We examined the long-term direct and indirect links between coparenting (conflict, communication, and shared decision-making) and preschoolers’ school readiness (math, literacy, and social skills). The study sample consisted of 5,650 children and their biological mothers and fathers who participated in the Early Childhood Longitudinal Study-Birth Cohort. Using structural equation modeling and controlling for background characteristics, we found that our conceptual model of the pathways from coparenting to child outcomes is structurally the same for cohabiting and married families. Controlling for a host of background characteristics, we found that coparenting conflict and shared decision-making were negatively and positively, respectively, linked to children’s academic and social skills and co-parental communication was indirectly linked to academic and social skills through maternal supportiveness. Coparenting conflict was also indirectly linked to children’s social skills through maternal depressive symptoms. The overall findings suggest that for both cohabiting and married families, the context of conflicted coparenting may interfere with the development of children’s social competencies and academic skills, whereas collaborative coparenting promotes children’s school readiness because mothers are more responsive to their children’s needs. These findings have implications for programs aimed at promoting positive family processes in cohabiting and married families.

Keywords: Coparenting Conflict; Communication; Shared Decision-making and School Readiness


*Human Development, University of Maryland, College Park, MD.
†Child Trends, Washington, DC.
‡Temple, Philadelphia, PA.

Correspondence concerning this article should be address to Natasha Cabrera Human Development, University of Maryland, College Park, MA. E-mail: ncabrera@umd.edu.

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INTRODUCTION

Recent research has focused on the associations between coparenting, defined as "an enterprise undertaken by two or more adults who together take on the care and upbringing of children for whom they share responsibility" (McHale & Lindahl, 2011, p. 30), and father engagement across diverse family structures (Bronte-Tinkew & Horowitz, 2010; Carlson & Högnäs, 2011; Fagan & Palkovitz, 2011; Waller, 2012). Coparenting has been mostly examined in married couples and less so in cohabiting families. Given the unprecedented rise in the percentage of children living in cohabiting families, it is important to understand how unmarried couples coparent. Moreover, with some exceptions (Belsky & Fearon, 2004; Cabrera, Shannon, & LaTaillade, 2009; Caldera & Lindsey, 2006), most of this literature has not examined the influence of coparenting, which can be supportive and of high quality or non-supportive and of negative quality (Feinberg, 2003), on children’s school readiness across family structures. Focusing on school readiness is important because it is the foundation for school success, and is the most salient task that parents are engaged in with their young children. Of the studies that have linked coparenting to children’s outcomes, most have been conducted with small non-representative samples, and have not examined the mechanisms that explain this link. This is a significant omission because coparenting is a central family process linked to parenting and child functioning (McHale & Lindahl, 2011).

In this study, we focus on three dimensions of coparenting (conflict, communication, and shared decision-making) to better understand the direct links between the quality of coparenting relationships and children’s school readiness (academic and social skills) in a national sample of children and their married and cohabiting parents. In addition, we determine whether the association between coparenting and school readiness is mediated by maternal supportiveness or maternal mental health, and examine whether these associations are influenced by marital status.

THEORETICAL FRAMEWORK

We frame this study using family systems theory that family members are interdependent and that the dynamic nature of various family relationships (e.g., mother–father, parent–child, sibling–sibling) affect each other and influence individual outcomes (Cox & Paley, 1997; McHale et al., 2002; Van Egeren & Hawkins, 2004). McHale and Lindahl (2011) and others (Feinberg, 2003; McHale, Kuersten-Hogan, & Rao, 2004) have proposed that coparenting is distinct from other couple dimensions of parents’ relationship (intimacy, conflict), and that because of its proximity to the child, it is more tightly related to child wellbeing than other aspects of the interparental relationship (Feinberg, 2003). Thus, the coparenting relationship involves a triadic interaction (mother-father-child) and a dyadic interaction (mother-father).

There is consensus that as Feinberg (2003) has proposed the quality of the coparenting relationship (e.g., support, childrearing agreement, division of labor, and joint family management) both directly and indirectly (through the parent-child relationship) influence child adjustment. For example, co-parental conflict, parental communication, and participation in decisions about child rearing (joint family management) are dimensions of coparenting that are linked to parenting and children’s outcomes (Feinberg, 2003; McHale & Lindahl, 2011).
Family systems theory also suggests that the associations between the coparenting and the parent-child subsystems may depend on other contextual factors, such as parents’ marital status (Feinberg, 2003). In contrast with cohabiting couples, married individuals function as shared entities (e.g., shared home ownership) rather than independently (Wilk, Bernhardt, & Noack, 2009); have more contact and stronger ties with extended family members (Eggebeen, 2005); and, get more help from family and friends to work out their coparenting problems (Nock, 1995). (although see Burton & Hardaway, 2012 and Gaskin-Butler, Engert, Markievitz, Swenson, & McHale, 2012 for discussions of how extended kin function as coparents in many family systems led by unmarried parents). Married parents may therefore be better able to communicate with each other and engage in shared decision-making in relation to child rearing. On the basis of these findings and the tenets of family systems theory, we examine whether the links between coparenting and child outcomes vary for couples who are married versus those who are cohabiting.

