* and *Coparenting Warmth* (Tables 3 & 4, respectively), covariates at prenatal and 1 month both explained a significant proportion of the variance [$\Delta R^2 = .32$, $F(6, 63) = 4.86$, $p < .001$]. Higher maternal education significantly predicted *Cooperation* and *Warmth* at the prenatal time point and 1 month. Higher maternal age also significantly predicted *Warmth* at the prenatal time point. The full model explained 43% of the variance in *Cooperation* scores and 45% of the variance in *Warmth* scores at prenatal. For both *Cooperation* and *Warmth*, prenatal *Father RS*, but not prenatal *Mother RS* explained a significant proportion of the variance. Higher prenatal *Father RS* predicted *Cooperation* [$\beta = .44$, $t(60) = 3.31$, $p = .002$]. Prenatal *Father RS* also positively predicted *Warmth* [$\beta = .47$, $t(60) = 3.58$, $p = .001$]. One month *RS* was not a significant predictor of *Cooperation* or *Warmth* for mothers or fathers.

Table 3

Hierarchical Multiple Regression Analyses Predicting Coparenting Cooperation at 3 months from Prenatal and 1 month Father and Mother Relationship Satisfaction (RS)

	Prenatal		1 Month	
Predictor	ΔR^2	β	ΔR^2	β
Step 1	.32***		.32***	
Father Age		.03		.09
Mother Age		.02		-.06
Father Minority Race		-.15		-.16
Mother Minority Race		-.10		-.10
Mother College Education		.35**		.34*
Mother Full-Time Work Status		.20†		.17
Step 2	.11**		.04	
Father RS		.44**		.22
Mother RS		-.18		-.02
Step 3	.01		.00	
Father RS x Mother RS		-.12		.01
Total R^2	.43		.35	
F	5.05***		3.63**	

Note. $N = 70$. All β coefficients are from the full model. †$p < .1$. *$p < .05$. ** $p < .01$. ***$p < .001$.

Table 4

Hierarchical Multiple Regression Analyses Predicting Coparenting Warmth at 3 months from Prenatal and 1 month Father and Mother Relationship Satisfaction (RS)

	Prenatal		1 Month	
Predictor	ΔR^2	β	ΔR^2	β
Step 1	.32***		.32***	
Father Age		.13		.13
Mother Age		-.31*		-.19
Father Minority Race		-.16		-.12
Mother Minority Race		-.06		-.08
Mother College Education		.48**		.44**
Mother Full-Time Work Status		-.02		.09
Step 2	.13**		.06†	
Father RS		.47**		.26†
Mother RS		-.12		.01
Step 3	.00		.00	
Father RS x Mother RS		-.06		.00
Total R^2	.45		.38	
F	5.47***		4.08***	

Note. $N = 70$. All β coefficients are from the full model. †$p < .1$. *$p < .05$. ** $p < .01$. ***$p < .001$.

In the Verbal Sparring models father minority race was a significant predictor at both prenatal and 1 month. Neither *Father* nor *Mother RS* explained a significant amount of variance on their own at either prenatal or 1 month (Table 5). However, at 1 month there was a significant interaction between *Father RS* and *Mother RS* [β = -.43, $t(60)$ = -2.86, p = .006]. A median split was performed on *Mother RS* scores to test its effect at different levels on the relationship between *Father RS* and *Verbal Sparring*. Simple slope tests did not reveal a significant association between *Father RS* and *Verbal Sparring* for low levels of *Mother RS* (b = .05, SEb = .04, β = .24, p = .146) or high levels of *Mother RS* (b = -.04, SEb = .05, β = -.15, p = .394). This finding suggests that while there is not a major effect for each subgroup of high versus low *Mother RS*, the contrast between the effects at low levels of *Mother RS* and high levels of *Mother RS* is significantly different. It appears that when parents had matching levels of *RS* (both high or both low) there was less *Verbal Sparring*, but when their levels of *RS* were mismatched (one high and one low) more *Verbal Sparring* was observed (see Figure 1).

Table 5

Hierarchical Multiple Regression Analyses Predicting Coparenting Verbal Sparring at 3 months from Prenatal and 1 month Father and Mother Relationship Satisfaction (RS)

	Prenatal		1 Month	
Predictor	ΔR^2	β	ΔR^2	B
Step 1	.21*		.21*	
Father Age		.22		.16
Mother Age		-.13		-.16
Father Minority Race		.34*		.35**
Mother Minority Race		-.09		-.18
Mother College Education		-.19		-.24†
Mother Full-Time Work Status		-.11		-.11
Step 2	.01		.00	
Father RS		-.09		-.04
Mother RS		.09		-.24
Step 3	.00		.09**	
Father RS x Mother RS		-.06		-.43**
Total R^2	.22		.31	
F	1.88†		2.96**	

Note. $N = 70$. All β coefficients are from the full model. †$p < .1$. *$p < .05$. ** $p < .01$. ***$p < .001$.

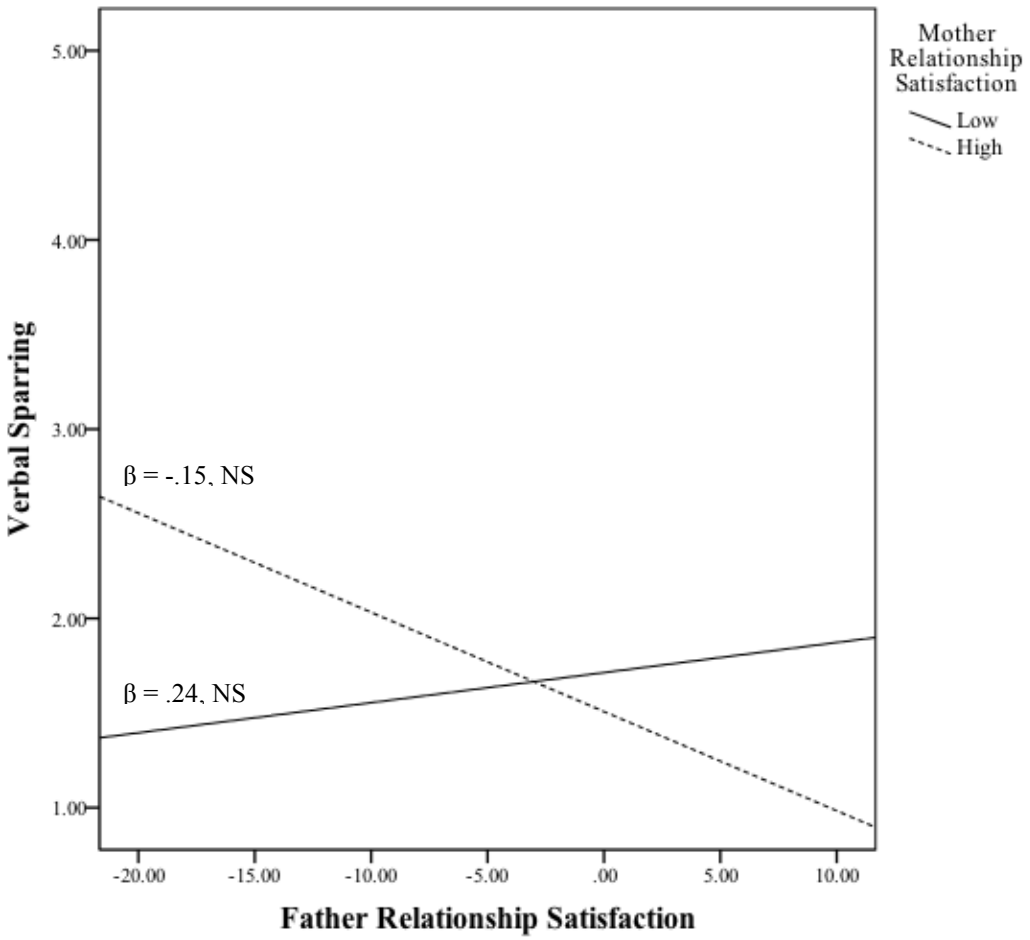

Figure 1. Association between Father Relationship Satisfaction at 1 month Postpartum and Coparenting Cooperation at 3 months Postpartum Varies as a Function of Mother Relationship Satisfaction at 1 month Postpartum.
Note: NS = Not significant.

Change in Relationship Satisfaction

A paired t-test indicated a negative trend that was not significant in change in relationship satisfaction from prenatal to 1 month for fathers [$t(76) = -1.56$, $p = .123$] and mothers [$t(77) = -0.94$, $p = .349$]. Hypothesis 2 tested the effect of change in *RS* from prenatal to 1 month on *Coparenting* scores at 3 months (Table 6). Three analyses were run for the three *Coparenting* DVs. Covariates were entered on Step 1. For Step 2, both *Father Change in RS* and *Mother Change in RS* were entered. Step 2 was nonsignificant in all three models predicting *Coparenting Cooperation, Warmth,* and *Verbal Sparring*.

