HHS Public Access

Author manuscript

J Fam Psychol. Author manuscript; available in PMC 2023 July 27.

Published in final edited form as:

J Fam Psychol. 2017 April ; 31(3): 294–303. doi:10.1037/fam0000245.

Marital, Parental, and Whole-Family Predictors of Toddlers' Emotion Regulation: The Role of Parental Emotional Withdrawal

Martin I. Gallegos,

Sarah E. Murphy,

Aprile D. Benner,

Deborah B. Jacobvitz,

Nancy L. Hazen

Department of Human Development and Family Sciences, University of Texas at Austin.

Abstract

The present study aims to address how dyadic and triadic family interactions across the transition to parenthood contribute to the later development of toddlers' adaptive emotion regulation using structural equation modeling methods. Specifically, we examined the interrelations of observed marital negative affect before childbirth, parents' emotional withdrawal during parent–infant interactions at 8 months, and coparenting conflict at 24 months as predictors of toddlers' adaptive emotion regulation at 24 months. Data for the present study were drawn from a longitudinal dataset in which 125 families were observed across the transition to parenthood. Results suggested that prenatal marital negativity predicted mothers' and fathers' emotional withdrawal toward their infants at 8 months postbirth as well as coparenting conflict at 24 months postbirth. Coparenting conflict and father–infant emotional withdrawal were negatively associated with toddlers' adaptive emotion regulation; however, mother–infant emotional withdrawal was not related. The implications of our study extend family systems research to demonstrate how multiple levels of detrimental family functioning over the first 2 years of parenthood influence toddlers' emotion regulation and highlight the importance of fathers' emotional involvement with their infants.

Keywords

emotion regulation; emotional withdrawal; family systems; fathers; toddlers

Children's ability to adaptively regulate their emotions is critical to their later cognitive and social functioning. *Adaptive emotion regulation* refers to one's ability to flexibly modulate emotions to meet the demands of emotionally challenging situations (Morris, Silk, Steinberg, Myers, & Robinson, 2007). It does not mean simply reducing or eliminating negative affect because emotions such as anger and frustration can motivate a child to solve a difficult task or to seek adult help when needed, but rather, regulating negative

Correspondence concerning this article should be addressed to Martin I. Gallegos, Department of Human Development and Family Sciences, University of Texas at Austin, Austin, TX 78712-1248. migallegos@utexas.edu.

emotions and expressing them in socially appropriate ways. According to Morris et al. (2007), the emotional climate of the family, including emotions expressed in marital, parent–child, and whole-family interactions, plays a particularly important role in the early development of children's adaptive emotion regulation. Numerous studies have found that negative parent–infant interactions predict children's dysregulated emotion regulation, including underregulated expression of negative emotions and overregulated, flat affect (Frankel, Umemura, Jacobvitz, & Hazen, 2015). However, much less is known about how parents' *emotional withdrawal* during interactions with their infants might affect infants' later emotion regulation, although it seems likely that parents who habitually show flat affect when interacting with their infants would have detrimental effects on their emotional development.

Moreover, although emotional climate assessed at the whole-family level has been linked to children's later development of externalizing symptoms (e.g., Johnson, 2003), little is known about how the emotional climate of whole-family interactions relates to children's early development of adaptive emotion regulation. Finally, although family systems theory stresses that multiple systems of family interactions (e.g., marital, parent–child, and whole-family) interrelate to influence children's development (e.g., Sturge-Apple, Davies, & Cummings, 2010), rarely have these multiple levels been studied as simultaneous predictors of children's adaptive emotion regulation. Thus, the goal of this study was to longitudinally examine interrelations among observed prenatal negative marital interactions, emotionally withdrawn parent–infant interactions at 8 months, and coparenting conflict in triadic family interactions at 24 months as predictors of toddlers' later adaptive emotion regulation.

Prenatal Marital Negative Affect: Indirect Effects on Toddlers' Emotion Regulation

Even before a child is born, emotional expressivity in the marital relationship sets the tone for the family emotional climate that a child will experience, including the emotional climate of parent–child and whole-family interactions (Lindahl, Clements, & Markman, 1997; Tanner Stapleton & Bradbury, 2012). According to the spillover hypothesis, interparental conflict can spill over to parenting by exhausting parental resources (Erel & Burman, 1995). Erel and Burman (1995) found consistent support for the spillover hypothesis in their meta-analysis, demonstrating an association between marital and parenting quality. Moreover, marital negativity assessed prenatally has been found to predict negative parenting 9 years after childbirth, suggesting not only that the emotional climate of marital interactions persists over the transition to parenthood but also that spillover effects of marital quality are not simply an artifact of child effects on marital interactions (Tanner Stapleton & Bradbury, 2012). Most studies of spillover from marital to parent–child interactions have focused on the relation of martial conflict to negative, harsh parent–child interaction patterns (e.g., Erel & Burman, 1995; Krishnakumar & Buehler, 2000) rather than to parents' emotional withdrawal, but marital negativity may tax parenting resources such that mothers and fathers may be more likely to withdraw emotionally during interactions with their infant. In addition, parents who are distant and tense in their marital interactions may interact in similar unresponsive and emotionally withdrawn styles with their children.

Prenatal marital negativity may also affect the family emotional climate that a child experiences by affecting later triadic mother–father–child coparenting interactions, in which both parents jointly engage in parenting behavior while in the presence of their child (Lindahl et al., 1997). Thus, prenatal marital negativity may indirectly exert negative effects on children's development of adaptive emotion regulation both by increasing mothers' and fathers' emotional withdrawal during interactions with their infant and by increasing interparental conflict during whole-family coparenting interactions in which their child is present.

Mother and Father Emotional Withdrawal From the Infant

Although experimental studies using the Face-to-Face Still-Face (FFSF) paradigm (Tronick, Als, Adamson, Wise, & Brazelton, 1978) suggest that chronic parent emotional withdrawal might have negative implications for adaptive emotion regulation development (Adamson & Frick, 2003), emotional withdrawal in parent–infant interactions has been studied far less than insensitive parenting as a predictor of emotion regulation in the early years. In the FFSF, when a parent manipulates his or her response to his or her infant with an unresponsive, flat, and expressionless face after typical face-to-face interactions, infants typically display increased emotional dysregulation, including more negative facial expressions, fussing, crying, and turning away (Adamson & Frick, 2003; Tronick et al., 1978). Consistent with the FFSF studies, prior observational research has demonstrated that children become emotionally dysregulated when parents ignore their distress (e.g., Eisenberg, Cumberland, & Spinrad, 1998).

Most studies of the role of parental emotion withdrawal on children's emotional development have focused on the role of parental depression rather than emotional withdrawal per se. Mothers experiencing depressive symptoms are also more likely than other mothers to show emotional withdrawal in interactions with their infants (Lovejoy, Graczyk, O'Hare, & Neuman, 2000). However, maternal depressive symptoms are more likely to relate to mothers' increased negative responsiveness toward their children than to increased emotional withdrawal (Dix, Moed, & Anderson, 2014; Lovejoy et al., 2000), particularly when their children show greater negative reactivity and aversive behaviors (Dix et al., 2014). Few studies have examined the relation of paternal depression to fathers' emotional withdrawal from infants, although disengaged father–infant interactions have been found to predict externalizing symptoms (i.e., oppositional, aggressive, overactive behaviors) in 1-year-old infants (Ramchandani et al., 2013). Given that parental depression and emotional withdrawal are related but distinct constructs, it is important to examine how parental emotional withdrawal, independent of depression, relates to the early development of children's adaptive emotion regulation.