CONCEPTUAL MODEL

A family systems perspective suggests that parents who communicate and share in the decision-making, but also experience conflict over how to rear their children, will directly and indirectly through parent-child interactions (dyadic) and parents’ psychological well being, influence their children’s functioning.

According to Feinberg (2003), parents are responsible for managing family interactions by controlling their communications and behaviors (e.g., conflict) with each other, which influence their children. According to our hypothesized model (see Figure 1), coparenting conflict, communication, and decision-making when the child is 24 months old will be directly linked to children’s math, literacy, and social skills at 48 months. Parents who are not supportive of one another or disagree over child-rearing

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<table>
<thead>
<tr>
<th>Co-Parenting Communication (24 months)</th>
<th>Maternal Depressive Symptoms (24 months)</th>
<th>Math Score (48 months)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Co-Parenting Conflict (24 months)</td>
<td>Maternal Supportiveness (24 months)</td>
<td>Literacy Score (48 months)</td>
</tr>
<tr>
<td>Shared Decision-making (24 months)</td>
<td>Maternal Supportiveness (24 months)</td>
<td>Social Skills (48 months)</td>
</tr>
</tbody>
</table>

**Figure 1.** Conceptual model.

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tasks are less likely to both model and assist children in emotion regulation, which are important for exploration and learning in social contexts (Raikes & Thompson, 2005). Moreover, hostile parents may have a difficult time bonding with their children, and hence might inhibit exploratory behaviors, which can interfere development of social skills (playing with other children, paying attention, and trying to understand others).

Our model also links communication and shared-decision-making directly to children’s school readiness. Parental communication and shared decision-making represent coparenting processes that promote parents’ joint responsibility to provide for children’s physical and emotional needs (Feinberg, 2003). Parents who communicate about their child on a regular basis and share in making decisions about children’s health, nutrition or child care may signal to their children parental harmony and a working relationship, which can result in children having feelings of security and competence and support and support their learning behaviors.

According to our conceptual model, coparenting also influences children’s outcomes through its effect on maternal mental health (Feinberg, 2003). Maternal depression has been found to negatively affect parent-child interactions (Field, Hernandez-Reif, & Feijo, 2002) and compromises mothers’ ability to parent, impacts marital functioning, and causes stress for children, resulting in poor child functioning (Elgar, McGrath, Waschbusch, Stewart, & Curtis, 2004). For example, research shows that co-parental conflict increases mothers’ stress levels and depressive symptoms, which have been negatively linked to the development of emotional, behavioral, language, and cognitive problems in children at all stages of development, including infancy (Brown et al., 2004; Petterson & Albers, 2001). In contrast, positive co-parental relationships characterized by communication and shared decision-making are expected to promote parents’ wellbeing.

Our model also tests the association between our study variables and children’s school readiness through maternal supportiveness (Feinberg, 2003). Children develop in a sociocultural context where they interact with caregivers, siblings, and others (Vygotsky, 1979). Whereas maternal supportiveness has been linked to greater cognitive, academic, and social competence in preschool aged children (Crockenberg & Litman, 1990), reduced maternal supportiveness has been linked to cognitive delays and poor social skills (Cabrera, Fagan, Wight, & Schadler, 2011). Although the mechanisms accounting for the links between coparenting and parenting are not yet fully understood (Feinberg, Kan, & Hetherington, 2007), there is evidence that higher levels of co-parental conflict may reduce mothers’ feelings of self-efficacy, whereas increasing parenting stress levels, resulting in poor parenting behaviors (Margolin, Gordis, & John, 2001). Researchers have found that co-parental conflict in the home is linked to harsher and less responsive parent-child interactions, (Katz & Woodin, 2002), which is related to children’s maladjustment (Amato & Fowler, 2002).

Current Study

Although research shows that coparenting is directly and indirectly linked to parenting and children’s school readiness, there is less clarity on how these coparenting processes influence children’s development over time. Guided by review of the literature and informed by family systems theory, we examine longitudinal
effects of coparenting conflict, communication, and shared decision-making on children’s school readiness—math, literacy, and social skills. We hypothesize that a negative coparenting relationship, characterized by high levels of conflict, will be directly and negatively associated with preschoolers’ skills. We posit that a positive coparenting relationship, characterized by high levels of communication and shared decision-making, will be directly and positively associated with preschoolers’ skills. We also hypothesize that co-parental conflict will increase mothers’ depressive symptoms and reduce maternal supportiveness, which, in turn, will be negatively associated with children’s skills. Co-parental communication and shared decision-making are expected to decrease mothers’ depressive symptoms and increase maternal supportiveness, which, in turn, will be positively associated with children’s skills.

Apropos to this special volume on fragile families, an important study aim was to contribute to research, practice and policy efforts targeting fragile families by assessing the extent to which associations between coparenting and preschool outcomes vary (or not) by parents’ marital status. We suggest that results indicating greater similarity than difference between married and cohabiting couples would provide a case for generalizability of the hypothesized relations across diverse family structure (i.e., identify “common” pathways), whereas findings suggesting greater difference than similarity would help to identify uniqueness in the pathways by which coparenting matters for children’s school readiness. Evidence of relational similarities across cohabiting and married families would make the case for similar services targeting married and cohabiting families with respect to coparenting behaviors. In contrast, evidence of relational differences between married and cohabiting families would argue for more group-specific services that address identified areas of need.

