Published in final edited form as:

Infant Ment Health J. 2009 September 2; 30(5): 523–548. doi:10.1002/imhj.20227.

Predictors of co-parenting in Mexican American families and direct effects on parenting and child social emotional development

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Abstract

The present study examined associations between parents' levels of acculturation depressive symptoms, family support, and couple relationship quality with coparenting conflict. We also explored the effects of coparenting conflict on parenting and infant social development in a sample of low-income Mexican American ($n=735$) infants (age 9 months) and their parents. Results indicated that couple conflict was the strongest predictor of coparenting conflict. Coparenting conflict had a significant effect on mother-infant interaction and father engagement. The effects of coparenting on father caregiving varied by father's level of acculturation; when there is high coparenting conflict, more acculturated fathers engaged in more caregiving than less acculturated fathers. Coparenting conflict was not predictive of infant social development.

Keywords

Mexican American families; Latino families; coparenting; family process; parental engagement/involvement; acculturation; infant development

INTRODUCTION

Although the study of coparenting is relatively new, recent conceptual advances as well as empirical findings suggest that coparenting is linked to parenting and child adjustment (Belsky, Putnam, & Crni, 1996; Feinberg, 2003; Margolin et al., 2001). Coparenting is broadly defined as the “ways that parents and/or parental figures relate to each other in the role of parent” (Feinberg, 2003, p. 96). Although there are various conceptualizations of coparenting (Cowan, Cowan, Pruett, & Pruett, 2005; Feinberg, 2003; McHale, Kuersten-Hogan, & Rao, 2004), most include agreement or disagreement on childrearing issues, division of child-related labor, support for the coparenting role, and joint management of family interactions (Feinberg, 2003). To date, the bulk of the research on coparenting has focused on post-divorce coparenting and two-parent, white middle-class families. Little is known about coparenting in culturally diverse families. In this article we use Feinberg's (2003) model of coparenting to examine the factors that influence coparenting as well as its effects on parenting and child social development in a national sample of low-income Latino infants and their mothers and fathers. Specifically, we focus on Mexican Americans because it is the largest ethnic group in the U.S. Mexican-American children are at risk for a host of problems and given the importance of co-

parenting as a central family process, it is a reasonable focus of study that can inform effective interventions.

Using the Early Childhood Longitudinal Study – Birth Cohort (ECLS-B), in this study we focus on one aspect of the coparenting relationship, interparental conflict as reported by mothers and fathers, because interparental conflict has been found to be strongly associated with children's social emotional development. We ask the following research questions: (1) How do parental depression, relationship quality, social support influence, and levels of acculturation interparental conflict? (3) How does interparental conflict influence father engagement, mother-infant interaction, and child adjustment? (4) How does acculturation moderate the association between coparenting conflict and parenting and infants' social and emotional development?

FEINBERG'S COPARENTING MODEL

Feinberg (2003) and others (McHale, Kuersten-Hogan, & Rao, 2004, Belsky, Crnic, & Gable, 1995) have proposed that the coparenting relationship occurs when individuals share responsibility for rearing particular children and although it is linked to other aspects of the parents' relationship, it is also distinct from other couple dimensions of parents' relationship (intimacy, conflict). Because of its proximity to the child it is more tightly related to child wellbeing than other aspects of the interparental relationship (Feinberg, 2003). Feinberg proposes an ecological model of the antecedents and consequences of coparenting relationships, which are hypothesized to link coparenting to parenting and child outcomes via moderator or mediator mechanisms. Feinberg proposes that coparenting is influenced by multiple levels (individual, family, and extrafamilial) and that the qualities of the coparenting relationship (e.g., support, childrearing agreement, division of labor, and joint family management) both directly and indirectly influence parenting and child adjustment.

Influences on Coparenting

A goal of this paper is to examine several possible predictors of coparenting. According to Feinberg's (2003) ecological model of coparenting, individual-level such as parents' mental health (depression), family-level such as couple relationship quality, and extrafamilial-level such as social support variables are important influences on coparenting. In addition, in this paper we also examine how levels of acculturation predict coparenting given research suggesting that levels of acculturation have important effects on parenting (Cabrera, Shannon, West, & Brooks-Gunn, 2006).

Mental health—Parents who are depressed may be less likely to express support or resolve child rearing difficulties in a positive way thus creating conflict than parents who are not depressed. While a growing number of studies have examined the effects of maternal and paternal depression on hostile or negative parenting (Cummings, Davies, & Campbell, 2000; Downey & Coyne, 1990; Parke et al., 2004), almost none have explored the effects of depression on coparenting, and even fewer among Mexican American families.

Mother-father relationship quality—The quality of the couple relationship is considered to be the most important influence on cooperating relationships (Kitzmann, 2000). Couples who support each other and are able to discuss disagreements are more likely to have a positive coparenting relationship than those who do not. Drawing from the research on parenting, positive mother-father relationships in European American and Mexican American families have a direct positive effect on child adjustment (Parke et al., 2004), whereas marital conflict predicts child maladjustment (Cummings, Goeke-Morey, & Raymond, 2004). There are virtually no studies of the effects of couple relationship quality on coparenting relationships.