The role of father–infant interactions in children's emotional development has been particularly understudied, and little is known about whether paternal emotional withdrawal differs from maternal emotional withdrawal in its prevalence or in how it relates to children's later emotional development. Because fathers are less likely to be an infant's primary caregiver (Kotila, Schoppe-Sullivan, & Kamp Dush, 2013), they may be more likely than mothers to emotionally withdraw from interacting with their infant when the

infant becomes upset. Because of social norms regarding maternal caregiving, mothers may be more likely to feel that it is their job to comfort their distressed infant and thus to remain emotionally engaged, even if they risk displaying frustration or anger to their infant. At the same time, recent research on father–infant caregiving suggests that fathers may play a particularly important role in children's emotional development (Hazen, Mc-Farland, Jacobvitz, & Boyd-Soisson, 2010; Paquette, 2004). Specifically, fathers often engage infants in stimulating play, which may help their children develop the ability to regulate strong emotions when they become overstimulated or distressed (Hazen et al., 2010). Children of fathers who are often emotionally withdrawn may lack these experiences, which could result in less adaptive emotion regulation. Therefore, the present study will offer the novel contribution of examining mothers' and fathers' emotional withdrawal as predictors of toddlers' later adaptive emotion regulation.

In addition, studies have not yet examined whether spillover from prenatal marital negativity might result in parents' emotional withdrawal (rather than negativity) in interactions with their infants. Thus, in the present study, we aimed to build on past research by examining the understudied role of mothers' and fathers' emotional withdrawal during infancy as a possible mediator between prenatal marital negativity and toddlers' later adaptive emotion regulation.

Coparenting Conflict in Triadic Family Interaction

Coparenting, which refers to how parents work with or against each other when caring for their child, must necessarily be observed in triadic family interactions in which mothers and fathers are involved in joint parenting while their child is present (McHale, 1995). Coparenting can be viewed as the intersection between marital and parent–child relationships (Cowan & Cowan, 2002) because it is affected by marital quality (e.g., Christopher, Umemura, Mann, Jacobvitz, & Hazen, 2015; McHale, 1995) as well as the quality of mother–child and father–child interactions (e.g., Feinberg & Kan, 2008). However, according to family systems theory, although triadic interactions among mothers, fathers, and children subsume dyadic marital and parent–child interactions, they cannot be reduced to the sum of these dyadic interactions because parents often behave differently when the whole family is together (Bowen, 1976; Johnson, 2001). For example, triadic family interactions characterized by weak parental leadership, low collaboration, and poor cohesion have been shown to predict kindergarten children's externalizing behavior in first grade (Johnson, Cowan, & Cowan, 1999) and fourth grade (Johnson, 2003) above and beyond the effects of dyadic parent–child and marital interactions.

Coparenting that is hostile and conflictual has been found to be particularly important in predicting negative child outcomes such as externalizing (Murphy, Jacobvitz, & Hazen, 2016; Schoppe, Mangelsdorf, & Frosch, 2001) and internalizing problems (Katz & Low, 2004). According to the emotional security hypothesis, very young children's exposure to and involvement in chronic family conflict is detrimental to their emotion regulation (Davies & Cummings, 1994) because it may threaten their sense of emotional security within the family, which may in turn have direct deleterious effects on their emotion regulation. For example, children who saw their parents engage in verbal conflict at age 5 were more likely

to exhibit externalizing symptoms at age 8 (Kouros, Cummings, & Davies, 2010). However, studies of the role of coparenting conflict in the early development of adaptive emotion regulation are lacking.

We propose that negative whole-family interactions characterized by high coparenting conflict may have undesirable effects on children's emotion regulation independent of negative marital interactions and emotionally withdrawn parent–child interactions. We further expect that prenatal marital negativity is likely to spill over to later coparenting conflict as well as to withdrawn parent–infant interactions. However, it seems unlikely that emotionally withdrawn parenting would predict coparenting conflict because parents who emotionally withdraw from their child would be more likely to disengage from coparenting than to engage in coparenting conflict.

Overview of the Present Study

The present study used structural equation modeling to investigate prenatal marital negative affect (i.e., negativity), parents' emotional withdrawal at 8 months, and coparenting conflict in triadic family interactions at 24 months as predictors of toddlers' adaptive emotion regulation at 24 months. We also investigated whether prenatal marital negative affect spills over to parents' emotional withdrawal in interactions with their 8-month-old infants and to coparenting conflict in triadic family interactions at 24 months. We hypothesized that (a) higher prenatal marital negative affect would directly predict parents' greater emotionally withdrawn behaviors during parent–infant interaction at 8 months and higher coparenting conflict in triadic interactions at 24 months; (b) greater parental emotional withdrawal at 8 months and greater coparenting conflict at 24 months would directly predict toddlers' less adaptive emotion regulation at 24 months; and (c) prenatal marital negative affect would be indirectly related to toddlers' adaptive emotion regulation at 24 months via relations with higher parental emotional withdrawal at 8 months and higher coparenting conflict at 24 months.

It is also possible that the relation of coparenting conflict and toddlers' emotion regulation could be driven by child effects (e.g., Kiff, Lengua, & Zalewski, 2011; Morris et al., 2007), particularly because both of these constructs were assessed at 24 months. Therefore, we also tested the alternative hypothesis that the previously hypothesized indirect path would be reversed, such that prenatal marital negative affect would directly predict toddlers' less adaptive emotion regulation at 24 months, which in turn would predict greater coparenting conflict at 24 months. Possible differences by parent gender were also explored, based on prior work indicating that mothers and fathers have been found to differ in their emotional interactions with their children (Eisenberg et al., 1998; Morris et al., 2007). In all analyses, we controlled for family income, infant temperament, parents' depressive symptoms, and caregiving involvement because all have been shown in numerous past studies to have potential effects on the quality of parent–infant and family interaction quality.

Method

Participants

Participants were part of a larger longitudinal study following 125 couples that were expecting their first child (74 boys, 51 girls). English-speaking couples from a large Southwestern city who were expecting their first child were recruited during the mothers' third trimester of pregnancy during 1993–1995. The pool of participants came from birthing classes, public service radio announcements, newspaper press releases, and flyers distributed to maternity stores. Parents' ages at the time of recruitment ranged from 16 to 42 for mothers (M = 29) and 19–50 for fathers (M = 31). Most participants were White (84%), and the remainder were Hispanic (8%), African American (2%), or biracial or of another ethnicity (6%). Median income for the sample was $30,000–$44,999. Of the 125 families in the sample, 7 earned $0–15,000, 22 earned $15,000–$30,000, 31 earned $30,000–$45,000, 33 earned $45,000–$60,000, and 32 earned more than $60,000. The sample was well educated, with 60% earning a bachelor's or graduate degree and another 30% reporting some college or trade/business school coursework.

