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Within- and Between-Family Differences in Cooperative and Competitive Coparenting

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Abstract

Coparenting, the coordination between adults in their parental roles, contributes to the functioning of multiple family subsystems. The ecological context model of coparenting posits that multiple factors, including contextual, marital and child characteristics, influence coparenting behavior (Feinberg, 2003). To date, coparenting has primarily been considered a between-family construct, and the focus has been on examining the factors that account for differences in coparenting across families. There is very limited research exploring variations in coparenting within-families across contexts. To address this gap, the current study explores whether there is significant within- and between-family variation in coparenting. In addition, family, marital, and child correlates of both within- and between-family variation in coparenting are examined. Fifty-eight two-parent families, drawn from a larger ongoing longitudinal study on children's emotional development, participated in this study. Parents and their children participated in a laboratory visit when children were 42-months-old that included three triadic family interaction tasks that were coded to assess cooperative and competitive coparenting, as well as child-centered behavior. Additionally, children completed a computerized go/no-go task to assess their inhibitory control and parents completed questionnaires about their marital relationship quality. Results indicated that a substantial portion of the variance in coparenting occurred within families. In addition, the correlates of coparenting cooperation and competition differed.

Keywords

Coparenting; Inhibitory Control; Marital Relationship Quality; Within- and Between-Family Variation

Coparenting, the coordination between adults in their parental roles, uniquely contributes to the functioning of multiple family subsystems (Caldera & Lindsey, 2006; Gable, Belsky, & Crnic, 1995; Margolin, Gordis, & John, 2001; Schoppe-Sullivan, Mangelsdorf, Frosch, & McHale, 2004). Coparenting encompasses multiple domains (Feinberg, 2003; Van Egeren & Hawkins, 2004), but considerable research has focused on how supportive or undermining parents are of each other's parenting efforts (Gable et al., 1995; McHale, 1995). Within the context of family interaction, supportive coparents advance each other's parenting efforts and work together to achieve the same goals. In contrast, conflict regarding parenting and actively working against the other parent's goals are characteristic of undermining coparents. Given the critical function of coparenting within the family, there is emerging interest in the factors that influence coparenting behavior. We examine these processes in

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families with preschoolers because this developmental period can be challenging for some parents as children are increasing in their autonomy and noncompliance, but are still developing the ability to regulate their emotions and behavior (Kuczynski & Kochanska, 1990).

To date, research has largely investigated the factors that account for differences in coparenting across families. A clear gap in the literature is whether situational demands that may vary across different family interaction contexts influence coparenting behavior, especially considering that the effect sizes for cross-situational consistency of parenting behavior during this period are generally small to moderate (Holden & Miller, 1999). There has been some interest in overt versus covert coparenting that reflect contexts with different family members present (McHale, 1997). The ecological context of parenting model posits that contextual factors such as stress and support influence coparenting behavior (Feinberg, 2003). Coparenting may, therefore, vary as a function of the stress or support that an interaction context provides. One study found that coparenting competition differed across play versus caregiving tasks when infants were 3 and 12 months old (Kuersten-Hogan, Franco, & Son, 2013). Cooperation, however, did not differ across contexts. The primary aim of the current study was to examine whether there was within-family variation in competition and cooperation across a freeplay, structured play, and clean-up task to address the gap in the literature regarding within-family differences in coparenting. If within-family differences are evident, the next step is to explore some factors that may account for these differences. Mchale and colleagues (Mchale, Kuersten-Hogan, Lauretti, & Rasmussen, 2000) identified profiles based on multiple family processes and found that high levels of warmth, cooperation, and child-centered family interaction cohere. In addition, greater parenting demands and stress are thought to be linked with less child-centered behavior (Deater-Deckard, 1998). Situations that require parents to get their children to perform specific tasks are potentially more demanding for parents than playing with their children. Given the above research, we expect that fluctuations in child-centered behavior across contexts will account for within-family variation in cooperation but not competition.