**METHOD**

**Data Source**

These analyses use data from the Early Childhood Longitudinal Study Birth Cohort (ECLS-B) 9-, 24-, and 48-month surveys. The ECLS-B tracks a nationally representative sample (N = 10,700) of children born in 2001 from infancy to kindergarten entry to assess their experiences in a variety of domains (Nord et al., 2004). The primary modes of data collection were in-person interviews and direct child assessments during home visits. Information on children was also drawn from birth certificates and from interviews with parents, child-care providers, and teachers. The ECLS-B resident father lived with the sampled children and, at each data collection point, was asked to complete a 20-minute self-administered questionnaire.

**Analytic Sample**

At 9 (baseline) and 48 months, approximately 10,700 and 8,950 parent interviews, respectively, and 10,000 and 8,750 child assessments, respectively, were completed. Our sample includes 6,000 children living with their biological mother and father at 9, 24, and 48 months. Approximately 350 cases were excluded from the analysis because of missing data on the 48-month child-level weight variable, resulting in a sample of 5,650. Cases with missing data on the child-level weight variable included
cases for which no 48-month survey was completed (i.e., cases lost to attrition) as well as cases for which children did not have at least one assessment at each time point (e.g., survey was completed by telephone or parent would not allow assessments to be conducted). There was less than 5% missing data in our outcomes and predictors (except for literacy at 6% and coparenting conflict at 16%). Missing data among the control variables was slightly higher (10% and 27%). Using the Full Information Maximum Likelihood (FIML) method, which allows Mplus to estimate parameters even for cases with missing data (Muthén & Muthén, 2006), our final analytical sample is \( n = 5,650 \). All analyses were conducted using sample weights that were selected based on the combination of survey components to be used in the analysis. As we use 9- and 48-month child assessments and 9-, 24-, and 48-month parent reports, we used a child-level weight adjusted for disproportionate sampling, survey nonresponse, and noncoverage of the specific target population.

**Child Outcomes Measures**

In this study, we measured the following school readiness skills: social, literacy, and math skills.

**Social skills**

Parents were asked how often the child exhibits behaviors, such as playing with other children, paying attention well, and trying to understand others, at the 48-month interview (1 = never, 2 = rarely, 3 = sometimes, 4 = often, 5 = very often). Parents were prompted to consider how the child’s behavior in the prior 3 months related to children who are within 2 years of their child’s age. These items were drawn from the Preschool and Kindergarten Behavior Scales-Second Edition (Merrell, 2003), with modifications made to some items (Tourangeau, Nord, & Atkins-Burnett, 2006). We created a 13-item index with an alpha of 0.84.

**Literacy skills**

The literacy assessment included 37 scored items across six key domains: letter recognition—in both receptive and expressive models, letter sounds, early reading—recognition of simple words, phonological awareness, knowledge of print conventions, and matching word (Snow et al., 2007). The literacy score is based on item response theory (IRT), which uses patterns of correct and incorrect answers to obtain estimates on a scale that may be compared across different assessment forms (for the same outcome), and provides scores that can be compared regardless of which assortment of items a child received through adaptive testing (Snow et al., 2007). The overall scale score was 0.81.

**Math skills**

The math assessment was developed using psychometric data available from the field test and provided coverage of five primary constructs with 28 total items: number sense, geometry, counting, operations, and patterns (Snow et al., 2007). Results from the field test indicated that different domains were more or less appropriate for children according to their ability levels, so domains were split into low forms, high forms, and routing tests (Snow et al., 2007). We used the IRT overall scale score, which has an alpha of 0.88.

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Predictors

Coparenting communication

Mothers were asked to report on how frequently they talked with the father about the focal child (1 = not at all, 6 = daily). Using the responses from the 24-month survey we also created a measure of fathers’ report of how frequently they talked with the mother about the focal child with matching response categories (1 = not at all, 6 = daily).

Coparenting conflict

At 24 months, mothers were asked to report of how frequently they argued with her spouse or partner about their children. Mothers were asked “Do you and your spouse/partner often, sometimes, hardly ever, or never have arguments about your children.” A similar question was also asked of fathers on the 24-month resident father survey.

Shared decision-making

At 24-months, mothers were asked “When it comes to making major decisions about the child, please tell me if the father has No Influence, Some Influence, or a Great Deal of Influence on such matters as:” discipline, nutrition, healthcare, and childcare. The values of the four items were summed (range 4–12); higher schools indicated that the father had more influence in decision-making ($\alpha = .81$). Fathers who responded to the resident father survey were also asked to report on how much influence they felt they had on the same issues. A similar index was developed for fathers at 24-months ($\alpha = .94$).