Data for the current study were collected prenatally (i.e., during the mother's last trimester of pregnancy) and when children were 8 months and 24 months old. At 24 months, 108 families remained in the sample. Of the 17 families who left the study, 12 families moved away, 3 were too busy to participate, and 2 could not be located. In terms of attrition, individuals without data at 24 months did not differ from individuals with data at 24 months on any of the study variables except for prenatal family income. Couples reporting family incomes less than $30,000 were more likely to drop out by 24 months compared with couples with higher incomes, $x^2(1, N = 124) = 6.75$, $p = .01$.

Procedure

During the prenatal home visits, couples were videotaped during a series of marital interaction tasks. When the infants were 8 months old, mother–infant and father–infant interactions were videotaped during home visits. When the children were 24 months old, triadic family interactions (i.e., mother–father–child) were videotaped at home. Different teams of coders rated each of the four types of family interaction videos, and all coders were blind to the hypotheses and all other coded data. Each type of family interaction was coded using established observational coding systems that assess multiple aspects of family interaction; however, only the constructs of interest in the present study are described here. For each measure, pairs of coders were trained by conference coding approximately 15% of the videos before independently rating videos to obtain interrater reliability. Interrater reliability between pairs of coders was calculated using intraclass correlation coefficients (ICCs), which were adequate for all ratings (>.70). For all ratings, after reliability calculations, cases in which raters disagreed were conference coded with the coder trainer so that the data would be as accurate as possible. A disagreement was defined as ratings that were more than 2 points apart (or by more than 1 point apart in the case of coparenting conflict because it was rated on a 5-point scale instead of a 7-point scale). Final scores consisted of averaged scores between coders or conferenced scores for those cases that were conference coded.

Measures

Dyadic prenatal marital negative affect.—During the prenatal phase, couples were videotaped for 30 min while participating in a series of discussion tasks. Parents were asked to discuss how their relationship had changed during pregnancy, reach an agreement about a topic on which they disagreed, and plan to do an enjoyable activity together. Following coder training, two coders independently rated all of the remaining couple interactions on six 7-point subscales (Booher & Jacobvitz, 1998), including a negative affectivity scale (ICC = .86), which assessed the extent to which the couple's interaction was tense and emotionally negative versus relaxed and comfortable. Higher scores were characterized by tension due to prolonged silences, stiff postures, lack of eye contact, whining, or personal attacks. Lower scorers demonstrated very few, if any, signs of conflict and were characterized by a sense of comfort being together and a relaxed and spontaneous exchange of ideas and feelings.

Parental emotional withdrawal at 8 months.—At 8 months, each parent was instructed to play with their infant as they ordinarily would for approximately 15 min and to engage in routine caregiving tasks (feeding and clothes change) for approximately 15 min. Each interaction was videotaped and later rated using the Infant Caregiving Scales (ICS; Hazen et al., 2010), which includes 90 items rated on 7-point scales. Scales for several caregiving constructs (e.g., responsiveness, affection, emotional withdrawal, hostility, role-reversal) were developed from the items using a criterion sort method (Waters & Deane, 1985). Seven expert judges rated the 90 items according to the extent to which they were diagnostic of each caregiving construct. Items that judges agreed were highly diagnostic of a particular caregiving construct were used to create a scale to assess that construct. Ratings on each of the items that made up each scale were averaged to create scores for each scale.

The emotional withdrawal scale assessed the extent to which parents responded to their infant with flat, withdrawn affect in face-to-face interaction, similar to the simulated flat affect shown in the FFSF paradigm. It did not assess the extent to which the parents physically withdrew from their infant or were generally uninvolved. It consisted of seven items, including "Parent and baby's interaction seems flat and disengaged" and "There is a clear lack of emotional connection between parent and baby." Internal consistency for the scale was high (αs = .71 for fathers and .72 for mothers). After coder training, two coders rated 86% of the videos for reliability (ICCs for emotional withdrawal averaged .72 for mothers and .71 for fathers).

Coparenting conflict at 24 months.—Coparenting conflict was assessed using 25-min in-home observations of mother–father–child triadic interactions obtained when the children were 24 months old. Parents were instructed to prepare a snack and change their child's clothes while engaging in a parenting card-sort activity. This task was designed to examine coparenting interactions that required parents to complete an adult task while concurrently caring for their child. Parents were told they could complete the tasks in any order as long as they were completed within a 25-min timeframe. The time constraints put the parents under mild time pressure, which was designed to simulate navigation of daily challenges at home. If parents completed the task early, then they were asked to engage their child in a

challenging peg-sorting task that required parent involvement for the child to successfully complete the task.

After coder training, two coders independently rated all of the remaining videos for coparenting behaviors on several 5-point Likert-type scales using the Coparenting and Family Rating Scales (CFRS; McHale, Kuersten-Hogan, & Lauretti, 2001). The present study utilized the Verbal Sparring scale (ICC = .74), a measure of coparenting conflict. High scores on this scale indicated pervasive disagreements and high use of hostility, sarcasm, and insulting behavior among family members.

Toddler emotion regulation at 24 months.—Toddlers' adaptive emotion regulation was assessed at 24 months using the Children's Emotion Regulation Assessment, an observational technique developed to rate young children's emotion regulation during problem-solving tasks when the parent is not present (Boyd-Soisson, 2002). Previous research using this assessment technique indicated that toddlers' emotion regulation was predicted by mothers' and fathers' sensitive caregiving during infancy (Hazen et al., 2010). Children were observed during a laboratory visit in two challenging 5–10 min task situations presented by a researcher that were designed to induce frustration. The first task involved a long tube with a snack stuck in the middle. Children were provided with bristle blocks to see if they could figure out how to connect the bristle blocks so they could use them to push the snack out. The second task involved a large locked Plexiglas box full of attractive toys. Children were asked to figure out how they could get the toys out, which was not possible without help from the researcher, who eventually provided a key when the child approached her for assistance. The researcher aided the children as little as possible, but when children became distressed, the researcher provided increased aid.

After coder training, two coders rated 65% of the videos on a 7-point Likert scale assessing *adaptive emotion regulation* (ICC = .89). This was defined as showing a range of emotions that were adapted to solving the task, including mild frustration, interest, the ability to persist in the task even when frustrated, ability to solicit help when necessary either verbally or nonverbally, and joy and pride upon solution of the problem. Children received high scores if they showed these characteristics and low scores if they became so distressed or angered that they would not complete the tasks, if they withdrew from the tasks, or if they showed little or no emotion when failing or succeeding at the task.

Control Variables

Infant temperament.—Infant temperament scores were assessed at 3–6 weeks postbirth using mothers' reports of the Infant Behavior Questionnaire (IBQ; Rothbart, 1981). This measure assesses six domains (i.e., infants' activity level, smiling and laughter, fear, distress to limitations, soothability, duration of orienting) on 7-point scales (1 = *absence of behavior*, 7 *very high frequency or intensity of the behavior*). For the present study, we created composite scores by subtracting the standardized positive reactivity score from the standardized negative reactivity score, following Rothbart's (1981) suggestion (α = .77).