The ecological context of coparenting model also posits that marital and child characteristics influence the quality of coparenting behavior (Feinberg, 2003). Not surprisingly, marital conflict is generally associated with hostile and competitive coparenting (McHale, 1995). Kitzmann (2000) found that couples who engaged in more negativity during couple discussions engaged in less supportive coparenting in subsequent triadic interactions. Further, both marital conflict and positive marital engagement seem to be more consistently associated with coparenting 3-year-olds versus infants (Schoppe-Sullivan et al., 2004).

Children's temperament, particularly negative affectivity, has also emerged as a correlate of coparenting behavior though the results have been inconsistent. For instance, when infants were easier to soothe, mothers, but not fathers, reported a more positive coparenting relationship (Burney & Leerkes, 2010). Moreover, negative affectivity has been linked to more intrusive and undermining coparenting, but was not associated with cooperative coparenting (Cook, Schoppe-Sullivan, Buckley, & Davis, 2009; Lindsey, Caldera, & Colwell, 2005). We concentrate on children's inhibitory control, a regulatory dimension of temperament, that is fairly stable by three and half years of age (Kochanska & Knaack, 2003). Children with low inhibitory control are more likely to have difficulty sitting still, following directions and display greater externalizing behaviors (Kochanska & Knaack, 2003) which can put a strain on the coparenting relationship.

There is some evidence that the association between temperament and coparenting depends on the quality of the marital relationship. In one study, under conditions of low marital quality having a fussy and less adaptable infant increased coparents' undermining behaviors

(Schoppe-Sullivan, Mangelsdorf, Brown, & Sokolowski, 2007). Similarly, fathers were more likely to engage in more negative coparenting when they reported low quality marital relationships and considered their infants highly reactive (Burney & Leerkes, 2010). This research suggests that positive marital relationships can buffer families from the potential stresses of parenting a child with a difficult temperament. In contrast, Cook et al. (2009) found that preschoolers' negative affectivity was associated with less supportive coparenting only when marital adjustment was high. Together, these findings allude to potential differences in these associations depending on the age of the child. We examined whether the interaction between inhibitory control and marital relationship quality predicts between-family differences in coparenting behavior during family interaction with preschoolers.

In sum, the first and primary aim was to examine whether there was significant within- and between-family variation in cooperation and competition. Very little is known regarding the consistency of coparenting across different situations and the current study is an important step in beginning to explore this. The second aim was to examine whether fluctuations in child-centered behavior were associated with within-family variation in coparenting. The third aim explored whether marital relationship quality and children's inhibitory control were associated with between-family differences in coparenting while adjusting for the variation within-families.

Methods

Participants and Procedure

Data were drawn from a longitudinal study of emotional development that started when children were 18 months old ($N = 161$). Families were recruited through newspaper birth announcements, flyers posted at daycares, and a database of local families. This study included the 58 families who agreed to participate in the triadic interaction tasks at the 42-month assessment (children's $M_{\text{age}} = 42.24$ months, $SD_{\text{age}} = .76$ months; 35 girls; mothers' $M_{\text{age}} = 34.12$ years, $SD_{\text{age}} = 4.76$ years; fathers' $M_{\text{age}} = 36.29$ years, $SD_{\text{age}} = 5.77$ years). The subsample was primarily Caucasian (children, 89.7%; mothers, 93.1%; fathers, 94.8%). Annual family income ranged from \$21,000 to over \$60,000 per year ($M = \$51,000$ to \$60,000). Mothers averaged 15.92 years of education ($SD = 2.67$ years) and fathers averaged 16.84 years of education ($SD = 2.45$ years). Families who participated in the triadic interactions had a higher average household income ($M_{\text{subsample}} = \$51,000$ to \$60,000; $M_{\text{overall sample}} = \$41,000$ to \$50,000; $t = 2.75$, $p < .01$), greater marital love ($M_{\text{subsample}} = 15.64$; $M_{\text{overall sample}} = 8.99$; $t = -15.23$, $p < .001$) and greater marital conflict ($M_{\text{subsample}} = 7.88$; $M_{\text{overall sample}} = 4.21$; $t = -10.48$, $p < .001$). No other significant differences for key study variables were found.