Table 6

Hierarchical Multiple Regression Analyses Predicting Coparenting at 3 months from Father and Mother Change in Relationship Satisfaction (RS) from Prenatal to 1 month

	Cooperation		Warmth		Verbal Sparring	
Predictor	ΔR^2	β	ΔR^2	β	ΔR^2	β
Step 1	.32***		.32***		.21*	
Father Age		.01		.04		.24
Mother Age		-.01		-.11		-.16
Father Minority Race		-.16		-.10		.38**
Mother Minority Race		-.08		-.07		-.13
Mother College Education		.37**		.47***		-.18
Mother Full-Time Work		.17		.11		-.09
Step 2	.02		.01		.04	
Father Change in RS		-.15		-.11		.18
Mother Change in RS		.04		.03		-.20
Total R^2	.33		.33		.25	
F	3.83**		3.72**		2.55*	

Note. $N = 70$. All β coefficients are from the full model. †$p < .1$. *$p < .05$. ** $p < .01$. ***$p < .001$.

Depression

Hypothesis 3 explored the impact of *Depression* on the marital relationship and *Coparenting*. Part 1 tested the extent to which *Depression* is predictive of *RS* (Tables 7 & 8). Four analyses were run to test the impact of *Father Depression* and *Mother Depression* at prenatal and 1 month (2 time points) on *Father RS* and *Mother RS* at 3 months (separate *DVs*). Covariates were entered on Step 1 and *Father Depression* and *Mother Depression* were added on Step 2. At Step 1, for fathers only, mother age predicted father *RS* at 3 months. At the prenatal time point *Father Depression* did not predict *Father RS* at 3 months [β = -.19, $t(61)$ = -1.50, p = .140] (Table 7). However, at 1 month, *Father Depression* did negatively predict his own *RS* at 3 months [β = -.42, $t(61)$ = -3.82, $p < .000$]. Neither *Mother Depression* at prenatal nor 1 month predicted *Father RS*. *Mother Depression* at 1 month also negatively predicted her own *RS* at 3 months [β = -.13, $t(62)$ = -2.07, p = .043] (Table 8). Unlike *Father Depression* at prenatal, *Mother Depression* at prenatal demonstrated a negative trend towards significance in predicting her own *RS* [β = -.22, $t(62)$ = -1.86, p = .068]. *Father Depression* did not significantly predict *Mother RS* at prenatal or 1 month.

Table 7

Hierarchical Multiple Regression Analyses Predicting Father Relationship Satisfaction at 3 months from Father and Mother Depression at Prenatal and 1 month Postpartum

	Prenatal		1 Month	
Predictor	ΔR^2	β	ΔR^2	β
Step 1	.13		.13	
Father Age		-.30†		-.19
Mother Age		.34*		.31*
Father Minority Race		.05		.04
Mother Minority Race		-.01		-.03
Mother College Education		.16		.08
Mother Full-Time Work Status		.07		.08
Step 2	.05		.22***	
Father Depression		-.19		-.42***
Mother Depression		-.12		-.17
Total R^2	.18		.35	
F	1.72		4.09**	

Note. $N = 70$. All β coefficients are from the full model. †$p < .1$. *$p < .05$. ** $p < .01$. ***$p < .001$.

Table 8

Hierarchical Multiple Regression Analyses Predicting Mother Relationship Satisfaction at 3 months from Father and Mother Depression at Prenatal and 1 month Postpartum

	Prenatal		1 Month	
Predictor	ΔR^2	β	ΔR^2	β
Step 1	.15†		.15 †	
Father Age		-.13		-.07
Mother Age		.28†		.27
Father Minority Race		.03		.02
Mother Minority Race		-.23†		-.22†
Mother College Education		.05		.02
Mother Full-Time Work Status		.10		.13
Step 2	.07†		.08*	
Father Depression		-.13		-.13
Mother Depression		-.22†		-.24*
Total R^2	.23		.24	
F	2.25*		2.43*	

Note. $N = 71$. All β coefficients are from the full model. †$p < .1$. *$p < .05$. ** $p < .01$. ***$p < .001$.

Part 2 of hypothesis 3 tested the effects of both *Depression* and *RS* on the three *Coparenting DVs*. Six analyses were run so that each *IV* could be tested at both prenatal and 1 month. In each analysis, Step 1 included the covariates. Again, mother education significantly predicted *Cooperation* and *Warmth*, whereas father race significantly predicted *Verbal Sparring*. Step 2 included *Father RS*, *Mother RS*, *Father Depression*, and *Mother Depression* and Step 3 included the interaction terms *Father RS*Father Depression* and *Mother RS*Mother Depression.* In predicting *Cooperation*, *Father RS* was significant at prenatal [β = .55, $t(57)$ = 3.61, p = .001], whereas *Mother RS* was marginally significant [β = -.24, $t(57)$ = -1.70, p = .095] (Table 9). The interaction of father *RS* and father *Depression* at prenatal also significantly predicted *Coparenting Cooperation* [β = -.29, $t(57)$ = -2.36, p = .022] (Figure 2). A median split was performed on *Father Depression* to test its effect at different levels on the relationship between *Father RS* and *Cooperation*. The results suggest that *Depression* weakens the positive relationship between *RS* and *Cooperation*. Simple slope tests revealed a significant positive association between *RS* and *Cooperation* for low levels of *Depression* (b = .22, SEb = .06, β = .58, p = .001), but not for high levels of *Depression* (b = -.02, SEb = .07, β = -.06, p = .767). Therefore, for fathers with low levels of *Depression* the effect is as expected: fathers with high levels of *RS* demonstrate more *Cooperation* and fathers with low levels of *RS* demonstrate less *Cooperation*. However, the association does not hold for fathers with high levels of *Depression*. The model overall at prenatal accounted for 48% of the variance in *Coparenting Cooperation* scores [R^2 = .48, F(12, 57) = 4.43, p < .001]. A similar pattern was seen for *Coparenting Warmth* at prenatal (Table 10). Both *Father* and *Mother RS* were significant, as well as a comparable *Father RS*Depression* interaction [R^2 = .54, F(12, 57) = 5.67, p < .001]. There was again a significant positive association between *RS* and *Warmth*, but only at low levels of depression.

Table 9

Hierarchical Multiple Regression Analyses Predicting Coparenting Cooperation at 3 months from Relationship Satisfaction (RS) and Depression at Prenatal and 1 month

	Prenatal		1 Month	
Predictor	ΔR^2	β	ΔR^2	β
Step 1	.32***		.32***	
Father Age		.12		.12
Mother Age		-.14		.01
Father Minority Race		-.16		-.14
Mother Minority Race		-.11		-.10
Mother College Education		.38**		.31*
Mother Full-Time Work Status		.02		.18
Step 2	.11*		.06	
Father RS		.55**		.10
Mother RS		-.24†		-.02
Father Depression		-.15		-.32†
Mother Depression		.02		-.07
Step 3	.06†		.02	
Father RS x Depression		-.29*		-.21
Mother RS x Depression		.10		-.04
Total R^2	.48		.40	
F	4.43***		3.11**	

Note. $N = 70$. All β coefficients are from the full model. †$p < .1$. *$p < .05$. ** $p < .01$. ***$p < .001$.