Parental depression.—Maternal and paternal depression scores were assessed prenatally, at 8 months, and at 24 months using the 20-item Center for Epidemiologic Studies-

Depression Scale (CES-D; Radloff, 1977). Mothers and fathers indicated how often they had experienced the feeling described in each statement about depressive symptoms in the past week on a 4-point scale from “Rarely or none of the time” to “Most or all of the time.” The summed score for all 20 items represents the general depression experienced by each participant during the last week. Cronbach’s s for CES-D scores at each stage were as follows: for mothers, .78 prenatally, .82 at 8 months, and .82 at 24 months; for fathers, .76 prenatally, .81 at 8 months, and .83 at 24 months.

Family income.—Family income information was prenatally collected. Parents selected an income range on a 1–5 scale that corresponded to their household income in increments of $15,000 (e.g., $30,000–$45,000).

Parents’ involvement in infant care.—When the infants were 8 months old, one or both parents completed a Schedule of Care for Baby, indicating who cared for their baby each hour between 6:00 a.m. and 12:00 p.m. on each day of a typical week. Each parents’ involvement was calculated as the total hours/week during which they were solely responsible for the baby’s care.

Data Analyses

Path analyses using Mplus 6.0 were conducted to test the hypotheses proposed in the main model (Model 1, see Figure 1). Missing data were accounted for through the full information maximum likelihood (FIML) estimation, which enables inclusion of all data in the analyses (Allison, 2003; Enders, 2010). With FIML, missing data are not imputed; instead, all available data for each participant are fit to the covariance matrix (Enders, 2001). Therefore, our analyses include all data from each time of data collection, and our Table 1 denotes the sample sizes, means, standard deviations, and correlations for each variable. FIML assumes that data are either missing at random (i.e., probability of data missing on y is related to predictor variables) or missing completely at random (i.e., probability of data missing on y is not related to predictor variables). An analysis of missing data patterns revealed 24 distinct patterns of missingness. In total, 75 observations were missing no data, and the vast majority of the other missing data patterns (19) included only one or two observations (the remainder of missing data patterns include 10 or fewer observations). Given our sample size of 125, the extensive number of missing data patterns combined with the evidence that there is no predominant pattern of missingness provide strong evidence that data are missing at random, thus enabling the use of FIML in our analyses. In addition, given that each of the goodness-of-fit indices operates on different assumptions, several indices of overall model fit were included to convey a consistent evaluation (Hoyle & Panter, 1995), including the comparative fit index (CFI; Bentler, 1990), the root mean square error of approximation (RMSEA; Brown & Cudeck, 1993), and the χ^2 statistic.

To explore the possibility that mothers’ and fathers’ emotional withdrawal might be related to their children’s development of adaptive emotion regulation in different ways, after testing the overall model, we tested the model with paths for parent gender constrained. In the constrained model, we constrained two pairs of path coefficients to be equal. The first pair set as equal were the coefficients of prenatal marital negative affect predicting

mother–infant and father–infant emotional withdrawal at 8 months. The second pair set as equal were the coefficients of mother–infant and father–infant emotional withdrawal at 8 months predicting toddler emotion regulation at 24 months. We then used χ^2 difference tests to determine if the model fit declined significantly in the constrained model versus the original unconstrained model in which these paths were free to vary. In addition, we examined possible effects of child gender in preliminary analyses in which we tested models including interactions of child gender with each of the family interaction variables, but we found no significant results; thus, child gender was not examined further.

We also tested an alternative model that examined whether the hypothesized pathway of coparenting conflict predicting toddler adaptive emotion regulation might be causally reversed. Because these measures were both observed during the 24-month wave, causality between these variables cannot be determined. Although it seems likely that greater participation in whole-family conflict should result in the child's greater emotional dysregulation, it is also plausible that toddlers' poor emotion regulation could lead to increased coparenting conflict (e.g., Kiff et al., 2011; Morris et al., 2007).

Covariates.—Family income was regressed on prenatal marital negative affect, on maternal and paternal emotional withdrawal scores at 8 months, on coparenting conflict, and on toddler emotion regulation at 24 months. Infant temperament scores were regressed on maternal and paternal emotional withdrawal scores at 8 months, on coparenting conflict at 24 months, and on toddler emotion regulation at 24 months. Prenatal parental depression scores were regressed on prenatal marital negative affect, 8-month parental depression was regressed on maternal and paternal emotional withdrawal scores at 8 months, and 24-month parental depression was regressed on coparenting conflict scores at 24 months and on toddler emotion regulation scores at 24 months. Finally, parents' caregiving involvement scores at 8 months were regressed on parents' emotional withdrawal scores at 8 months.

Results

Table 1 presents the means, standard deviations, and correlations of the study variables. Paired *t* tests revealed significant differences between mothers and fathers on several variables. Fathers demonstrated significantly higher scores of emotional withdrawal toward their infants at 8 months than did mothers, $t(116) = 2.30$, $p = .02$, $d = .27$. Mothers demonstrated significantly more depressive symptoms than did fathers prenatally, $t(123) = 6.38$, $p = .001$, $d = .80$, at 8 months, $t(116) = 2.30$, $p < .02$, $d = .30$, and marginally at 24 months, $t(104) = 1.90$, $p = .06$, $d = .25$. Mothers also demonstrated significantly higher involvement with their infants than did fathers, $t(88) = 10.34$, $p < .001$, $d = 1.56$. No other differences between parents were observed.

Figure 1 shows the results of our main SEM model. This model fit the data well, $\chi^2(35) = 36.21$, $p = .41$, RMSEA = .02 (90% CI = .00, .07), CFI = .97. As predicted, higher prenatal marital negative affect was positively and significantly associated with mothers' and fathers' greater emotionally withdrawn behavior during parent–infant interaction at 8 months (for mothers, $\beta = .27$, $p = .003$; for fathers, $\beta = .26$, $p = .006$) and with higher coparenting conflict at 24 months, $\beta = .22$, $p = .04$. Also as predicted, fathers' emotional withdrawal at 8

months with infants was significantly negatively associated with toddlers' adaptive emotion regulation at 24 months,β = −.26, p = .005. However, mothers' emotional withdrawal at 8 months was not significantly associated with toddlers' adaptive emotion regulation at 24 months,β = .10, p = .29. Our hypothesis that greater coparenting conflict at 24 months would be significantly negatively associated with toddlers' less adaptive emotion regulation at 24 months was also supported, β = −.27, p = .009. Finally, the association between prenatal marital negative affect and toddler adaptive emotion regulation was partially but marginally mediated by father–infant emotional withdrawal at 8 months ($\beta_{indirect}$ = −.07, p = .06) but not by mother–infant emotional withdrawal at 8 months ($\beta_{indirect}$ =.03, p = .32) or by coparenting conflict at 24 months ($\beta_{indirect}$ = −.06, p = .12).