Mediators

Maternal depressive symptoms at 24 months

The Major Depression subscale of the Composite International Diagnostic Interview Short Form (CIDI-SF; Kessler, Andrews, Mroczek, Utsun, & Wittchen, 1998; Walters, Kessler, Nelson, & Mroczek, 2002; World Health Organization, 1990) is composed of a series of branching questions about anhedonia and dysphoria. Participants who “pass” each branching question are routed to further questions about symptoms; participants who do not “pass” skip the items about symptoms. Respondents received a “3” if they reported experiencing dysphoria (i.e., sadness) or anhedonia (i.e., inability to experience pleasure) everyday or almost every day for a period of 2 weeks or more in a row, and for at least half of the hours on the days that they experience it; a score of “2” if they reported experiencing such symptoms less often than almost every day; a “1” if they reported experiencing these symptoms less than half of the hours in the day; and a “0” if they did not experience any symptoms for the entire 2 week period.

Maternal supportiveness

Maternal supportiveness was measured at 24 months using the supportiveness composite variable of the Two Bags Task (Nord et al., 2004). The Two Bags Task is a simplified version of the Three Bags Task (Brady-Smith, O’Brien, Berlin, & Ware, 1999), and assesses six parent behaviors (parental sensitivity, intrusiveness, stimulation of cognitive development, positive regard, negative regard, and detachment) and
three child behaviors (child engagement, sustained attention, and negativity toward parent). Maternal supportiveness was assessed based on scores on maternal sensitivity, cognitive stimulation, and positive regard that have been found to be intercorrelated in previous large-scale datasets. Scores on this measure range from 1 to 7 (mean = 4.5), with higher scores indicating more supportive parenting. Information about the training of observers and how inter-rate reliability was established can be found elsewhere (Cabrera et al., 2011).

**Control Variables**

**Household and parents’ characteristics**

*Maternal employment,* linked to supportive coparenting behavior (Lindsey, Caldera, & Colwell, 2005), was measured at 24 months using a dichotomous variable indicating the biological mother’s employment status. *Maternal education,* robustly linked to children’s school readiness and social skills (Walker et al., 2011), was measured at 9-months as a four-category variable that indicated if the mother had less than a high school degree, completed high school, attended some college, or had at least a four-year college degree. *Mother’s age at birth,* linked to maternal responsiveness, was measured continuously (Cabrera, Shannon, West, & Brooks-Gunn, 2006). We also control for whether or not the child’s mother was born outside the U.S. (reported at 9 months) as patterns of mother-child interactions might vary by country of origin (Cabrera et al., 2006). We also include a direct assessment of the quality of the mother-child interaction at 9 months using the Nursing Child Assessment Teaching Scale (NCATS), which codes mother and child behaviors using four subscales: sensitivity to the infant’s cues, response to distress, social-emotional growth fostering behavior, and cognitive growth fostering behavior. Higher scores indicate more positive parenting practices. To control for earlier levels of depressive symptoms, we also included a control for maternal depressive symptoms at 9 months, measured with the Center for Epidemiological Studies Depression Scale—Short Form (CESD-SF), which comprises 12 of the 20 items from the full CES-D (Radloff, 1977) (Ross, Mirowsky, & Huber, 1983). Items were rated on a 4-point Likert scale (1 = rarely to 4 = most or all days). Higher scores indicated more depressive symptoms (α = .90 and .85 for mothers and fathers, respectively).

*Marital status* indicates whether the biological parents are cohabiting versus married at 24 months. Compared with unmarried fathers, some evidence suggests that married fathers are more involved with children (Hofferth & Anderson, 2003), which may indicate more positive co-parental relationships. *Poverty status,* measured using a dichotomous variable that identified households below 100% of the federal poverty line, has been positively associated with coparenting and higher cognitive and academic outcomes (Petterson & Albers, 2001).

**Child characteristics**

We control for child age (measured in months) and gender (male = 1) because it has been linked to positive coparenting (Margolin et al., 2001). We control for child temperament and children’s disability status given their associations with more negative parenting behavior and parenting stress (Lindsey et al., 2005; Van Egeren, 2004). *Child disability* status was measured at the 9-month survey by asking mothers if their child had been diagnosed with a disability (e.g., blindness, failure to thrive,

Down syndrome, etc.). Children’s temperament was measured at 9 months using a seven-item abbreviated version of the Infant/Toddler Symptom Checklist (ITSC) (DeGangi, Poisson, Sickel, & Weiner, 1995). Caregivers were asked seven questions about their children’s regulatory behaviors (e.g., how often the child is fussy or irritable; the child goes easily from a whimper to an intense cry). The scores for each item, which were scored from 0 = child never fit the description to 3 = fit the description most of the time, were then added together to create a single variable assessing the child’s temperament (α = .57). Higher scores indicate a more difficult temperament. Child’s race, linked to coparenting, parenting, and child well-being (Dorsey, Forehand, & Brody, 2007), was measured using a categorical variable that identified whether the child was non-Hispanic White, non-Hispanic Black, Hispanic, or of another race/ethnicity. Cognitive ability at 9-months is included to control for early learning ability, and was measured using the Bayley Short Form - Research Edition (BSF-R) Mental Scale at 9 months (Nord et al., 2004).