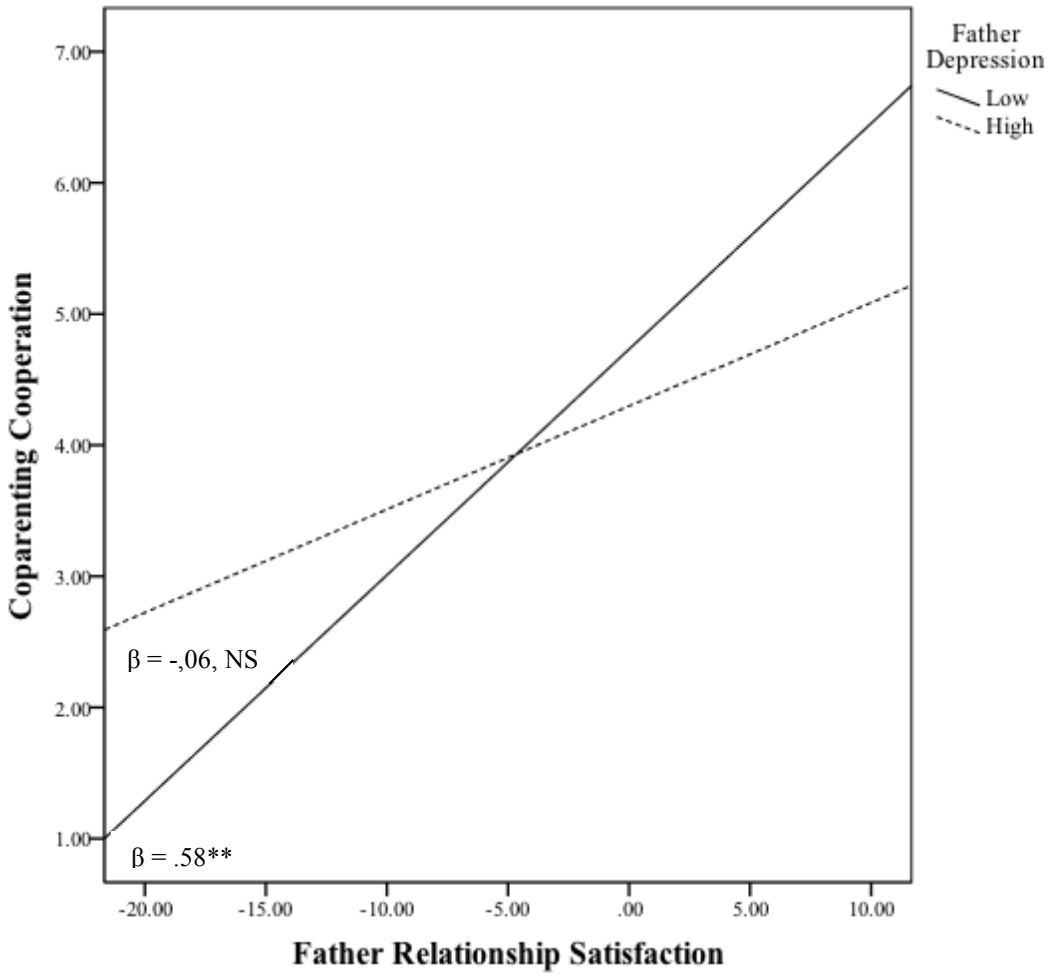

Figure 2. Association between Prenatal Father Relationship Satisfaction and Postpartum Coparenting Cooperation Varies as a Function of Prenatal Father Depression.
Note: NS = Not significant. ** $p < .01$.

Table 10

Hierarchical Multiple Regression Analyses Predicting Coparenting Warmth at 3 months from Relationship Satisfaction (RS) and Depression at Prenatal and 1 month

	Prenatal		1 Month	
Predictor	ΔR^2	β	ΔR^2	β
Step 1	.32***		.32***	
Father Age		.14		.17
Mother Age		-.27†		-.11
Father Minority Race		-.14		-.09
Mother Minority Race		-.08		-.08
Mother College Education		.47***		.40**
Mother Full-Time Work Status		-.07		.10
Step 2	.17**		.12*	
Father RS		.57***		.15
Mother RS		-.26*		-.03
Father Depression		-.15		-.40*
Mother Depression		-.16		-.13
Step 3	.06*		.04	
Father RS x Depression		-.29*		-.31†
Mother RS x Depression		.12		-.03
Total R^2	.54		.47	
F	5.67***		4.18***	

Note. $N = 70$. All β coefficients are from the full model. †$p < .1$. *$p < .05$. ** $p < .01$. ***$p < .001$.

At 1 month only *Father Depression*, not *RS* was significant at predicting *Warmth* [β = -.40, $t(57) = -2.44$, $p = .018$] and marginally significant at predicting *Cooperation* [β = -.32, $t(57) = -1.80$, $p = .078$]. At 1 month the *Father RS*Depression* interaction was marginally significant in predicting *Warmth*. For the *Verbal Sparring* models, *Father RS* and *Father Depression* were not significant as main effect predictors at prenatal or 1 month. The father interaction, however, was significant at prenatal [β= .36, $t(57) = 2.53$, $p = .014$] (Table 11; Figure 3). Simple slope tests revealed a significant negative association between *RS* and *Verbal Sparring* at low levels of *Depression* (b = -.12, SEb = .06, β = -.42, $p = .047$. Therefore, as hypothesized, fathers with low levels of *Depression* and high levels of *RS* demonstrate more *Verbal Sparring* and fathers with low levels of *Depression* and low levels of *RS* demonstrate less *Verbal Sparring*. However, for fathers with high levels of *Depression* a similar association between *RS* and *Verbal Sparring* was not significant (b = .05, SEb = .05, β = .26, $p = .335$).

Table 11

Hierarchical Multiple Regression Analyses Predicting Coparenting Verbal Sparring at 3 months from Relationship Satisfaction (RS) and Depression at Prenatal and 1 month

	Prenatal		1 Month	
Predictor	ΔR^2	β	ΔR^2	β
Step 1	.21*		.21*	
Father Age		.22		.22
Mother Age		-.23		-.23
Father Minority Race		.30*		.33*
Mother Minority Race		-.08		-.16
Mother College Education		-.20		-.19
Mother Full-Time Work Status		-.08		-.17
Step 2	.02		.02	
Father RS		-.22		-.04
Mother RS		.17		.05
Father Depression		.18		.08
Mother Depression		.01		.21
Step 3	.08*		.04	
Father RS x Depression		.36*		.25
Mother RS x Depression		.09		.19
Total R^2	.31		.27	
F	2.12*		1.77†	

Note. $N = 70$. All β coefficients are from the full model. †$p < .1$. *$p < .05$. ** $p < .01$. ***$p < .001$.

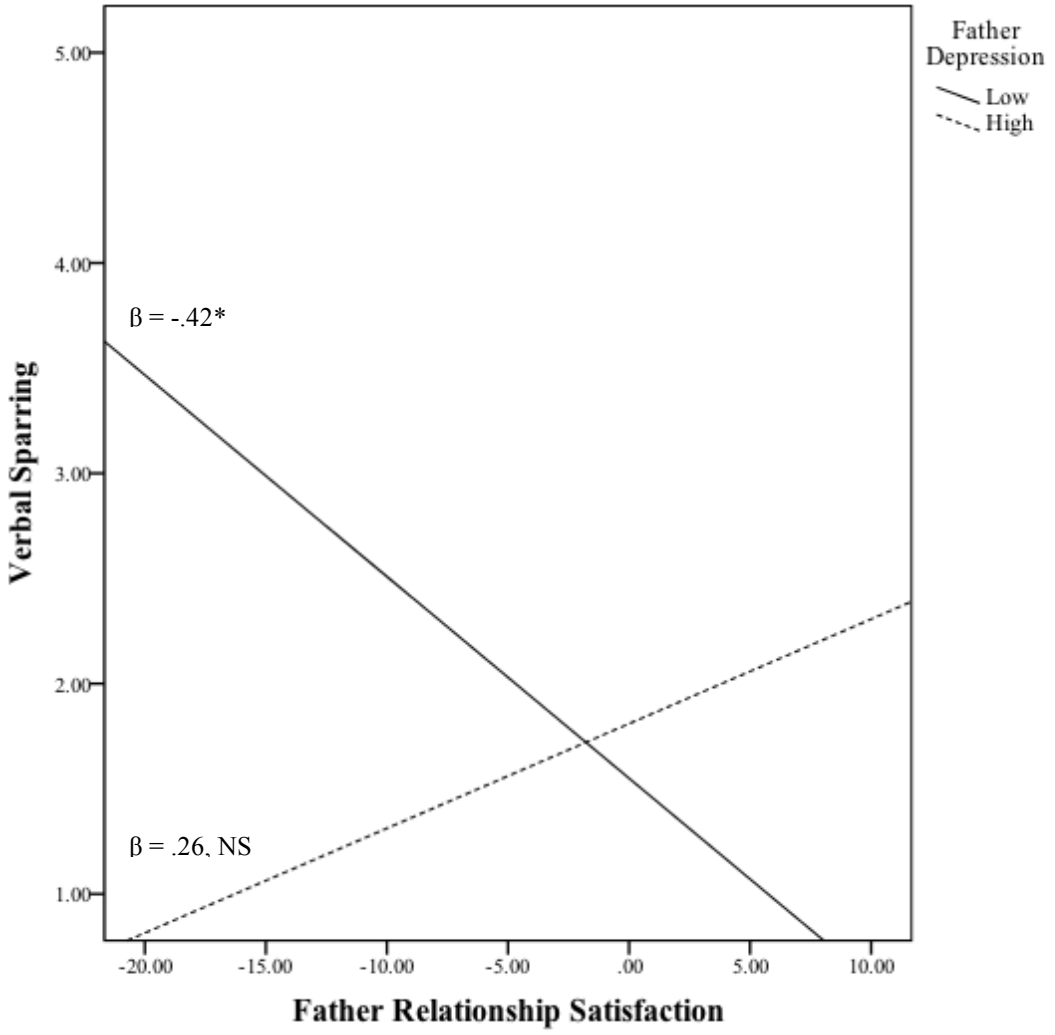

Figure 3. Association between Prenatal Father Relationship Satisfaction and Postpartum Verbal Sparring Varies as a Function of Prenatal Father Depression.
Note: NS = Not significant. * $p < .05$.