Children and their parents participated in a laboratory visit that included three 5-min triadic interaction tasks. For the *freeplay task*, families were instructed to play with the toys in the room as they normally would. For the *structured play task*, the experimenter brought a tower block game into the room and instructed families to play the game if they would like. For the *clean-up task*, parents were instructed to get their child to clean-up the toys.

Children also played a farm and zoo version of a computerized *go/no-go task* (McDermott, Degnan, Walker, Henderson, & Fox, in preparation), where they were instructed to find all of the animals at the zoo or farm that had escaped. To catch the animals, children responded via button-press (as fast and as accurate as possible) as soon as they saw an animal on the screen unless it was the zoo keeper's helper (monkey) or the farmer's helper (dog). Each game included 60 trials (25% no-go trials). This ratio of trials ensures children's desire to respond and therefore a greater need for an inhibitory control response during the no-go

trials. An Institutional Review Board approved this study and families provided informed consent.

Measures

Coparenting—Coparenting behaviors were coded during the triadic interaction tasks based on the Coparenting and Family Rating System (CFRS; McHale, Kuersten-Hogan, & Lauretti, 2001). The current study utilized the cooperation and competition global codes that were rated on a 5-point scale (1 = *very low* to 5 = *very high*) for each triadic interaction. Cooperation represents the degree to which parents overtly cooperated while interacting with their child. This included reiterating the other parent's statements to their child and actively building on the interaction to facilitate the other parent's activities with their child. Competition reflected the degree to which parents overtly undermined each other's parenting efforts. These behaviors included giving the child directives that conflicted with the other parent's directions and competing for the child's attention. Coders trained until the secondary coder achieved the criterion of a kappa of .80 with the primary coder. Inter-rater reliability for cooperation and competition was based on 20% of the videos (adjusted $\kappa = .88$ and $.96$, respectively).

Child-centered behavior—Child-centered behavior, a family-level construct, was also coded using the CFRS (McHale et al., 2001). A global code rated on a 5-point scale (1 = *adult-centered*, 3 = *equal*, 5 = *child-centered*) was given for each of the triadic interactions. Higher scores reflect parents' attunement to their child's needs and fluctuating interest levels, as well as their ability to structure the environment in a way that accommodates this variability (e.g., foregoing the prescribed order of tasks if the child demonstrated a lack of interest or boredom). Inter-rater reliability on 20% of the videos was good (adjusted $\kappa = .86$).

Inhibitory control—The total number of correct no-go trials was summed across the farm and zoo go/no-go tasks (McDermott et al., in preparation). The inhibitory control score was calculated as the percentage of correct no-go trials (He et al., 2010).

Marital relationship quality—Mothers and fathers completed the Intimate Relations Questionnaire (Braiker & Kelley, 1979), which assesses perceptions of their marital relationship and is rated on a 9-point scale (1 = *not at all* to 9 = *very much or extremely*). We utilized the 10-item love subscale (e.g., "How close do you feel to your partner"; Cronbach's $\alpha = .79$ and $.83$ for mothers and fathers, respectively) and 5-item conflict subscale (e.g., "How often do you and your partner argue with one another"; Cronbach's $\alpha = .60$ and $.74$ for mothers and fathers, respectively). Spouses' reports of love ($r = .29$, $p < .05$) and conflict ($r = .47$, $p < .001$) were significantly correlated. We summed mothers' and fathers' scores to create composites where higher scores indicate more love and conflict.

Results

Two families (3.5%) were missing data from the inhibitory control task. Little's MCAR $\chi^2(220) = 106.42$, $p = 1.00$ indicated that these data were likely missing completely at random. Given the small sample size, and the need to maintain power, we imputed the missing data in SPSS 20 using the expectation/maximization (EM) algorithm. All analyses are based on imputed data. Descriptive statistics and correlations are presented in Table 1.

Multilevel models were conducted using proc MIXED in SAS 9.3. Multilevel modeling accounts for the nested structure of the data, specifically contexts within families, and allows us to partition the variance in coparenting into within-family and between-family levels.