To test whether the strength of relations differed by parent gender, we compared an unconstrained model in which all paths were free to vary across mothers and fathers to a model in which we constrained the paths from prenatal marital negative affect to mother–infant and father–infant emotional withdrawal as well as the paths from mother–infant/father–infant emotional withdrawal to toddler adaptive emotion regulation. We observed a significant decline in the model fit for the constrained model, $\chi^2(2) = 6.17$, p = .05. We then separately tested model constraints of each set of paths to determine exactly where the gender differences occurred. There were no significant gender differences in the paths from prenatal marital negative affect to mother–toddler emotional withdrawal or to father–toddler emotional withdrawal, $\chi^2(1) = .03$, p = .86. There was a significant gender difference in the paths from parent–toddler emotional withdrawal to toddler emotion regulation, $\chi^2(1) = 6.13$, p = .01, such that this relation was significant for fathers (β = −.26, p = .005), but not for mothers, β = .10, p = .29.

The results of our alternative model that examined whether coparenting conflict was predicted by toddler emotion regulation, rather than the reverse, fit the data well, $\chi^2(35) = 36.86$, p = .38, RMSEA = .02 (90% CI = .00, 07), CFI = .95. Results of the hypotheses tested in this model paralleled that of our original model. However, the reversed causal pathway, with toddler emotion regulation predicting coparenting conflict, was also significant,β = −.27, p = .01. Thus, it is possible that toddler emotion regulation predicts family conflict instead of the reverse.

Discussion

The purpose of this paper was to examine several types of observed family interactions (i.e., marital, mother–child, father–child, and whole-family) as predictors of toddlers' adaptive emotion regulation at 24 months. Instead of focusing on harsh or emotionally negative parent–infant interactions like most previous studies, this study examined mothers' and fathers' emotional withdrawal from their infant as possible predictors of children's later emotion regulation during toddlerhood. Results of our hypothesized path model support most of our hypotheses, providing novel contributions to an improved theoretical understanding of how dyadic and triadic family interactions foster adaptive toddler emotion regulation. In particular, the study highlights the role of fathers' flat/withdrawn affect and couple's coparenting conflict, both of which have rarely been examined as predictors of early adaptive emotion regulation.

One of the key goals of the present study was to examine whether parents' greater emotional withdrawal in interactions with their infants would predict less adaptive emotion regulation in toddlerhood. Past research has focused primarily on the role of either parents' negative (e.g., Frankel et al., 2015) or warm and sensitive parenting (e.g., Fosco & Grych, 2013) on children's emotion regulation. Although infants have been observed to show significant emotional dysregulation when parents suddenly show a flat, withdrawn emotional expression in the FFSF paradigm (Adamson & Frick, 2003), little is known about the role of parents' naturally occurring emotional withdrawal in the development of children's adaptive emotion regulation. As predicted, fathers' emotional withdrawal with infants at 8 months was significantly negatively associated with their toddlers' later adaptive emotion regulation, although contrary to prediction, mothers' emotional withdrawal was not. It is interesting to note that fathers also demonstrated higher ratings of naturally occurring flat affect/ emotional withdrawal in interactions with their infants than did mothers.

It is not clear why fathers showed higher frequencies of emotional withdrawal when interacting with infants than mothers did. One possibility may be that mothers are usually the primary caregivers of infants (Kotila, Schoppe-Sullivan, & Dush, 2013); thus, they are more likely to be the parent who cares for and comforts their infant when he or she is upset. Recent research has found that mothers engage in more caregiving tasks related to soothing and comforting than do fathers, and toddlers are more likely to approach mothers than fathers when showing distressed emotions (Umemura, Jacobvitz, Messina, & Hazen, 2013). Perhaps fathers' relative inexperience with comforting infants may make them more likely to become emotionally disengaged when their efforts to comfort their infant are unsuccessful whereas mothers may be more likely to ramp up their emotional engagement in an effort to comfort their infant.

It is also possible that the inclusion of caregiving tasks (i.e., feeding the infant and changing its clothes) in our parent–child interaction observation may have led to greater emotional disengagement of fathers, who are often more comfortable engaging their infants in vigorous, stimulating play than engaging in nurturing caregiving (Paquette, 2004). However, this seems unlikely because the observation task required parents to spend equal time engaged in caregiving and play during the parent–infant interaction. Moreover, we observed that most fathers engaged in vigorous physical play with their infants during free play and caregiving tasks (e.g., blowing kisses on their baby's tummy during the clothes change; playing "airplane" with the spoon when feeding their baby). In addition, we observed that fathers who showed marked instances of emotional withdrawal did so across play and caregiving contexts.

Toddlers' emotion regulation may be related to fathers', but not mothers', higher emotional withdrawal simply because fathers are more likely to show emotional withdrawal than mothers. As noted previously, depressed mothers are more likely to show negative or distressed reactions to fussy infants than emotionally withdrawn reactions (Dix et al., 2014; Lovejoy et al., 2000), and in previous research with this dataset, we found that mothers', but not fathers', distressed reactions to their infants predicted later toddler emotional dysregulation (Frankel et al., 2015). Nonetheless, it is surprising that we found no relation between maternal emotional withdrawal and toddlers' later adaptive emotion regulation

because numerous studies have found that maternal simulated withdrawal is related to emotional dysregulation and withdrawal in infants (e.g., Adamson & Frick, 2003) and toddlers (e.g., Seiner & Gelfand, 1995). Perhaps the mothers in our study were less likely to emotionally withdraw when being observed because of the demand characteristics of the situation. Because mothers are more likely than fathers to have a social script of ideal parent–infant interaction, mothers may have felt compelled to engage emotionally with their infant, even if they would normally withdraw, whereas fathers may have been more likely to behave with their infants as they normally do.

However, father–infant interactions may also play a unique role in the development of toddlers' emotion regulation because they are more likely than mothers to engage infants in stimulating and challenging play (Hazen et al., 2010; Paquette, 2004). Paquette (2004) suggested that the father–child relationship may be characterized as an "activation relationship" aimed at fostering children's exploration and openness to the world through engaging the child in emotionally stimulating and even potentially frightening play, in contrast to the mother–child relationship, which is generally focused on comforting children during stressful times. Father–infant play that is potentially frightening but also sensitive has been found to predict children's adaptive emotion regulation at 24 months, whereas fathers' insensitive play has been linked to toddlers' emotional underregulation (Hazen et al., 2010). Thus, when interacting with their infants, fathers who are more emotionally withdrawn may be less likely to engage their infants in emotionally stimulating play that promotes the development of emotion regulation skills.

As expected, higher prenatal marital negative affect predicted mothers' and fathers' greater emotionally withdrawn behaviors during parent–infant interaction at 8 months. Prenatal marital negative affect also predicted coparenting conflict at 24 months. This result supports the notion of potential continuity in an emotionally negative family climate characterized by conflict and negative emotionality between parents over the first 2 years of their child's life, although coparenting conflict occurs in the child's presence. Results of this study help illustrate how early marital tension not only "spills over" into parent–child interactions, but additionally onto whole-family interactions over a 2-year period.