Division of Labor

Mother Violated Expectations for the division of childcare were the subject of hypothesis 4. The childcare subscale of the Who Does What measure was utilized as it is most closely related to *Coparenting*. A difference score was computed to account for the difference at 3 months between how mothers would like the division of childcare to be and how it is in reality. Father employment status was added as a covariate for these analyses and mother employment status continued as a covariate. *Mother Violated Expectations* were added to the regression analyses after the covariates. Part 1 of Hypothesis 4 tested the association of *Mother Violated Expectations* at 3 months and *RS* at 3 months. Results indicated that *Mother Violated Expectations* were significantly associated with her *RS* [β = -.29, $t(60)$ = -2.34, p = .022]. Father employment status, but not mother employment status was marginally associated with *Mother RS* [β = .23, $t(60)$ = 1.91, p = .061]. Mothers whose partners were working full time were somewhat more likely to report higher *RS*.

For part 2 of hypothesis 4, the ability of *Violated Expectations* to predict the three *Coparenting* DVs was examined (Table 12). The interaction of *Violated Expectations* and *Mother RS* was also tested. In Step 1, covariates were entered. Mother education was predictive of *Cooperation* and *Warmth* and father minority race was predictive of *Verbal Sparring*. In Step 2, *Mother Violated Expectations* and *Mother RS* were entered. In Step 3, the interaction term *Mother Violated Expectations***Mother RS* was entered. Results suggested that neither *Violated Expectations*, *Mother RS*, nor their interaction significantly predicted *Coparenting Cooperation*, *Warmth*, or *Verbal Sparring* (see Table 12). Mother and father employment status as covariates were also not significant in predicting *Coparenting*.

Table 12

Hierarchical Multiple Regression Analyses Predicting Coparenting at 3 months from Mother Violated Childcare Expectations and Mother Relationship Satisfaction (RS)

	Cooperation		Warmth		Verbal Sparring	
Predictor	ΔR^2	β	ΔR^2	β	ΔR^2	β
Step 1	.27**		.29**		.22*	
Father Age		.04		.06		.25
Mother Age		-.04		-.14		-.14
Father Minority Race		-.18		-.04		.39*
Mother Minority Race		-.04		-.06		-.14
Mother College Education		.37**		.48**		-.18
Mother Full-Time Work		.09		.05		-.13
Father Full-Time Work		.04		.02		.06
Step 2	.02		.04		.00	
Mother violated expectations		.03		-.18		-.02
Mother RS		.17		.13		-.07
Step 3	.01		.02		.00	
Mother violated expectations*Mother RS		-.13		-.15		-.06
Total R^2	.31		.35		.23	
F	2.59*		3.10**		1.67	

Note. $N = 67$. All β coefficients are from the full model. †$p < .1$. *$p < .05$. ** $p < .01$. ***$p < .001$.

Child Temperament

Hypothesis 5 tested the impact of father reported *Child Temperament* on the *Coparenting* context. In a preliminary model *Child Temperament* predicted *Father RS* at 3 months after controlling for covariates [β = -.25, $t(62)$ = -2.13, p = .037]. Next, the association between *Child Temperament* and *Father RS* in predicting *Coparenting* was tested (Table 13). Covariates were entered on Step 1, *Child Temperament* and *Father RS* on Step 2, and the interaction between *Child Temperament* and *Father RS* on Step 3. Step 1 indicated that mother education predicted *Cooperation* and *Warmth* and father minority race predicted *Verbal Sparring*. At Step 2 *Child Temperament* was marginally significant in predicting *Coparenting Cooperation* [β = -.18, $t(59)$ = -1.67, p = .100]. However, Step 2, including *Child Temperament* and *Father RS* represented a significant increase in R^2 [ΔR^2= .10, F(8, 60) = 4.67, p = .011]. Although *Child Temperament* on its own was not significant in predicting *Coparenting Warmth*, its combination with *Father RS* in Step 2 also represented a significant increase in R^2. The model overall predicted 40% of the variance in *Cooperation* scores and 43% of the variance in *Warmth* scores. *Child Temperament* was marginally significant in predicting *Verbal Sparring* scores [β = -.21, $t(59)$ = -1.80, p = .078]. The interaction between *Child Temperament* and *Father RS* was also marginally significant in predicting *Verbal Sparring* scores [β = .20, $t(59)$ = 1.70, p = .095]. The model overall predicted less variance in verbal sparing than it did for *Cooperation* and *Warmth* [R^2 = .30, F(9, 59) = 2.75, p = .009]; however, after taking into consideration the greater influence of covariates in the other models the contribution of the IVs were similar.

Table 13

Hierarchical Multiple Regression Analyses Predicting Coparenting at 3 months from Child Temperament and Father Relationship Satisfaction (RS)

	Cooperation		Warmth		Verbal Sparring	
Predictor	ΔR^2	β	ΔR^2	β	ΔR^2	β
Step 1	.28**		.30**		.22*	
Father Age		.11		.16		.22
Mother Age		-.09		-.22		-.11
Father Minority Race		-.16		-.11		.40**
Mother Minority Race		-.14		-.11		-.18
Mother College Education		.34**		.42**		-.17†
Mother Full-Time Work		-.02		-.02		-.15
Step 2	.10*		.12**		.04	
Poor ChildTemperament		-.18		-.13		-.21†
Father RS		.19		.29*		-.24†
Step 3	.02		.00		.03†	
Child Temp*Father RS		.16		.07		.20†
Total R^2	.40		.43		.30	
F	4.45***		4.89***		2.75*	

Note. $N = 69$. All β coefficients are from the full model. †$p < .1$. *$p < .05$. ** $p < .01$. ***$p < .001$.

CHAPTER IV

DISCUSSION

The theoretical framework for this study was the family system (Minuchin, 1985). Hypotheses assumed that the members of the family system are interdependent and affect each other through emotional and behavioral mechanisms. The purpose of the study was to investigate how the relationship between the two parents impacts the triadic coparenting process during the perinatal period. Father relationship satisfaction was hypothesized to show a greater effect on coparenting than mother relationship satisfaction. The inclusion of cooperation, warmth, and verbal sparring in measuring coparenting allowed for a broad understanding of coparenting and its positive and negative aspects. An aim of the study was also to examine factors that may play a role in the coparenting context, including depression, division of labor, and child temperament. For example, in the presence of higher depressive symptoms, the otherwise stronger positive relationship between RS and coparenting was expected to be weakened. As Aguinis and Gottfredson (2010) noted, studying the influence of moderating variables helps to understand the limits of our theories. Examining moderation might also help expand the understanding of how these phenomena work in different context. Overall, findings suggest that father variables, such as father relationship satisfaction and father depression are key factors in the development of coparenting. Recent research has also supported the study of father factors as essential to understanding coparenting and the family process (Palkovitz, Fagan, & Hull, 2012).

Relationship Satisfaction and Coparenting

Two covariates examined in this study consistently predicted coparenting in regression models. Mothers with at least a bachelor's degree were more likely to display cooperation and warmth than mothers without a bachelor's degree, while minority fathers were more likely to

display greater levels of verbal sparring than white fathers. Previous research has linked mother education to supportive coparenting (Stright & Bales, 2003). It is possible that reasoning skills and parenting values may explain the association between education and parenting behaviors. Limited research has linked father race to coparenting. Burney & Leerkes (2010) found that white fathers were more likely to rate the coparenting relationship as positive than minority fathers. However, in a sample of young African American families, McHale & Coates (2014) using the CFRS coparenting measure (McHale et al., 2001) utilized in this study, found that disagreement between raters on the verbal sparring scale may have led to inaccurate results. They noted that culturally competent raters who are familiar with the couple and know their interpersonal patterns are best suited to make judgments. It is possible that the lack of cultural sensitivity of the CFRS and the modest sample size utilized produced a spurious result. Interestingly, mother age significantly predicted father relationship satisfaction at both the prenatal time point and 1 month. Studies have shown that young mothers are more likely to have difficulty with childcare responsibilities and lean on others, such as their partner, for support (Gee & Rhodes, 2003). This can lead to frustration with the relationship for fathers.