Analytic Strategy

We conducted path analysis using Mplus (Muthén & Muthén, 1998-2009) to test direct and indirect effects of mothers’ perceptions of co-parental conflict, communication, and shared decision-making at 24 months on children’s math, literacy, and social outcomes at 48 months, as shown in Figure 1. Analyses used sampling weights, adjusted for the complex sampling design, and used FIML to handle missing data (Arbuckle, 1996). We assessed the acceptability of model fit using a cut-off of less than 0.06 for the Root Mean Square Error of Approximation (RMSEA), of greater than 0.95 for the Comparative Fit Index (CFI) and the Tucker-Lewis Index (TLI), and of less than 0.09 for the Standardized Root Mean Square Residual (SRMR). We also report the chi-square value for the models, although this goodness of fit estimate is likely to be significant with large samples even when the model fits the data well. The estimation method used was maximum likelihood with robust standard errors (MLR) because it is robust to violations of normality. We used the delta method standard errors provided as the default method in Mplus, to test the indirect effects (Muthén & Muthén, 2007).

RESULTS

Mean-level Differences in Study Variables by Marital Status

Table 1 presents weighted descriptive statistics for the variables in the analysis for the full sample and for married and cohabiting couples. Thirteen percent of biological resident parents were cohabiting at 24 months. At 24 months, the full sample of mothers and fathers reported more frequent communication (mean = 5.9, range = 1–6), infrequent coparenting conflict (mean = 2.3 for mothers; mean = 2.2 for fathers; range = 1–4), and high shared decision-making (mean = 10.4 for mothers; mean = 10.2 for fathers; range=4–12). On average, the full sample of mothers had low levels of depressive symptoms at 24 months (mean = 0.3, range = 0–3), and were moderately supportive in interactions with their children at 24 months (mean = 4.5, range = 1–7).

The average age of all mothers was 30 (range = 15–51) and more than half (52%) were employed. Twenty-two percent of mothers were foreign-born; 10% had less than
**Table 1**

*Weighted Descriptives for Children Living With Both Biological Parents*

<table>
<thead>
<tr>
<th></th>
<th>Total</th>
<th>Married</th>
<th>Cohab</th>
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<tbody>
<tr>
<td><strong>Independent variables</strong></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Mother Report, 24 months</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Co-Parenting Communication</td>
<td>5.9 (0.3)</td>
<td>5.9 (0.3)</td>
<td>5.9 (0.3)</td>
</tr>
<tr>
<td>Co-Parenting Conflict</td>
<td>2.3 (0.8)</td>
<td>2.3 (0.8)</td>
<td>2.4 (1.0)</td>
</tr>
<tr>
<td>Shared Decision-making</td>
<td>10.4 (1.9)</td>
<td>10.4 (1.9)</td>
<td>10.3 (2.0)</td>
</tr>
<tr>
<td>Father Report, 24 months</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Co-Parenting Communication</td>
<td>5.9 (0.5)</td>
<td>5.9 (0.5)</td>
<td>5.8 (0.4)</td>
</tr>
<tr>
<td>Co-Parenting Conflict</td>
<td>2.2 (0.8)</td>
<td>2.2 (0.8)</td>
<td>2.2 (0.9)</td>
</tr>
<tr>
<td>Shared Decision-making</td>
<td>10.2 (1.8)</td>
<td>10.2 (1.8)</td>
<td>10.3 (1.9)</td>
</tr>
<tr>
<td><strong>Mediators</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maternal Depressive Symptoms (CIDI-SF) at 24 months, mean [0–3]</td>
<td>0.3 (0.9)</td>
<td>0.3 (0.9)</td>
<td>0.3 (0.8)</td>
</tr>
<tr>
<td>Maternal Supportiveness (Two Bags Task) at 24 months, mean [1–7]</td>
<td>4.5 (0.9)</td>
<td>4.6 (0.8)</td>
<td>4.0 (0.8) ***</td>
</tr>
<tr>
<td><strong>Controls</strong></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Mother’s Individual Characteristics</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mother’s Age (in years) at 9 months, mean [15–51]</td>
<td>29.8 (5.7)</td>
<td>30.4 (5.4)</td>
<td>26.1 (5.7) ***</td>
</tr>
<tr>
<td>Employed at 24 Months</td>
<td>52%</td>
<td>53%</td>
<td>51%</td>
</tr>
<tr>
<td>Foreign-born at 9 months</td>
<td>22%</td>
<td>22%</td>
<td>39%***</td>
</tr>
<tr>
<td>Mother’s Education at 9 months</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt; high school degree</td>
<td>10%</td>
<td>10%</td>
<td>37%***</td>
</tr>
<tr>
<td>high school degree/equiv/vocational school</td>
<td>26%</td>
<td>26%</td>
<td>39%***</td>
</tr>
<tr>
<td>some college</td>
<td>27%</td>
<td>27%</td>
<td>19%***</td>
</tr>
<tr>
<td>at least a college degree (BA)</td>
<td>37%</td>
<td>37%</td>
<td>4%***</td>
</tr>
<tr>
<td>Maternal Depressive Symptoms (CES-D) at 9 months, mean [1–4]</td>
<td>1.4 (0.4)</td>
<td>1.3 (0.4)</td>
<td>1.5 (0.5) ***</td>
</tr>
<tr>
<td>Household Characteristics and Family Characteristics</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Biological Parents Cohabiting (vs. Married) at 24 Months</td>
<td>13%</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Positive Parenting (NCATS), mean [28–70] (9 months)</td>
<td>50.5 (5.8)</td>
<td>50.8 (5.8)</td>
<td>48.0 (5.6) ***</td>
</tr>
<tr>
<td>Below 100% of the Federal Poverty Line at 9 months</td>
<td>11%</td>
<td>11%</td>
<td>38% ***</td>
</tr>
<tr>
<td>Child Characteristics</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>51%</td>
<td>51%</td>
<td>59% *</td>
</tr>
<tr>
<td>Race/Ethnicity (measured at 9 months)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-Hispanic White</td>
<td>66%</td>
<td>66%</td>
<td>32%***</td>
</tr>
<tr>
<td>Non-Hispanic Black</td>
<td>5%</td>
<td>5%</td>
<td>10%***</td>
</tr>
<tr>
<td>Hispanic</td>
<td>22%</td>
<td>22%</td>
<td>52%***</td>
</tr>
<tr>
<td>Other Race/Ethnicity</td>
<td>7%</td>
<td>7%</td>
<td>5%</td>
</tr>
<tr>
<td>Age (in months) at 9 months, mean [6.9–22.2]</td>
<td>10.4 (1.9)</td>
<td>10.3 (1.9)</td>
<td>10.4 (1.8)</td>
</tr>
<tr>
<td>Child has disability at 9 months</td>
<td>6%</td>
<td>6%</td>
<td>5%</td>
</tr>
<tr>
<td>Cognitive Ability (Bayley Short Form - Research Edition) at 9 Months, mean [1–5]</td>
<td>1.1 (0.5)</td>
<td>1.1 (0.5)</td>
<td>1.1 (0.4)</td>
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<td>Temperament at 9 months, mean [0–20]</td>
<td>8.0 (3.8)</td>
<td>7.9 (3.8)</td>
<td>8.3 (3.5)</td>
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<tr>
<td><strong>Dependent variables (48 months)</strong></td>
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<td>IRT Math Scores [9.9–65.7]</td>
<td>30.4 (9.6)</td>
<td>31.1 (9.5)</td>
<td>26.5 (8.7) ***</td>
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<tr>
<td>Literacy Score [5.4–34.7]</td>
<td>13.8 (7.1)</td>
<td>14.2 (7.1)</td>
<td>11.2 (6.1) ***</td>
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<tr>
<td>Social Skills [1–5]</td>
<td>3.9 (0.5)</td>
<td>3.9 (0.5)</td>
<td>3.9 (0.5)</td>
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*p < .05, **p < .01, ***p < .001.*