Furthermore, as predicted, greater coparenting conflict at 24 months was significantly negatively associated with toddlers' less adaptive emotion regulation at 24 months, above and beyond the effects of parents' emotionally withdrawn parenting. This provides further support for the emotional security hypothesis, which suggests that marital and family conflict may threaten children's sense of emotional security, thereby threatening their development of adaptive emotion regulation (Davies & Cummings, 1994). Observing conflict between parents may be particularly detrimental to children's emotion regulation development because children who have been exposed to high levels of interparental conflict have been shown to exhibit more symptoms of depression and anxiety as compared with children in low-conflict families (e.g., Katz & Low, 2004). This finding also complements extant studies that have shown that observations of whole-family interactions uniquely predict children's socioemotional outcomes beyond that of dyadic parent–child and marital interactions (e.g., Johnson, 2003; Johnson et al., 1999).

Given that the children did not directly experience prenatal marital negative affect, only indirect effects of prenatal marital negative affect on toddlers' less adaptive emotion regulation via parental emotional withdrawal and coparenting conflict were expected. Although our results indicated that prenatal marital negative affect spilled over to parental emotional withdrawal at 8 months and to coparenting conflict at 24 months, and that fathers' emotional withdrawal and coparenting conflict both predicted toddlers' less adaptive emotion regulation, the indirect paths from prenatal marital negative affect to toddlers' adaptive emotion regulation via these measures did not reach significance. However, we did find that father–infant emotional withdrawal at 8 months partially but marginally mediated the association between prenatal marital negative affect and toddlers' adaptive emotion regulation at 24 months, suggesting the possibility of an indirect path. Thus, results of the present study suggest that although marital negativity may spill over to both parents' emotional withdrawal with their infants and to coparenting conflict, only fathers' emotional withdrawal and coparenting conflict were found to show unique direct associations with toddlers' adaptive emotion regulation. However, a larger sample with greater power may have yielded significant indirect paths from prenatal marital negativity to toddler emotion regulation via fathers' emotional withdrawal and possibly, via coparenting conflict.

Our alternative model examined the possibility that coparenting conflict would be predicted by toddler emotion regulation rather than the reverse. Results indicated that this model fit the data equally well; thus, results of the present study do not clearly indicate whether it is more plausible that coparenting conflict influences children's development of less adaptive emotion regulation or the reverse. However, a bidirectional relation between coparenting conflict and less adaptive toddler emotion regulation would be supportive of family systems theory because such a relation would be reflective of a mutual cycle of distress (Kiff et al., 2011). In a hypothetical family scenario of this kind, coparenting conflict could contribute to toddlers' emotional dysregulation, which could in turn increase the parents' frustration and stress, thus further fostering conflict in the context of coparenting. Future studies with measures of coparenting conflict and child emotion regulation at multiple time points are needed to better examine these potential bidirectional effects.

Strengths, Limitations, and Future Directions

A particular strength of our study was our utilization of observations of family interactions in three significant family subsystems (i.e., marital, mother–child, father–child), as well as in the whole family. This approach offered novel insight into the interrelations of these subsystems across time as predictors of toddlers' adaptive emotion regulation. Furthermore, the present study provides further insight on the understudied impact of parents' emotional withdrawal on children's emotion regulation development, and it includes fathers, an often-neglected member in family systems research.

Limitations of this study include the absence of observational assessments of marital negativity and coparenting conflict at 8 months. In addition, coparenting interactions and toddler emotion regulation were both assessed at 24 months, thus potentially placing into question any mediation effects and making causal attributions less plausible. In addition, the sample is a volunteer sample of convenience. Although compensation was provided, couples

experiencing high marital conflict may have been unlikely to volunteer. The sample size is also small, which affects analytical power, particularly in the multimediational models we conducted. That said, even with our limited sample size, we were able to identify significant pathways of interest. In addition, our sample is primarily White, middle class, and well educated. Thus, it is unclear if these results can be generalized to families with other demographic backgrounds. Finally, the data used in the present study were collected in the mid-1990s, and mothers' and fathers' parenting roles may differ today. Nonetheless, recent research indicates that although father involvement has increased dramatically since the late 1960s, levels of father involvement have not changed since the 1990s (e.g., Kotila et al., 2013).

Given our results, we encourage other researchers to further explore interrelations of parent–infant emotional withdrawal, co-parenting conflict, and toddler emotion regulation. For example, it would be important to longitudinally examine the influence of naturally occurring parent–child emotional withdrawal on child self-regulation outcomes beyond toddlerhood as well as buffers against its detrimental effects. Also, in addition to conflictual whole-family interaction, emotionally distant family interactions might predict children's less adaptive emotion regulation. Emotionally distant family climates may also be more related to parental emotional withdrawal, compared with conflictual, hostile family climates. Researchers should also continue to examine the extent to which parents' adoption of complementary versus similar roles when interacting with their infants relates to children's emotion regulation development. Marriage and family therapists are also encouraged to use our results to explore ways to help parents, especially fathers, avoid emotional withdrawal during interaction with their infants.

In summary, the implications of our study extend family systems research to demonstrate how detrimental family functioning at multiple levels in the first 2 years of parenthood may negatively influence toddlers' adaptive emotion regulation. Our results support Morris et al.'s (2007) theoretical perspective that marital, parent–child, and whole-family interactions interrelate to influence the development of children's emotion regulation and provide new evidence that father–infant engagement in the early years may play a key role in the development of children's emotion regulation.

Acknowledgments

This research was supported by Grant SBR-9212990 from the National Science Foundation and Grant 3332 from the Hogg Foundation for Mental Health awarded to Nancy L. Hazen and Deborah B. Jacobvitz. This project was presented at the 20th Biennial Conference of the Society for Research in Human Development, Denver, Colorado, March 2016.

References

Adamson LB, & Frick JE (2003). The still face: A history of a shared experimental paradigm. Infancy, 4, 451–473. 10.1207/S15327078IN0404_01

Allison PD (2003). Missing data techniques for structural equation modeling. Journal of Abnormal Psychology, 112, 545–557. 10.1037/0021-843X.112.4.545 [PubMed: 14674868]

Bentler PM (1990). Comparative fit indexes in structural models. Psychological Bulletin, 107, 238–246. 10.1037/0033-2909.107.2.238 [PubMed: 2320703]

Booher MCG, & Jacobvitz D. (1998). Emotional attunement and self reflection/flexibility of thought scoring system. Unpublished manuscript, University of Texas at Austin.

Bowen M. (1976). Theory in the practice of psychotherapy. In Guerin PJ (Ed.), Family therapy: Theory and practice (pp. 42–90). New York, NY: Gardner Press.

Boyd-Soisson E. (2002). The Children's Emotion Regulation Scales. Unpublished assessment, University of Texas at Austin.

Brown MW, & Cudeck R. (1993). Alternative ways of assessing model fit. In Bollen KA & Long JS (Eds.), Testing structural equation models (pp. 136–162). Newbury Park, CA: Sage.