Based on previous literature, it was expected that both father RS and mother RS would predict coparenting, but that father RS would show a larger effect (Van Egeren, 2004; Belsky, 1991; Schoppe-Sullivan & Mangelsdorf, 2013). Father RS did in fact significantly predict coparenting, while mother RS did not. Father RS during the prenatal period, but not at one month, was positively associated with coparenting cooperation and warmth. The effect size for father RS fell between small and medium. RS measured prior to birth may be closer to baseline than RS measured at 1 month during the key adjustment or crisis period associated with childbirth (LeMasters, 1957). Therefore, it follows that prenatal RS would be more closely

associated with coparenting measured at 3 months postpartum when the parents have better adjusted to the addition of a child. The literature has also supported the notion that marital RS and coparenting are more closely related constructs for fathers (Belsky, 1991; Van Egeren, 2004; Burney & Leerkes, 2010). As mothers frequently act as primary caretakers, their relationship with the child must exist regardless of their feelings towards the father. However, as mothers many times take the lead in parenting, for fathers involvement with the child frequently involves the mother as well. Therefore, father relationships with mothers may be more closely linked to their participation in the coparenting relationship.

Verbal sparring was predicted by a different arrangement of factors than cooperation and warmth. The main effects of father and mother RS were unrelated to verbal sparring at both the prenatal and 1 month time points. However, their interaction predicted verbal sparring at the 1 month time point with a small to medium effect size. Analysis of simple slopes found that the effects were not significantly different from zero, but as there was a significant interaction they were significantly different from one another. It appears that when parents had matching levels of RS (both high or both low) there was less verbal sparring, but when parents had differing levels of RS there was more verbal sparring (one high and one low). Therefore, at high levels of IVs (mother RS and father RS), verbal sparring was low, as would be expected. However, in contrast to what I predicted, when the RS of both parents was low verbal sparring was also low. It may be that when both parents have low levels of RS they have both essentially "given up" or lost interest in engaging with one another and the child, whether positively or negatively. Similarly, McHale (1995) found that some parents in distressed marriages did not demonstrate hostile-competitive coparenting, but showed their distress in other facets of coparenting. For example, these couples scored low on a coparenting measure of family harmony. These couples

may have tried to keep the marital relationship and the coparenting relationship separate by refraining from hostility; however, their tension was displayed by their lack of more positive interaction. In reference to the finding that when parents have mismatching levels of RS verbal sparring increases, it may be possible that conflict increases as a result of differing levels of parent effort and engagement. Differing levels of relationship satisfaction have been associated with the unfulfilled relationship expectations of one spouse, which can increase frustration and conflict and lead to poorer coparenting (Van Egeren, 2003; Khazan et al., 2008). One parent may be pulling for more caretaking involvement than the other is willing to provide or in contrast one parent may be pushing the other away.

Change in Relationship Satisfaction

The effect of a change in RS from the third trimester to 1 month postpartum in predicting coparenting was investigated. In this study it seems the change in RS was less important than the main effect of father RS in predicting coparenting. However, it is possible that if the change in coparenting were considered in addition to the change in RS their relationship would have been more evident (Van Egeren, 2004). It may also be that the short time period used to account for change was not adequate to see results. For instance, Van Egeren (2004) studied trajectories of change in RS and coparenting from the first trimester through 6 months.

Depression

As anticipated, each parent's depression at 1 month postpartum negatively predicted his or her own RS at 3 months postpartum. This association between depression and RS has been found in couple research (Whitman, 2001), as well as in research addressing new and expecting parents (Figueiredo et al., 2008; Bower et al., 2013). Father RS continued to play a large role in predicting cooperation and warmth when depression was included in the models. Father RS at

the prenatal time point positively predicted both cooperation and warmth as anticipated with a medium effect size. However, as a function of including depression in the models, mother RS at the prenatal time point also predicted warmth and marginally predicted cooperation. This effect size was small and unexpectedly in the negative direction. However, the parenting literature has found similar effects depending on the time frame considered and the level of parental depressive symptoms (Kouros, Papp, Goeke-Morey, & Cummings, 2014). For instance, to explain her finding that change in coparenting experiences was negatively associated with change in marital experiences, Van Egeren (2004) suggested that one relationship (either the marital relationship or coparenting relationship) may be maintained at the expense of the other (Van Egeren, 2004). The time and effort put forth in maintaining a highly functioning coparenting relationship with a focus on the child may have a negative effect on the quality of the marital relationship. Or conversely, maintaining a positive marital relationship may be associated with less involvement from one partner (more likely the father).

This idea is linked to the compensatory hypothesis (Belsky et al., 1991; Engfer, 1988; Erel & Burman, 1995; Kouros et al., 2014). When RS is low some mothers may meet their emotional needs, including the need for love and support, by devoting more time and attention to the mother-child relationship, effectively compensating for a lack of partner relationship support by overinvesting in the mother-child relationship. Kouros et al. (2014) had mothers and fathers complete daily ratings of emotional quality with their spouse and with their child. They utilized the compensatory hypothesis to explain their result for mothers that from one day to the next lower levels of marital quality were associated with greater mother-child relationship quality. In contrast, the spillover hypothesis or the idea that marital quality spills over to parenting quality was more applicable for fathers. Further, gatekeeping or the idea that maternal encouragement

and criticism shape father involvement may also explain the negative association between mother RS and cooperation and warmth. For example, high RS may not transfer into positive coparenting if mothers are engaging in parenting behaviors that serve to alienate or push the father the away (Schoppe-Sullivan, Brown, Cannon, Mangelsdorf, & Sokolowski, 2008). Gatekeeping may arise from forces internal to the family (e.g., the other parent showing behaviors that might be interpreted as risky or aggressive, relationship conflict, parental impairment) or external (e.g., family of origin influences on parental expectations, positive or negative social support for gatekeeping, parent availability to care for the child due to work).

Father depression was found to moderate the association between father RS and coparenting at the prenatal time point. This interaction effect was small to medium in size. Specifically, the effect of father RS on all coparenting variables (cooperation, warmth, and verbal sparring) varied by level of father depression. For fathers with low depression, coparenting was at its strongest when RS was high and at its poorest when RS was low. However, when levels of depression were high the relationship between father RS and coparenting was no longer meaningful. Therefore, my hypothesis was partially supported. Results suggest that if a father is depressed satisfaction in his relationship may not prevent the development of poor coparenting. It may be that in fathers the symptoms of depression, such as lack of energy, lack of interest, feelings of worthlessness (APA, 2013) prevent them being fully affected by their relationship with mothers in how they coparent. Similar to the present study, Davies, Sturge-Apple, & Cummings (2004) found that there was a negative relationship between interparental discord and paternal acceptance (warmth) only at low levels of father depression. They also found a negative relationship between interparental discord and maternal acceptance (warmth) only at high levels of mother depression. This study did not find a significant

interaction for mothers, but the authors' explanation is related to why father variables are more significant in predicting coparenting. They suggested that mothers when not depressed may be better equipped than fathers may be to handle marital tension and not carry it over to parenting.

Division of Labor

Mother expectations for the division of childcare were predicted to play an important role in the coparenting context. Mothers specifically were assessed as a result of past research, which has found the equitable division of labor and childcare to be most consequential for mothers in predicting coparenting and relationship satisfaction (Belksy, 1985; Van Egeren, 2004). First, I predicted that mother violated expectations for the division of labor would predict lower levels of RS. This was supported in the present study and is similar to previous studies, which found that those who reported a greater difference between actual and ideal division of labor reported lower marital satisfaction (Khazan et al., 2008; Belsky, 1985). Father employment status was marginally positively predictive of mother RS in this model, but mother employment was not. It may be that an agreed upon prior arrangement is made by parents with fathers working full time or that mothers with partners who were working full time were more understanding when childcare tasks were unevenly distributed.

In the context of coparenting, mother violated expectations did not predict coparenting or moderate the association between RS and coparenting as expected. Past research has found that violated expectations about the division of childcare impacts coparenting experiences, even after controlling for the marital relationship (Van Egeren, 2004). It may be that the means of measurement and time period in this study did not properly capture the impact of the division of childcare. This study compared mother's ratings of how they would like the division of childcare to be and how it is in reality at one time point (3 months). However, Van Egeren (2004) had

parents rate their expectations for the division of childcare prior to the baby's birth, which was compared to their actual perceptions of the division of labor at one, three, and six months. This study likely missed valuable information by not inquiring about pre-birth expectations.

RS also did not predict coparenting in the violated expectations models; however, it was in the expected positive direction. It is possible that the two variables, violated expectations and RS, were closely related and splitting the variance associated with coparenting. Mother and father employment status also did not predict coparenting. Similarly, Van Egeren (2004) found that maternal employment status did not predict coparenting experiences when division of childcare was included in the model suggesting that it is not the number of hours worked for mothers that determines coparenting, but the equitable division of childcare regardless.