*Fam. Proc., Vol. 51, September, 2012*
a high school degree, 26% were high school graduates, 27% had some college, and 37%
had at least a 4-year degree. Married mothers were less likely than cohabiting mothers
to be foreign-born and were more highly educated. Mothers also reported low levels of
depressive symptoms at 9 months, and married mothers reported fewer depressive
symptoms than cohabiting mothers.

Overall, mothers scored an average of 50.5 on the NCATS (range = 23–70); married
mothers scored significantly higher than cohabiting mothers. At 9-month, more than
one in 10 (11%) of families were below 100% of the federal poverty line; cohabiting
couples were more likely than married couples to be in poverty. Slightly more than
half of the children (51%) were men, with more male children live in cohabiting fami-
lies. Two-thirds of children (66%) were non-Hispanic White, 5% were non-Hispanic
Black, 22% were Hispanic, and 7% were of another race/ethnicity. A significantly
greater proportion of children were living in cohabiting compared with married house-
holds. At 9-month, children were, on average, 10.4 months old (range = 6.9–22.2), 6%
had a disability, scored an average of 1.1 on the Bayley Short Form (range = 1–5, and
8.0 on the ITSC scale of temperament (range = 0–20). Preschool-aged children scored
an average of 30.4 (range = 9.9–65.7) and 13.8 (range = 5.4–34.7) on the math and on
the literacy assessment, respectively; children living with married parents scored
higher than children with cohabiting parents. At 48 months children had average
social skill scores of 3.9 (range = 1–5).