Christopher C., Umemura T., Mann T., Jacobvitz D., & Hazen N. (2015). Marital quality over the transition to parenthood as a predictor of coparenting. Journal of Child and Family Studies, 24, 3636–3651. 10.1007/s10826-015-0172-0

Cowan PA, & Cowan CP (2002). Interventions as tests of family systems theories: Marital and family relationships in children's development and psychopathology. Development and Psychopathology, 14, 731–759. 10.1017/S0954579402004054 [PubMed: 12549702]

Davies PT, & Cummings EM (1994). Marital conflict and child adjustment: An emotional security hypothesis. Psychological Bulletin, 116, 387–411. 10.1037/0033-2909.116.3.387 [PubMed: 7809306]

Dix T, Moed A, & Anderson ER (2014). Mothers' depressive symptoms predict both increased and reduced negative reactivity: Aversion sensitivity and the regulation of emotion. Psychological Science, 25, 1353–1361. 10.1177/0956797614531025 [PubMed: 24796661]

Eisenberg N, Cumberland A, & Spinrad TL (1998). Parental socialization of emotion. Psychological Inquiry, 9, 241–273. 10.1207/s15327965pli0904_1 [PubMed: 16865170]

Enders CK (2001). The performance of the full information maximum likelihood estimator in multiple regression models with missing data. Educational and Psychological Measurement, 61, 713–740. 10.1177/0013164401615001

Enders CK (2010). Applied missing data analysis. New York, NY: Guilford Press.

Erel O, & Burman B. (1995). Interrelatedness of marital relations and parent-child relations: A meta-analytic review. Psychological Bulletin, 118, 108–132. 10.1037/0033-2909.118.1.108 [PubMed: 7644602]

Feinberg ME, & Kan ML (2008). Establishing family foundations: Intervention effects on coparenting, parent/infant well-being, and parent-child relations. Journal of Family Psychology, 22, 253–263. 10.1037/0893-3200.22.2.253 [PubMed: 18410212]

Fosco GM, & Grych JH (2013). Capturing the family contexts of emotion regulation: A family systems model comparison approach. Journal of Family Issues, 34, 557–578. 10.1177/0192513X12445889

Frankel LA, Umemura T, Jacobvitz D, & Hazen N. (2015). Marital conflict and parental responses to infant negative emotions: Relations with toddler emotional regulation. Infant Behavior & Development, 40, 73–83. 10.1016/j.infbeh.2015.03.004 [PubMed: 26047678]

Hazen N, McFarland L, Jacobvitz D, & Boyd-Soisson E. (2010). Fathers' frightening behaviors and sensitivity with infants: Relations with fathers' attachment representations, father-infant attachment, and children's later outcomes. Early Child Development and Care, 180, 51–69. 10.1080/03004430903414703

Hoyle R, & Panter A. (1995). Writing about structural equation models. In Hoyle RH (Ed.), Structural equation modeling (pp. 158–176). Thousand Oaks, CA: Sage.

Johnson VK (2001). Marital interaction, family organization, and differences in parenting behavior: Explaining variations across family interaction contexts. Family Process, 40, 333–342. 10.1111/j.1545-5300.2001.4030100333.x [PubMed: 11676272]

Johnson VK (2003). Linking changes in whole family functioning and children's externalizing behavior across the elementary school years. Journal of Family Psychology, 17, 499–509. [PubMed: 14640800]

Johnson VK, Cowan PA, & Cowan CP (1999). Children's classroom behavior: The unique contribution of family organization. Journal of Family Psychology, 13, 355–371. 10.1037/0893-3200.13.3.355

Katz LF, & Low SM (2004). Marital violence, co-parenting, and family-level processes in relation to children's adjustment. Journal of Family Psychology, 18, 372–382. 10.1037/0893-3200.18.2.372 [PubMed: 15222844]

Kiff CJ, Lengua LJ, & Zalewski M. (2011). Nature and nurturing: Parenting in the context of child temperament. Clinical Child and Family Psychology Review, 14, 251–301. 10.1007/s10567-011-0093-4 [PubMed: 21461681]

Kotila LE, Schoppe-Sullivan SJ, & Kamp Dush CM (2013). Time in parenting activities in dual-earner families at the transition to parenthood. Family Relations: An Interdisciplinary Journal of Applied Family Studies, 62, 795–807. 10.1111/fare.12037

Kouros CD, Cummings EM, & Davies PT (2010). Early trajectories of interparental conflict and externalizing problems as predictors of social competence in preadolescence. Development and Psychopathology, 22, 527–537. 10.1017/S0954579410000258 [PubMed: 20576176]

Krishnakumar A, & Buehler C. (2000). Interparental conflict and parenting behaviors: A meta-analytic review. Family Relations: An interdisciplinary Journal of Applied Family Studies, 49, 25–44. 10.1111/j.1741-3729.2000.00025.x

Lindahl KM, Clements M, & Markman H. (1997). Predicting marital and parent functioning in dyads and triads: A longitudinal investigation of marital processes. Journal of Family Psychology, 11, 139–151. 10.1037/0893-3200.11.2.139

Lovejoy MC, Graczyk PA, O'Hare E, & Neuman G. (2000). Maternal depression and parenting behavior: A meta-analytic review. Clinical Psychology Review, 20, 561–592. 10.1016/S0272-7358(98)00100-7 [PubMed: 10860167]

McHale JP (1995). Coparenting and triadic interactions during infancy: The roles of marital distress and child gender. Developmental Psychology, 31, 985–996. 10.1037/0012-1649.31.6.985

McHale J, Kuersten-Hogan R, & Lauretti A. (2001). Evaluating coparenting and family level dynamics during infancy and early childhood: The coparenting and family rating system. In Kerig P. & Lindahl K. (Eds.), Family observational coding systems (pp. 151–170). Mahwah, NJ: Erlbaum.

Morris AS, Silk JS, Steinberg L, Myers SS, & Robinson LR (2007). The role of the family context in the development of emotion regulation. Social Development, 16, 361–388. 10.1111/j.1467-9507.2007.00389.x [PubMed: 19756175]

Murphy SE, Jacobvitz DB, & Hazen NL (2016). What's so bad about competitive coparenting? Family-level predictors of children's externalizing symptoms. Journal of Child and Family Studies, 25, 1684–1690. 10.1007/s10826-015-0321-5

Paquette D. (2004). Theorizing the father–child relationship: Mechanisms and developmental outcomes. Human Development, 47, 193–219. 10.1159/000078723

Radloff LS. (1977). The CES-D Scale: A self-report depression scale for research in the general population. Applied Psychological Measurement, 1, 385–401. 10.1177/014662167700100306

Ramchandani PG, Domoney J, Sethna V, Psychogiou L, Vlachos H, & Murray L. (2013). Do early father-infant interactions predict the onset of externalising behaviours in young children? Findings from a longitudinal cohort study. Journal of Child Psychology and Psychiatry, 54, 56–64. 10.1111/j.1469-7610.2012.02583.x [PubMed: 22808985]

Rothbart MK (1981). Measurement of temperament in infancy. Child Development, 52, 569–578. 10.2307/1129176

Schoppe SJ, Mangelsdorf SC, & Frosch CA (2001). Coparenting, family process, and family structure: Implications for preschoolers' externalizing behavior problems. Journal of Family Psychology, 15, 526–545. 10.1037/0893-3200.15.3.526 [PubMed: 11584800]

Seiner SH, & Gelfand DM (1995). Effects of mothers' simulated withdrawal and depressed affect on mother-toddler interactions. Child Development, 66, 1519–1528. 10.2307/1131661 [PubMed: 7555227]