Models were estimated with restricted maximum likelihood (REML) because it produces less biased estimates and standard errors with small sample sizes (Snijders & Bosker, 2012). Satterthwaite denominator degrees of freedom, recommended for smaller sample sizes, were used to determine the significance of fixed effects (Hoffman, 2007). Relative model fit was examined using the Bayesian information criteria (BIC), where smaller scores indicate better fit (Singer & Willett, 2003). Multiple covariance structures were fit for both competition and cooperation, and for both models compound symmetry had the lowest BIC (see Hoffman, 2007).

Within- and between-family variation in coparenting

Unconditional random intercept models were fit first. The composite multilevel model was $\text{coparenting}_{ij} = \gamma_{00} + u_{0j} + e_{ij}$. Where coparenting_{ij} reflects either cooperation or competition at observation i in family j , γ_{00} is the grand mean (intercept), u_{0j} is the deviation from the grand mean for family j , and e_{ij} reflects the residual for observation i for family j . Intraclass correlations were calculated to determine the proportion of variance attributable to within- and between-family levels. For cooperation (BIC = 443.6; ICC = .54), 54% of the variance occurred between-families and 46% within-families. The results indicated that there was significant within-family (estimate = .40, $SE = .05$, $z = 7.62$, $p < .001$) and between-family variance (estimate = .46, $SE = .11$, $z = 4.10$, $p < .001$). For competition (BIC = 379.8; ICC = .36), 36% of the variance was between-families and 64% within-families. There was also significant within-family (estimate = .35, $SE = .04$, $z = 7.62$, $p < .001$) and between-family variance (estimate = .20, $SE = .06$, $z = 3.26$, $p < .001$).

Within-family fluctuations in coparenting

Given the significant within-family variance, the next models included child-centered behavior (group-mean centered) as a time-varying predictor. This allowed us to examine whether coparenting across contexts differed as a function of deviations from average levels of child-centered behavior. We only had three repeated measures, therefore child-centered behavior was estimated as a fixed effect (Singer & Willett, 2003). No index of time was included because we were examining fluctuations in coparenting across contexts rather than systematic change. The composite multilevel model was $\text{coparenting}_{ij} = \gamma_{00} + \gamma_{10} (\text{child-centered_deviations}_{ij}) + u_{0j} + e_{ij}$. Coparenting_{ij} reflects either cooperation or competition at observation i in family j , γ_{00} is the grand mean (intercept), γ_{10} reflects the expected change in coparenting given a one unit increase in deviations from average levels of child-centered behavior, u_{0j} is the deviation from the grand mean for family j and e_{ij} reflects the residual for observation i for family j . For coparenting cooperation, greater deviations from the average family level of child-centeredness were associated with lower levels of cooperation across contexts (BIC = 431.7; estimate = $-.18$, $SE = .06$, $t(115) = -2.92$, $p = .004$). Deviations in child-centered behavior were not associated with coparenting competition across contexts (BIC = 387.4; estimate = $-.03$, $SE = .06$, $t(115) = -.45$, ns). There was still significant within-family variation for both cooperation (estimate = .38, $SE = .05$, $z = 7.58$, $p < .001$) and competition (estimate = .35, $SE = .05$, $z = 7.58$, $p < .001$).

Between-family differences in coparenting

The final models included the between-family predictors (grand-mean centered), including the average family level of child-centered behavior, children's inhibitory control, marital love, and conflict. Child gender was included as a covariate. We also tested the models that included the children's inhibitory control x marital quality interactions. The interaction terms were not significant and these models had larger BICs (cooperation 443.6 versus 461.0; competition 392.5 versus 414.4) indicating a worse model fit. Therefore, we report the results from the models without the interactions. The composite multilevel model

equation was $\text{coparenting}_{ij} = \gamma_{00} + \gamma_{10} (\text{child-centered_deviations}_{ij}) + \gamma_{01} (\text{child-centered_family_average}_{ij}) + \gamma_{02} (\text{gender}_{ij}) + \gamma_{03} (\text{inhibitory_control}_{ij}) + \gamma_{04} (\text{love}_{ij}) + \gamma_{05} (\text{conflict}_{ij}) + u_{0j} + e_{ij}$. Coparenting_{ij} reflects either cooperation or competition at observation i in family j . γ_{00} is the grand mean (intercept), γ_{10} reflects the expected change within-families in coparenting given a one-unit increase in deviations from the family average level of child-centered behavior. γ_{01} through γ_{05} represent the average difference between-families in coparenting for a one-unit increase in the specific predictor, u_{0j} is the deviation from the grand mean for family j and e_{ij} reflects the residual for observation i for family j .