Child Temperament

The effect of child temperament on the coparenting context was also examined. Child temperament was a significant predictor of father RS at 3 months. In predicting coparenting, only when considered together child temperament and father RS significantly predicted cooperation and warmth scores. This is consistent with literature showing that child temperament becomes important to coparenting in the context of marital quality and other contextual factors (Burney & Leerkes, 2010; Van Egeren, 2004; Schoppe-Sullivan, Mangelsdorf, Brown, & Sokolowski, 2007). Burney and Leerkes (2010) found that infant reactivity negatively impacted fathers' reports of coparenting only in the presence of low relationship quality. Van Egeren (2004) found that fathers who perceived their children to have more difficult temperaments reported worse coparenting relationships. It is possible that when infants have difficult temperaments fathers are called to do more childcare than expected and find themselves frustrated.

The verbal sparring model demonstrated a more unexpected result. At Step 2, better child temperament was marginally predictive of more verbal sparring. However, other research has also found a negative tendency for fussy infants in predicting poor coparenting (Schoppe-Sullivan, et al. 2007). More importantly, this was explained in the context of marital quality. In the present study the interaction effect of child temperament and relationship satisfaction marginally predicted verbal sparring. Schoppe-Sullivan et al. (2007) found an interaction effect in which parents who had a perceived a fussy infant only showed less undermining coparenting when they demonstrated high marital quality pre-birth. Other research also suggests that low-risk parents are able to make up for the effects of a difficult infant (Crockenberg & Leerkes, 2003). Child temperament adds to the coparenting literature in the unique way it interacts with marital quality and aspects of coparenting.

Strengths and Limitations

This study is unique in that few studies have assessed depression as a moderator in the association between relationship satisfaction and coparenting. Further, few studies in the coparenting literature have utilized a sample with a high percentage of depressed fathers increasing the likelihood of detecting effects. The sample utilized for this study was selected to over-represent depressed parents to accomplish the original study's aim to examine perinatal depression in both mothers and fathers. Although maternal depression has been given more attention in the traditional research literature the results presented here add to mounting evidence that paternal depression impacts parenting as well (Lamb, 2004; Parke, 2002).

The longitudinal, rather than cross-sectional nature of this study allowed for the examination of factors over the transition to parenthood and their development. In this way it was possible to measure contributors to coparenting in a more meaningful way then correlational

or cross-sectional research. Further, coparenting was assessed using a standardized laboratory task, providing more ecological validity than self-report measures. Providing a context of reliability and validity for results, all measures demonstrated strong psychometric properties.

Despite the strengths of this study, several limitations should be considered. First the perinatal time period examined in this study was of short duration ranging from the 3rd trimester of pregnancy to 3 months postpartum. Although valuable information can be gained from this significant period of transition (LeMaster, 1957), further studies of the more extended effects of adding a child to the family will add perspective to these results. Future studies with greater sample sizes would also allow for the comprehensive examination of all variables in the coparenting context.

The dyadic satisfaction subscale of the Dyadic Adjustment Scale (Spanier, 1976) was the measure of relationship satisfaction used in this study following the recommendation of previous researchers (Grahm et al., 2006). This measure focuses on the amount of tension in the relationship and whether the respondent has considered ending the relationship. It should be considered that the significance of these factors may vary for men versus women. Further research with a broader measure of marital satisfaction or quality may provide additional information. Behavioral/observational measures of marital functioning may also provide further support for results (Van Egeren, 2004).

Although demonstrating validity in multiple studies on coparenting (McHale et al., 2001), the CFRS is an observational coding tool that is subject to social desirability bias similar to other observational measures. However, the CFRS provides a measure of subtle interfamilial patterns that can only be captured through direct observation. As in the current study race was a significant predictor of the verbal sparring dimension of coparenting, the multicultural sensitivity

of the CFRS should be investigated in future research. Future research should also utilize samples with greater racial, socioeconomic, and cultural diversity to support the generalizability of findings to populations with varied characteristics.

Lastly, the present study's ability to assess violated expectations for the division of labor was limited as mothers were asked about their desires versus reality of egalitarian childcare at only the three month time point. It is likely this study did not fully capture mothers' feelings about balance in childcare responsibility by not utilizing the prenatal time point as a measure of expectations.

Conclusion

In this study the examination of both father and mother variables in a longitudinal ecological framework allowed for the meaningful prediction of coparenting effects. Results suggest that fathers are an integral part of the coparenting context. A positive association between father relationship satisfaction and coparenting was observed. Importantly, high father depression weakened the association between father relationship satisfaction and all three observed coparenting variables. For fathers without depressive symptoms, relationship satisfaction significantly predicted coparenting; however, this was not the case for the fathers with depressive symptoms. It appears that for fathers with depressive symptoms, the relationship with the mother is less consequential to the development of coparenting. Results suggest that if a father is depressed satisfaction in his relationship may not prevent the development of poor coparenting. Unexpectedly, when controlling for depression a negative association was observed between mother relationship satisfaction and coparenting cooperation and warmth. This may be the result of maternal gatekeeping, in which maternal encouragement or criticism in regard to parenting shapes father involvement independent of relationship satisfaction. It is possible that

high mother relationships satisfaction may not transfer to positive coparenting if mothers are engaging in parenting behaviors that serve to alienate or push the father the away.

Results of the study suggest that violated expectations are important in the family context. Mother violated expectations for the division of labor positively predicted mother relationship satisfaction and difficult child temperament negatively predicted father relationship satisfaction as expected. These variables were not found to impact the strength of the association between father or mother relationship satisfaction and coparenting; however, more research should be conducted on their impact on the family system and on coparenting.

The results of this study suggest that interventions to improve the relationship satisfaction of parents prior to childbirth may be most effective at improving coparenting outcomes. Parenting interventions or classes addressing the egalitarian division of labor, as well as managing difficult infants may improve relationship satisfaction. In light of the importance of father relationship satisfaction and father depression to the coparenting system, the development of clinical interventions focusing on not only new mothers, but also new fathers would be beneficial. In addition to mothers, it would be helpful for fathers to be screened and treated for depression in the prenatal period to help ensure healthy development of the coparenting relationship.

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APPENDIX A

DEMOGRAPHIC QUESTIONNAIRE

About You

Please answer each question as it relates to you.

MM DD YYYY

Please enter today's date: ____/____/_____

1. From which site did you receive this packet? (please select only one):

- ○ Sentara: Virginia Beach Hospital
- ○ Sentara: Princess Anne
- ○ Sentara: Greenbrier Healthplex
- ○ Sentara: Health Management (Va. Beach)
- ○ Bon Secours: DePaul Medical Center
- ○ Bon Secours: Mary Immaculate Hospital
- ○ Bon Secours: Maryview Medical Center
- ○ MFM (Maternal Fetal Medicine) at EVMS
- ○ MFM at Tidewater Perinatal Center
- ○ MFM at Tidewater Perinatal Center
- ○ MFM at Riverside Regional Medical Center
- ○ Hampton Healthy Families Partnership
- ○ Newport News Healthy Families Initiative
- ○ Tidewater Physicians Multispecialty Group
- ○ Community Location (i.e., Flyer in Panera Bread, Babies-R-Us, etc.)
- ○ Other:

_____

1a. If you received this packet from a prenatal or parenting class taken at one of the sites listed above, what was the name of the class where you received this packet? Please write the name of the class here: _____

2. What is your gender?

   ○ Male

   ○ Female

MM DD YYYY

3. What is your birth date? ____/____/_____

4. What is your race?

   ○ American Indian or Alaska Native

   ○ Asian

   ○ Black or African American

   ○ Native Hawaiian or Other Pacific Islander

   ○ White

   ○ Other: _____

5. What is your ethnicity?

   ○ Latino or Hispanic

   ○ Not Latino or Hispanic

6. What is your household income?

   - ○ Less than $10,000
   - ○ $10,000 - 20,000
   - ○ $20,001 - 30,000
   - ○ $30,001 - 40,000
   - ○ $40,001 - 50,000
   - ○ $50,001 - 75,000
   - ○ More than $75,000

7. What is the highest level of education you completed?

   - ○ Some High School
   - ○ High School Diploma or GED
   - ○ Trade School
   - ○ Some College
   - ○ Bachelor's Degree
   - ○ Master's Degree
   - ○ Doctoral Degree
   - ○ Other (please specify): _____

8. Please indicate your current status (check all that apply):

- ○ Not Employed
- ○ Staying home with child(ren)
- ○ Military (Active Duty)
- ○ Military (not Active Duty)
- ○ Full-time student
- ○ Part-time student
- ○ Employed Part-time
- ○ Employed Full-time

9. What is your child's expected delivery date? (If you are not sure, please enter your best guess.)

MM DD YYYY

Expected Date of Birth: ____ / ____ / _____

Please answer the following questions in reference to the child whom you are expecting.