Sturge-Apple ML, Davies PT, & Cummings EM (2010). Typologies of family functioning and children's adjustment during the early school years. Child Development, 81, 1320–1335. 10.1111/j.1467-8624.2010.01471.x [PubMed: 20636698]

Tanner Stapleton L, & Bradbury TN (2012). Marital interaction prior to parenthood predicts parent-child interaction 9 years later. Journal of Family Psychology, 26, 479–487. 10.1037/a0029051 [PubMed: 22888781]

Tronick E, Als H, Adamson L, Wise S, & Brazelton TB (1978). The infant's response to entrapment between contradictory messages in face-to-face interaction. Journal of the American Academy of Child Psychiatry, 17, 1–13. 10.1016/S0002-7138(09)62273-1 [PubMed: 632477]

Umemura T, Jacobvitz D, Messina S, & Hazen N. (2013). Do toddlers prefer the primary caregiver or the parent with whom they feel more secure? The role of toddler emotion. Infant Behavior & Development, 36, 102–114. 10.1016/j.infbeh.2012.10.003 [PubMed: 23268105]

Waters E, & Deane KE (1985). Defining and assessing individual differences in attachment relationships: Q-Methodology and the organization of behavior in infancy and early childhood. Monographs of the Society for Research in Child Development, 50, 41–65. 10.2307/3333826

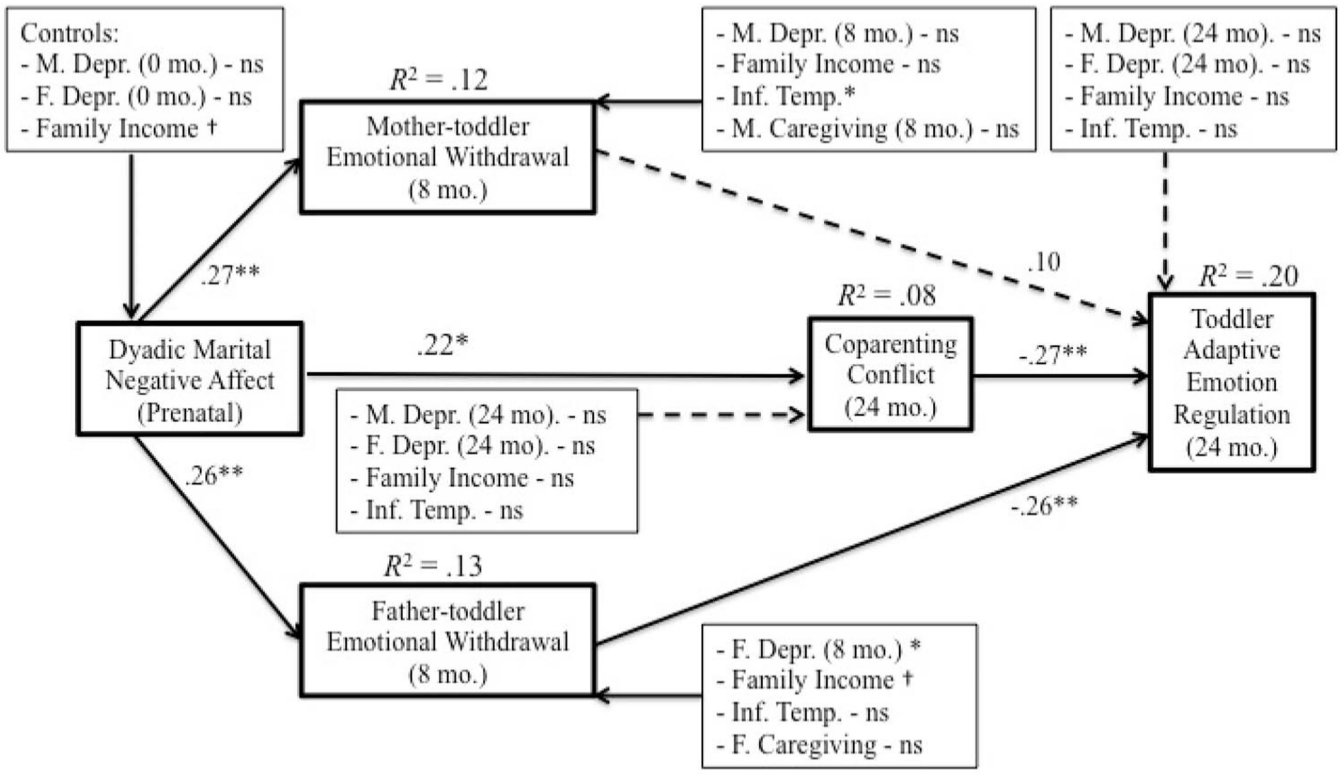

Figure 1.

Model 1: Main model structural equation modeling results. Standardized regression values reported. *Dashed lines* indicate nonsignificant paths. ns = nonsignificant; M. = mother; F. = father; Depr. = depression; Inf. Temp. = infant temperament. † $p < .10$, $p < .05$, ** $p < .01$.

J Fam Psychol. Author manuscript; available in PMC 2023 July 27.

Table 1

Descriptives and Correlations Among Study Variables

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Toddler ER[c]	—													
2. Marital Neg.[a]	−.21*	—												
3. M. EW[b]	.00	.25**	—											
4. F. EW[b]	−.29**	.26**	.15	—										
5. Cop. conf.[c]	−.31**	.22*	.15	.15	—									
6. Inf. Temp.	−.04	−.29**	.11	−.06	−.06	—								
7. M. Involve.[b]	−.06	.02	.02	−.04	−.13	.21*	—							
8. F. Involve.[b]	−.23*	.08	.00	.04	.11	−.01	−.19†	—						
9. M. Depr.[a]	−.09	.09	−.04	.05	.11	−.15	−.01	.15	—					
10. F. Depr.[a]	.07	.10	.04	−.03	−.07	−.10	−.21*	.05	.05	—				
11. M. Depr.[b]	−.17†	.19*	.13	.12	.15	.13	−.01	.27*	.33***	.03	—			
12. F. Depr.[b]	.10	.05	−.09	−.17†	−.06	−.04	−.12	.10	.11	.59***	.11	—		
13. M. Depr.[c]	−.09	.02	−.02	−.02	.14	.07	−.01	.29**	.37***	−.08	.29**	.03	—	
14. F. Depr.[c]	−.03	.03	.02	−.07	−.02	−.19†	−.23*	.03	.04	.51***	−.15	.48***	.04	—
N	99	119	119	118	94	118	111	90	125	124	120	117	108	105
M	4.97	2.99	2.94	3.20	1.93	−.51	40.26	11.60	31.47	26.89	29.62	27.76	30.03	28.39
SD	1.71	1.42	.96	.93	.97	1.72	23.04	9.11	6.22	5.20	6.42	5.94	6.79	6.35

Note. Data from all 125 cases are used here via the FIML procedure. ER = emotion regulation; Neg = negative affect; M = mothers; F = fathers; EW = emotional withdrawal; Cop. conf. = coparenting conflict; Inf. Temp. = infant temperament; Involve. = involvement; Depr. = depression.

[a] prenatal.

[b] 8 months.

[c] 24 months.

† $p < .10$.

* $p < .05$.

** $p < .01$.

*** $p < .001$.