For the between-family predictors of cooperation, average family levels of child-centered behavior (estimate = $-.51$, $SE = .28$, $t(52) = -1.81$, $p = .08$) and marital conflict (estimate = $-.10$, $SE = .06$, $t(52) = -1.83$, $p = .07$) approached significance. Specifically, families with more marital conflict and greater child-centered behavior were less cooperative. Child gender (estimate = $.11$, $SE = .21$, $t(52) = .54$, ns), inhibitory control (estimate = $-.002$, $SE = .004$, $t(52) = -.65$, ns), and marital love (estimate = $-.11$, $SE = .08$, $t(52) = -1.38$, ns) were not associated with coparenting cooperation. There was still significant within-family (estimate = $.38$, $SE = .05$, $z = 7.58$, $p < .001$) and between-family (estimate = $.45$, $SE = .12$, $z = 3.95$, $p < .001$) variance in cooperation. For the between-family predictors of competition, only the average family level of child-centered behavior was a significant predictor (estimate = $-.77$, $SE = .19$, $t(52) = -4.13$, $p < .001$). Specifically, more child-centered families had lower levels of competition. Child gender (estimate = $.18$, $SE = .14$, $t(52) = 1.32$, ns), inhibitory control (estimate = $-.002$, $SE = .002$, $t(52) = .98$, ns), marital love (estimate = $-.02$, $SE = .05$, $t(52) = -.29$, ns), and marital conflict (estimate = $-.01$, $SE = .04$, $t(52) = .39$, ns) were not associated with coparenting competition. There was still significant within-family (estimate = $.35$, $SE = .05$, $z = 7.58$, $p < .001$) and between-family (estimate = $.14$, $SE = .05$, $z = 2.60$, $p = .005$) variance in competition.

Discussion

Two dimensions of coparenting, whether coparents are cooperative and support each other's parenting efforts or work against each other, have been found to influence the functioning of multiple family subsystems. The ecological context of coparenting model (Feinberg, 2003) outlines the contextual, relationship, and child characteristics that putatively influence coparenting behavior. This research, however, has largely assessed coparenting as a between-family construct. Parents interact across different situations as they work together to parent their children. To further our understanding of the differences in coparenting behavior that may occur across contexts we examined cooperation and competition across three situations that are likely to occur at home (i.e., freeplay, structured play, and clean-up tasks). Considerable within-family variation across contexts in coparenting competition (64%) and cooperation (46%) was found, suggesting that coparents alter how they interact with each other in response to changing situational demands. Competition appears to fluctuate more across contexts than cooperation. This introduces the idea that competitive coparenting behavior may largely be context dependent and is consistent with a previous study that found differences in competition, but not cooperation, in a play versus a caregiving task (Kuersten-Hogan et al., 2013). Further corroboration across different family interactions such as meal times and teaching tasks is needed to determine whether the current findings are a function of these specific tasks or support the notion that competition is highly variable. One broader theoretical implication of the significant within-family variation is the need to consider whether averaging coparenting behavior across different contexts, even if correlated, truly represents the family processes that are occurring. From a practical perspective, coparenting interventions may benefit from identifying the contexts where competition is most likely to occur and offer more targeted interventions for those specific situations.

Previous research using a family typology approach found that one profile of families was characterized by both high cooperation and child-centered behavior (McHale et al., 2000). We found that the more parents varied from their average level of child-centered behavior across contexts, the less likely they were able to cooperate and support each other's parenting efforts. If variations in child-centered behavior reflect to some degree the changing demands on parents across contexts, the results suggest that those parents who can shift comfortably between the tasks and are less stressed are more likely to be cooperative (Deater-Deckard, 1998). This was not the case for competition. Clearly, multiple family processes in addition to measures of situational attributes that vary across contexts need to be investigated further. One potential avenue may be to measure how stressful or demanding parents consider different situations and to determine if this influences within-family changes in competition.