10. What is your relationship with the baby's biological father?

- ○ Married
- ○ Separated
- ○ Divorced
- ○ Widowed

- ○ Never married but have a continuing romantic relationship
- ○ Never married and not involved in a romantic way

11. Are you the biological parent of the expected child?
    - ○ Yes
    - ○ No
12. Is this your first child with your current partner?
    - ○ Yes
    - ○ No
13. What is your living situation?
    - ○ Living with child's father
    - ○ Not living with child's father
14. Was this pregnancy…
    - ○ Planned
    - ○ Unplanned
15. Is this pregnancy high-risk?
    - ○ Yes
    - ○ No
    - ○ Unsure
16. Were you in a committed relationship with the father at the time of conception?
    - ○ Yes
    - ○ No
17. Besides the baby you are expecting, how many other children do you have? _____

18. Besides the baby you are expecting, how many children live with you? _____

19. Do you or your partner plan to leave the area during the next 9 months?

- O Yes
- O No
- O Unsure

19a. If so, who?

- O You
- O Your partner
- O Both you and your partner

19b. How long will you (and/or your partner) be out of the area? _____

20. Are you or your partner currently or expected to be separated greater than two weeks for any reason?

- O Yes
- O No
- O Unsure

21. Do you and your partner plan to live together for at least the next 9 months?

- O Yes
- O No
- O Unsure

APPENDIX B

OBSERVATIONAL CODING

Cooperation

1 – Parents virtually never act in smooth accord. One or both partners are unengaged for parts of the 2+1 and continue this separation during the 3 together. During Part 3, no evidence of inclination toward active co-action and benign cooperation has quality or neutrality or uninvolvement. An overall impression of either non-connection or striking miscoordination.

2 – Very little mutual coordination and cooperation in their activities, but less severe propensities toward separatism or miscoordination. At the same time, the level of connection with the active partner in 2+1 is not very animated, and during 3 together the benignly cooperative parent is polite but inactive, failing to search for a joint or common theme. Efforts to join are tentative, forced, miscoordinated. Both partners are adequately involved but unconnected.

3 – A 3 may be given to a family where the impression is a "mixed" one. Unlike a "4" family – the typical family where cooperation as a theme is apparent but in which there may also be occasional interference or other evidence of individual rather than joint agendas, the "3" family will impress as having been very uncooperative at times (a long W-NE period during one of both 2+1s, followed by a cooperative rebound in the 3 together). Overall, the family shows evidence of having been cooperative, but behavior either during the 2+1s or the 3 together cannot be readily reconciled with what came before or after, leaving the rater with some questions.

4 – The rating of "4" describes the "average" cooperative coparenting pair. Such partners will politely wait turns, watch the ongoing interaction with interest, and on one or two occasions say something affirming, build on the partner's activities, make an attempt at co-action. At other times, momentary miscoordination, interference, boredom, or disengagement may be seen, but it is in the context of a cooperative engagement qualitatively different from polite non-connection.

5 – A family receiving a score of "5" likewise shows no evidence of puzzling disinterest or disconnection. Typically, a "5" family will differ from a "4" family in that one of the two partners seems particularly cooperative and jointly-oriented (showing a consistent active presence, willingness to make room for the other, interest in what the other partner is doing, and several affirmative comments), while the other partner's behavior is more like that in a "4" family (largely benign support, but with few or no instances of

referencing the partner or taking over for what the partner is doing). Occasional miscoordination or disconnection may be seen, but is clearly not of any real consequence.

6 – In a "6" family, both partners are clearly cognizant and supportive of one another, and make joint and regular efforts to sustain a family theme. Such interactions fail to receive a "7" rating only because these activities by both of the partners, while frequent and convincing, are not sustained for the entire session and interspersed with down-time or momentary miscoordination.

7 – A family receiving a score of "7" should show smoothly coordinated interactions and demonstrated mutual support throughout the session. Miscoordination should be nonexistent or minimal, with rapid and graceful returns to cooperative interaction.

Family Warmth

1 – No demonstrations of warmth between the parents; parents' engagement with the baby showed clear warmth for less than half the session.

2 – No warmth between the parents; parents' interactions with the baby were at least moderately warm for at least half of the session.

3 – The parents were unquestionably warm with the baby – more than just moderately so but short of exceptionally so – but showed absolutely no warm moments with one another; or the parents had one or two moments of warmth between them in the context of a moderately warm session with the baby. A "3" can also be given if one parent was quite warm toward baby while the other's warmth toward baby was more tempered.

4 – Both parents were unquestionably warm with the baby, more than moderately so but short of exceptionally so (or, one was moderately warm while the other was exceptional), and the parents were also clearly warm with one another on one or two occasions.

5 – Both parents were exceptionally warm with the baby, and were clearly warm with one another on one or two occasions; alternatively, one or both parents were unquestionably warm with baby (more than moderately so but not exceptionally so), but were clearly warm with one another on three or four occasions.

6 – Both parents were exceptionally warm with the baby and, with some momentary lapses, consistently warm with one another; alternatively, both parents were consistently and exceptionally warm with one another, but one parent showed moderate but not exceptional warmth with the baby.

7 – Both parents were consistently and unquestionably warm with the baby and one another.

Verbal Sparring

1 – Absolutely no evidence of any back-and-forth nattering or kidding at any time.

2 – One instance of a back-and-forth exchange of uncertain valence (sounds playful, but may or may not be tinged with hostility – unable to judge with confidence).

3 – More than one back-and-forth of uncertain valence, as described in "2" above.

4 – One back-and-forth exchange unquestionably hostile or contentious in nature.

5 – More than one back-and-forth exchange unquestionably hostile or contentious in nature; or, multiple hostile and contentious comments made by one partner that are unresponded to verbally by the addressee but which may be responded to via non-verbal means.

APPENDIX C

DYADIC ADJUSTMENT SCALE

DYADIC ADJUSTMENT SCALE

Most persons have disagreements in their relationships. Please indicate below the approximate extent of agreement or disagreement between you and your partner for each item on the following list.

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

	All the time	Most of the time	More often than not	Occa-sionally	Rarely	Never
16. How often do you discuss or have you considered divorce, separation, or terminating your relationship?	O	O	O	O	O	O
17. How often do you or your mate leave the house after a fight?	O	O	O	O	O	O
18. In general, how often do you think that things between you and your partner are going well?	O	O	O	O	O	O
19. Do you confide in your mate?	O	O	O	O	O	O
20. Do you ever regret that you married? (*or lived together*)	O	O	O	O	O	O
21. How often do you and your partner quarrel?	O	O	O	O	O	O
22. How often do you and your mate "get on each other's nerves?"	O	O	O	O	O	O

	Every Day	Almost Every Day	Occa-sionally	Rarely	Never
23. Do you kiss your mate?	O	O	O	O	O

	All of them	Most of them	Some of them	Very few of them	None of them
24. Do you and your mate engage in outside interests together?	O	O	O	O	O

How often would you say the following events occur between you and your mate?

	Never	Less than once a month	Once or twice a month	Once or twice a week	Once a day	More often
25. Have a stimulating exchange of ideas	O	O	O	O	O	O
26. Laugh together	O	O	O	O	O	O
27. Calmly discuss something	O	O	O	O	O	O
28. Work together on a project	O	O	O	O	O	O

These are some things about which couples sometimes agree and sometime disagree. Indicate if either item below caused differences of opinions or were problems in your relationship during the past few weeks. (Check yes or no)

	Yes	No	
29.	O	O	Being too tired for sex.
30.	O	O	Not showing love.

31. The circles on the following line represent different degrees of happiness in your relationship. The middle point, "happy," represents the degree of happiness of most relationships. Please fill in the circle which best describes the degree of happiness, all things considered, of your relationship.

O	O	O	O	O	O	O
Extremely Unhappy	Fairly Unhappy	A Little Unhappy	Happy	Very Happy	Extremely Happy	Perfect

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

- **O** I want desperately for my relationship to succeed, and *would go to almost any length* to see that it does.
- **O** I want very much for my relationship to succeed, and *will do all I can* to see that it does.
- **O** I want very much for my relationship to succeed, and *will do my fair share* to see that it does.
- **O** It would be nice if my relationship succeeded, but *I can't do much more than I am doing now* to help it succeed.
- **O** It would be nice if it succeeded, but I *refuse to do any more than I am doing now* to keep the relationship going.
- **O** My relationship can never succeed, and *there is no more that I can do* to keep the relationship going.