**Multivariate Analyses**

Figure 2 displays the standardized path coefficients for the model estimating the
influence of mothers’ perceptions of coparenting conflict, communication, and shared
decision-making on children’s math, literacy, and social skills, with maternal depres-
sive symptoms and maternal supportiveness as mediators. Even though Feinberg’s
(2003) model of coparenting suggests that communication and shared decision-making
should be a latent variable, the data do not support his theory, that is, the correlation
between these variables is very low (r = .17). Thus, a measurement model was not a
good fit and the final tested model included only observed variables. We also ran the
models separately for married and cohabiting subgroups to determine if there were
structural differences between them. We tested all pathways identified in the concep-
tual model, and show significant pathways using bolded lines. The model fit for full
sample was good (RMSEA = 0.011, CFI = 0.995, TLI = 0.971, SRMR = 0.007). The
model fit was similar for the married subsample (RMSEA = 0.015, CFI = 0.995,
TLI = 0.958, SRMR = 0.013), and for the cohabitating subsample (RMSEA = 0.000,
CFI = 1.000, TLI = 1.053, SRMR = 0.013). Multiple group analysis showed no struc-
tural differences between married and cohabiting families (the omnibus test produced
a chi-square difference test that was not significant) suggesting that the pathways
from our predictors to outcome measures is the same for both groups. As there is no
significant difference between the models, we do not discuss the models separately,
but combine them into one model. Table 3 presents the overall direct, indirect, and
total effects for the estimated SEM model for the full sample.

We also tested a model using fathers’ perceptions of coparenting communication,
conflict, and decision-making (RMSEA = 0.019, CFI = 0.991, TLI = 0.920,
SRMR = 0.010), but there were no significant differences in path coefficients from the
model using mother’s reports. Pathways from the mother and father models were
compared by constructing confidence intervals around each path coefficient and determining whether the confidence interval in the mother-report model overlapped with the respective confidence interval in the father-report model. Thus, in this study, we present the model that uses mothers’ perceptions of co-parenting.

Higher reports of coparenting communication at 24 months were associated with greater observed maternal supportiveness ($b = 0.067$, $p < .01$), which in turn was related to higher math scores ($b = 0.155$, $p < .001$), higher literacy scores ($b = 0.138$, $p < .001$), and better social skills ($b = 0.138$, $p < .001$) at 48 months. Indirect effects from coparenting communication to all three child outcomes were also significant through maternal supportiveness (see Table 3). Net of these indirect effects, coparenting communication had no direct effects on any child outcomes.

Higher levels of mothers’ reports of co-parenting conflict were directly and negatively associated with all three child outcomes: lower math scores ($b = -0.043$, $p < .05$), lower literacy scores ($b = -0.052$, $p < .01$), and lower social skills ($b = -0.071$, $p < .001$). Coparenting conflict was also related to higher levels of maternal depressive symptoms ($b = 0.042$, $p < .05$), and maternal depressive symptoms were in turn negatively related to social skills ($b = -0.033$, $p < .05$). There were no indirect effects from coparenting conflict for any of the child outcomes.

Finally, higher reports of shared decision-making were directly related to higher children’s social skills ($b = 0.049$, $p < .05$). However, shared decision-making had no other effect on math and literacy skills and depressive symptoms and maternal supportiveness.
DISCUSSION

Following a family systems framework and using a nationally representative, longitudinal sample of children in the ECLS-B, we found that conflict in the coparenting relationship when children are toddlers predicted poorer child social and academic skills at age 48 months. Conversely, shared decision-making was directly linked to children’s social skills and high frequency of communication was indirectly linked to school readiness through its influence on maternal supportiveness.

Consistent with past research, negatively associating parental disagreements about childrearing and children’s outcomes (Belsky, Crnic, & Gable, 1995; Feinberg et al., 2007), we found a significant, albeit small, negative direct association between co-parental conflict and lower academic and social skills for preschoolers, net of socio-demographic and other controls. This is similar to findings reported by Belsky et al. (1995) and supports the notion that acrimonious parental interactions and disagreements about childrearing are detrimental to young children’s development (Feinberg et al., 2007).

The hypothesis that coparenting would work indirectly through maternal supportiveness to influence child outcomes was supported only for coparenting communication for all three outcomes. Mothers who reported talking frequently with their partners about their children had children who scored higher on school readiness skills. On the other hand, shared decision-making (the degree to which a father had influence on issues such as discipline, nutrition healthcare, and childcare), was only

![Table 2](23)

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<td>Co-parenting communication → Maternal depressive symptoms</td>
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<td>Co-parenting communication → Maternal supportiveness</td>
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<td>Co-parenting conflict → Maternal depressive symptoms</td>
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<td>Co-parenting conflict → Social skills</td>
<td>-0.071***</td>
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<td>Shared decision-making → Maternal depressive symptoms</td>
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<td>Shared decision-making → Maternal supportiveness</td>
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<td>Shared decision-making → Social skills</td>
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<td>Maternal depressive symptoms → Maternal supportiveness</td>
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Note. Perceptions of co-parenting communication, co-parenting conflict, and shared decision-making were all reported by mothers.

*p < .05, **p < .01, ***p < .001.
directly linked to children’s social skills. These findings reinforce the specificity of parenting processes in child functioning (Amato & Fowler, 2002; Crockenberg & Litman, 1990). Together, frequent communication and shared decision-making may signal a family system that is coordinated and works jointly to promote child wellbeing. In this context, children may feel secure, more able to learn, and explore.

Consistent with our hypothesis, we found that parents who reported high levels of coparental conflict had children who exhibited fewer social skills because mothers reported more depressive symptoms. These findings are consistent with other studies

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that suggest that mental health suffers in the context of conflicted family relationships (Field, 1999).