Finally, we attempted to replicate the findings that marital relationship quality and children's temperament together predict differences in coparenting across families while adjusting for the within-family variation in coparenting (Tabachnick & Fidell, 2013). For both cooperation and competition, there were no significant inhibitory control x marital relationship quality interactions. Marital conflict emerged as potential correlate of cooperation, with more conflict associated with less cooperation. Inhibitory control, however, did not account for differences in coparenting across families. This is not surprising given the inconsistent results in the literature to date. Indeed, Stright and Bales (2003) included regulatory dimensions in their temperament composite and did not find associations between temperament and coparenting. A person-centered, rather than variable-centered, approach to temperament may help to illuminate the associations. Additionally, families who were more child-centered exhibited less cooperative and competitive coparenting behavior than families who were less child-centered. It may be that during family interaction if both parents are involved but letting the child drive the interaction there may actually be fewer opportunities for both cooperative and competitive coparenting.

Notable findings emerged but some limitations should be noted. Clearly we did not account for a large proportion of the within-family variance in coparenting behavior. Assessing children's negative and positive affect across the different contexts would be a stronger test of the association between child characteristics and coparenting behavior. These family processes are also bidirectional and we were not able to capture this (Morrill, Hines, Mahmood, & Córdova, 2010; Schoppe-Sullivan et al., 2004). In addition, findings from the current study do not necessarily apply to ethnic minority families, families of lower socioeconomic status, or families that do not consist of heterosexual, married/cohabitating coparents.

The results underscore the utility of exploring both within- and between-family variation in coparenting behavior and the need for a more nuanced approach when considering the family processes that influence cooperative and competitive coparenting. Given the results from the current study, and previous research, we expect the factors that emerge as correlates of within-and between-family differences in cooperation and competition will differ. Future work is needed to further delineate these complex associations.

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Table 1

Descriptive Statistics and Correlations for Within- and Between-Family Variables

Study Variables	1	2	3	4	5	6	7	8	9	10	11	12	13
Within-Family Variables													
1. Cooperation FP	----												
2. Cooperation SP	.71***	----											
3. Cooperation CU	.51***	.54***	----										
4. Competition FP	.11	.05	.05	----									
5. Competition SP	.11	.14	.15	.53***	----								
6. Competition CU	.20	.17	-.01	.36**	.24†	----							
7. Child-Centered ^a FP	-.21	-.16	-.05	.05	-.12	.14	----						
8. Child-Centered ^a SP	.09	.16	.36**	-.07	.04	.04	-.12	----					
9. Child-Centered ^a CU	.05	-.03	-.28*	.03	.04	-.12	-.53***	-.78***	----				
Between-Family Variables													
10. Inhibitory Control	-.10	-.06	-.10	-.03	.16	-.10	-.09	.05	.02	----			
11. Child-Centered ^b	-.13	-.10	-.31*	-.46***	-.32*	-.31*	-.58***	-.04	.39**	.24†	----		
12. Marital Love	-.07	.00	-.05	.12	.05	-.05	.33*	-.07	-.26*	.13	-.18	----	
13. Marital Conflict	-.15	-.11	-.12	.10	.06	-.04	-.04	.10	-.06	-.23†	-.06	-.41**	----
<i>M</i>	3.19	2.86	3.24	1.83	1.52	1.74	.54	.33	-.87	58.63	4.34	15.65	7.89
<i>SD</i>	1.00	.76	.98	.80	.71	.69	.33	.45	.52	30.01	.38	1.39	2.06

FP = freeplay task, SP = structured play task, CU = clean-up task.

^a Child-centered was group mean centered so these within-family variables reflect the deviations in child-centered behavior from the family's average level.^b The family average level of child-centered behavior.* $p < .05$;

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*** $p < .01$;*** $p < .001$