APPENIDIX D

CENTER FOR EPIDIMEOLOGIC STUDIES DEPRESSION SCALE

Below is a list of the ways you might have felt or behaved. Please mark the box indicating how often you have felt this way **DURING THE PAST WEEK.**

	Rarely or none of the time (less than 1 day)	**Some or a little of the time (1-2 days)**	**Occasionally or a moderate amount of the time (3-4 days)**	**Most or all of the time (5-7 days)**
During the past week:	0	1	2	3
1) I was bothered by things that usually don't bother me	0	1	2	3
2) I did not feel like eating; my appetite was poor	0	1	2	3
3) I felt that I could not shake off the blues even with help from my family and friends	0	1	2	3
4) I felt that I was just as good as other people	0	1	2	3
5) I had trouble keeping my mind on what I was doing	0	1	2	3
6) I felt depressed	0	1	2	3
7) I felt that everything I did was an effort	0	1	2	3
8) I felt hopeful about the future	0	1	2	3
9) I thought my life had been a failure	0	1	2	3
10) I felt fearful	0	1	2	3
11) My sleep was restless	0	1	2	3
12) I was happy	0	1	2	3
13) I talked less than usual	0	1	2	3
14) I felt lonely	0	1	2	3
15) People were unfriendly	0	1	2	3
16) I enjoyed life	0	1	2	3
17) I had crying spells	0	1	2	3
18) I felt sad	0	1	2	3
19) I felt that people disliked me	0	1	2	3
20) I could not get "going"	0	1	2	3

APPENDIX E

WHO DOES WHAT MEASURE – CHILDCARE BALANCE

SECTION 4: FAMILY TASKS WITH INFANT

Please show **how you *think*** you and your partner will divide the family tasks related to your new baby once he/she is born. **Using the numbers** on the scale below, please indicate HOW I ***THINK*** IT WILL BE down the **left side** and HOW I WOULD LIKE IT TO BE down the **right side** – once you become parents of a young infant (birth to 6 months).

1 2 3 4 5 6 7 8 9

SHE does it all — WE BOTH do this about equally — HE does it all

HOW I THINK IT WILL BE		HOW I WOULD LIKE IT TO BE
	40. Deciding about the baby's feeding schedule	
	41. Feeding the baby	
	42. Changing the baby's diapers; dressing the baby	
	43. Bathing the baby	
	44. Deciding whether to respond to the baby's cries	
	45. Responding to the baby's crying in the middle of the night	
	46. Taking the baby out: walking, driving, visiting, etc.	
	47. Choosing toys for the baby	
	48. Playing with the baby	
	49. Doing the baby's laundry	
	50. Arranging for baby sitters or child care	
	51. Dealing with the doctor regarding the baby's health	

APPENDIX F

EARLY INFANCY TEMPERAMENT QUESTIONNAIRE

Using the scale below, please select the response that best indicates how often your baby's behavior has been like the behavior described in each statement. If your baby has **not** experienced a situation, select "*Can't Answer*".

	Almost Never	Rarely	Usually Does Not	Usually Does	Frequently	Almost Always	Can't Answer
1. My baby accepts face washing at any time without protest.	O	O	O	O	O	O	O
2. My baby's hunger cry is a scream rather than a whimper.	O	O	O	O	O	O	O
3. My baby cries when awake and left alone.	O	O	O	O	O	O	O
4. My baby lies still (little squirming) when held in my arms between feedings.	O	O	O	O	O	O	O
5. For the first few minutes in a new place or situation (new store or home), my baby is fretful.	O	O	O	O	O	O	O
6. My baby resists (squirms, pulls away) hair brushing.	O	O	O	O	O	O	O
7. My baby vigorously cries when sleepy.	O	O	O	O	O	O	O
8. My baby lies still (little squirming) during hair brushing.	O	O	O	O	O	O	O
9. My baby adjusts to changes in sleep time within 2 or 3 days.	O	O	O	O	O	O	O
10. My baby displays much feeling (vigorous smile or cry) when dressing and undressing.	O	O	O	O	O	O	O

	Almost Never	Rarely	Usually Does Not	Usually Does	Frequently	Almost Always	Can't Answer
11. My baby is pleasant (coos, smiles) during face washing.	O	O	O	O	O	O	O
12. My baby moves about much (kicks, waves arms, squirms) during dressing and undressing.	O	O	O	O	O	O	O
13. My baby adjusts to changes in place of sleeping within 2 or 3 days.	O	O	O	O	O	O	O
14. My baby objects (cries, frets) if someone other than myself gives care.	O	O	O	O	O	O	O
15. My baby lies still (little kicking, splashing) in bath.	O	O	O	O	O	O	O
16. My baby displays much feeling (vigorous smile or cry) during diapering.	O	O	O	O	O	O	O
17. My baby is fussy (cries, frowns) during a bath.	O	O	O	O	O	O	O
18. My baby turns head away and looks for me when held by a new person.	O	O	O	O	O	O	O
19. My baby objects (fusses, squirms) to being bathed by a different person even after 2 to 3 tries.	O	O	O	O	O	O	O
20. My baby moves much (squirms, bounces, kicks) when lying awake in crib.	O	O	O	O	O	O	O

	Almost Never	Rarely	Usually Does Not	Usually Does	Frequently	Almost Always	Can't Answer
21. My baby resists changes in feeding schedule (1 hour or more) even after two tries.	O	O	O	O	O	O	O
22. My baby is fussy (cries, frets) when put down for sleep.	O	O	O	O	O	O	O
23. My baby accepts his/her bath any time of the day without resisting.	O	O	O	O	O	O	O
24. My baby cries during a bowel movement.	O	O	O	O	O	O	O
25. My baby moves about much (kicks, waves arms, squirms) during diapering.	O	O	O	O	O	O	O
26. My baby appears bothers (cries, squirms) when first put down to sleep in a different place than usual.	O	O	O	O	O	O	O
27. My baby is fussy (cries, fusses) when burped during feeding.	O	O	O	O	O	O	O
28. My baby cries loudly when diaper is soiled with bowel movement.	O	O	O	O	O	O	O
29. My baby resists (squirms, fusses) regular nail cutting.	O	O	O	O	O	O	O
30. My baby moves much during feeding (squirms, kicks, waves arms).	O	O	O	O	O	O	O

	Almost Never	Rarely	Usually Does Not	Usually Does	Frequently	Almost Always	Can't Answer
31. My baby lies quietly, making happy noises upon waking up.	O	O	O	O	O	O	O
32. My baby does not feed well (fusses) when in new situation.	O	O	O	O	O	O	O
33. My baby resists (squirms, fusses) during routine dressing and undressing.	O	O	O	O	O	O	O
34. My baby is noisy (vocalizing loudly) on waking up.	O	O	O	O	O	O	O
35. My baby smiles or coos during nail cutting.	O	O	O	O	O	O	O
36. My baby accepts right away a change in time of feeding.	O	O	O	O	O	O	O
37. My baby accepts routine washing of diaper area.	O	O	O	O	O	O	O
38. My baby lies still during nail cutting.	O	O	O	O	O	O	O

Please choose **one** response to complete statement below by filling in the dot.

39. My baby's temperament (style of behaving) is:

- O about average
- O more difficult than average
- O easier than average

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EDUCATION

2013 - Present	**Virginia Consortium Program in Clinical Psychology**, Norfolk, VA **Ph.D.** in Clinical Psychology, expected May 2018 University-based, APA accredited program, jointly sponsored by: Eastern Virginia Medical School, Norfolk State University, and Old Dominion University
2013 - 2016	**Old Dominion University**, Norfolk, VA **M.S.** in Psychology, May 2016
2005 - 2008	**University of Maryland**, College Park, MD **B.A.** in Psychology, December 2008

BACKGROUND

Jessica Block is a third year graduate student at Old Dominion University and the Virginia Consortium Program in Clinical Psychology. She is pursuing her Master of Science degree in Psychology and her Ph.D. in Clinical Psychology. She currently conducts research as part of the Early Family Lab at Old Dominion University under lab director, Dr. James Paulson. Jessica's research interests include early family processes, relationship satisfaction, and parental mental health in diverse populations. Jessica's clinical interests include child and adolescent therapy and assessment, child trauma, and parenting intervention.

SELECTED PUBLICATIONS AND PRESENTATIONS

Block, J. & Paulson, J. F., Ph.D. (2015). Relationship Satisfaction and Coparenting over the Transition to Parenthood. Poster presented at the Association for Psychological Science Annual Convention, New York, NY.

Block, J., Parker, T., M.A., Paulson, J. F., Ph.D. (2014). Postpartum Relationship Satisfaction of Younger and Older Parents. *Psychogram, 39*(1), 21.

Block, J., Balbierz, A., M.P.H., Howell, E., M.D., M.P.P. (2011). *Racial/Ethnic Differences in 6-Month Postpartum Breastfeeding Rates.* Poster presented at the American Psychological Association Annual Convention, Washington, D.C.