Our findings are also noteworthy because the associations between coparenting and mothers' supportiveness, maternal mental health, and child outcomes were similar for both married and cohabiting couples. We had initially surmised that because married individuals function as shared entities to a greater extent than do cohabiting couples, the coparenting relationship would have a stronger effect on parent and child outcomes. This was not the case. Although there were some differences in the ways that married and cohabiting couples function (e.g., sharing resources), our findings suggest that the pathways from coparenting to parenting, and child outcomes was similar for both types of families. The ways in which cohabiting and married parents resemble each other merits further research. In a national study of infants and their fathers, Cabrera and colleagues found no difference between cohabiting and married fathers engaged in the frequency with which they engaged in cognitive stimulating activities with their infants, but differences in the frequency with which they engaged in caregiving and physical play, favoring cohabiting fathers (Cabrera et al., 2011).

The results of this study must be interpreted in light of its limitations. First, we did not have longitudinal information on coparenting experiences across the life course for both mothers and fathers (see McHale, Waller, & Pearson, 2012). In addition, we would have liked to have considered effects of change in co-parental conflict between 9 and 24 months on child outcomes at 24 months. Unfortunately, the surveys available had only a limited number of items measuring coparenting, which precluded use of a change score. Relatedly, as this was a secondary analysis, we necessarily had to construct the coparenting measure from available items. It is, hence, possible that the measure of co-parental conflict that we used may not adequately capture frequency, nature, and content of such conflict. Finally, our study focused on two-parent families. Coparenting effects may differ in other family contexts or with other caregivers.

Despite our study limitations, there are a number of strengths of this study. Unlike prior studies that have relied on small, select samples, the nationally representative longitudinal data on young children and their parents examined in this study allow to make generalizations. These findings elucidate connections among family relationships and preschool children’s school readiness as well as the pathways (maternal supportiveness) through which such associations can be traced. Moreover, unlike prior research that has focused primarily on marital functioning, this report focuses on conflict, communication and shared decision-making in the coparenting relationship. Likewise, its focus on unmarried two parent resident samples rather than on divorced nonresidential parents is new. The study also included many variables (such as positive aspects of coparenting) typically unaccounted for in prior studies, allowing examination of the potential associations between these factors and children’s school readiness. In addition, this study uses child academic measures based on direct assessment rather than on parent perceptions of the child’s skills.

Future work on coparenting will benefit from examining how other indicators of coparenting affect a variety of different child outcomes over time, including health and safety outcomes. Studies of the associations between quality and coparenting in various subpopulations, on children’s school readiness will also be of interest. In terms of policy implications, our study provides evidence that coparenting conflict, across family structures, is associated with children’s academic and social skills. Assuming that the family is a system of interdependent individuals provides practitioners the
opportunity to work with both parents to affect coparental relationships and in turn, the family as a whole. Programs that address parenting strategies should focus on how couples, married and cohabiting, can foster a positive coparental alliance around decisions regarding a child. Findings from this study should also heighten practitioner awareness of the importance of family-level relationships, such as coparenting to young children’s wellbeing; considering only parenting behaviors may be insufficient to improve child outcomes.

REFERENCES


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Many thanks for your assistance.

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USING e-ANNOTATION TOOLS FOR ELECTRONIC PROOF CORRECTION

Required software to e-Annotate PDFs: Adobe Acrobat Professional or Adobe Reader (version 8.0 or above). (Note that this document uses screenshots from Adobe Reader X)
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Once you have Acrobat Reader open on your computer, click on the Comment tab at the right of the toolbar:

This will open up a panel down the right side of the document. The majority of tools you will use for annotating your proof will be in the Annotations section, pictured opposite. We’ve picked out some of these tools below:

1. **Replace (Ins) Tool** – for replacing text.
   
   **How to use it**
   
   - Highlight a word or sentence.
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   - Type the replacement text into the blue box that appears.

   ![Replace tool](image)

2. **Strikethrough (Del) Tool** – for deleting text.
   
   **How to use it**
   
   - Highlight a word or sentence.
   - Click on the Strikethrough (Del) icon in the Annotations section.

   ![Strikethrough tool](image)

3. **Add note to text** Tool – for highlighting a section to be changed to bold or italic.
   
   **How to use it**
   
   - Highlight the relevant section of text.
   - Click on the Add note to text icon in the Annotations section.
   - Type instruction on what should be changed regarding the text into the yellow box that appears.

   ![Add note to text tool](image)

4. **Add sticky note** Tool – for making notes at specific points in the text.
   
   **How to use it**
   
   - Click on the Add sticky note icon in the Annotations section.
   - Click at the point in the proof where the comment should be inserted.
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   ![Add sticky note tool](image)
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**How to use it**
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- Click on the proof to where you’d like the attached file to be linked.
- Select the file to be attached from your computer or network.
- Select the colour and type of icon that will appear in the proof. Click OK.

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**How to use it**
- Click on the Add stamp icon in the Annotations section.
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- Click on one of the shapes in the Drawing Markups section.
- Click on the proof at the relevant point and draw the selected shape with the cursor.
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- Double click on the shape and type any text in the red box that appears.

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