Family support—Coparenting requires mutual support as well as coordination of childrearing strategies (Feinberg, 2003; McHale, 1995; McHale, Kuersten-Hogan, & Rao, 2004). Stress on the family will tend to undermine harmonious coparenting whereas support may enhance it. Social support can enhance coparenting by enhancing the competence of each parent as well as enhancing the couple relationship. Latino families' social network primarily comprises their extended family (Cuellar, Arnold, & Gonzales, 1995; Miller & Harwood, 2001). Emotional support that Latinos receive from their extended family members has been linked to positive parenting, mainly for mothers, and positive school outcomes for middle-school children (see Harwood, Leyendecker, Carlson, Asencio, & Miller, 2002 for review). This association has not been explored with Latino fathers. It is also unknown whether social support has an effect on coparenting among Mexican American families.

Acculturation—Acculturation, the process of adapting and adjusting beliefs, behaviors, and values as a result of interacting with a host culture (Berry, 1990), is most commonly measured in terms of language facility and use, length of residency in host country, and generation status (Buriel, Calzada, & Vasquez, 1988; Cuellar, Arnold, & Maldonado, 1995; Wong-Rieger, & Quintana, 1987). Although this index of acculturation is preferred, some studies have shown that English language proficiency is a robust indicator of acculturation because it is associated with length of residence (Arcia, Skinner, & Bailey, 2001).

For the most part studies on parenting among Latinos have not disentangled the effects of poverty and acculturation on these processes. Hence it is difficult to determine whether noted effects are due to poverty or levels of acculturation. In general, less acculturated parents have been found to be more controlling and have a stricter style of parenting than more acculturated parents (Buriel, 1993; Chun & Akutsu, 2003), but more acculturated parents who use harsh discipline had more negative effects on children's outcomes than less acculturated parents (Parke et al., 2004). However, there have been no studies of the effects of acculturation on Mexican American parenting or coparenting and their infants.

Feinberg (2003) stipulates that patterns of coparenting division of labor might vary by race and ethnic groups. These group differences may reflect differential satisfaction by racial groups about how household chores and other obligations get allocated to parents or may reflect cultural norms and expectations about how fathers and mothers participate in these activities. To the degree that other dimensions of coparenting (interparental conflict) reflect differences across ethnic and racial groups is an empirical question. Ispa and her colleagues (2004) report that in more acculturated Mexican American families, maternal intrusiveness predicted increases in toddler negativity and decreases in dyadic mutuality than in less acculturated families. Thus it appears that the meaning of parenting behaviors (both for parents and children) also changes with levels of acculturation. Because parenting and coparenting are highly related, it is reasonable to assume that a similar process might be at work in coparenting as well. New evidence suggests that the stereotype of “machismo” is not supported by fathers' behaviors (Cabrera & Garcia Coll, 2006). Latino fathers have been found to participate in traditionally female household tasks than expected (McLoyd, 1993; Shelton & John, 1993). Hence, it is possible that these men are also more likely to share parenting responsibilities with their partners than previously expected. Given that parents might disagree on specific parenting practices, norms, and values, in particular in an acculturative context, it is possible that parents who coparent may experience more interparental conflict than those who do not. We would expect then that coparenting conflict may have a different effect on parenting and child outcomes depending on the level of acculturation of the parents.

Effects of Interparental Conflict on Parenting and Child Adjustment

Research has consistently shown that negative aspects of the coparenting relationship predict children's and adolescent behavioral and emotional problems (Belsky, Putnam, & Crnic, 1996; Margolin et al., 2001; McHale, 1995). For example, several studies have shown that coparenting is a stronger predictor of parenting and child adjustment than are other aspects of the couple partnership (Abidin & Bruner, 1995; Feinberg, 2003; Margolin et al., 2001). A longitudinal study found that interparental conflict during family play with 6-month old infants rather than couple conflict predicted attachment security at 3 years (Frosch, Mangelsdorf, & McHale, 2000).

There is some evidence that coparenting behaviors may vary among mothers and fathers and may influence parenting behaviors. A study of white middle class families found that while the co-parenting dimensions were significantly associated between mothers and fathers, "undermining co-parenting" was significantly related only for fathers and not mothers. Another study of white middle-class couples found that fathers spent more time with their preschool aged children when they perceived that their partners had confidence in them as parents and provided emotional appraisal of their parenting (McBride & Rane, 2001). These findings are consistent with a family systems view that suggests that fathers' parenting subsystem is more closely tied to the parent subsystem than it is for mothers.

As with other areas of research on coparenting, there are very few studies on Latino families. In one study of Latino families with early adolescent sons, researchers found that less interparental harmony (parents who were disengaged from one another) was linked to more child externalizing behavior problems (Lindahl & Malik, 1999). This study, however, did not control for levels of acculturation.

Hypotheses

According to Feinberg's (2003) model of coparenting, parental depression, couple relationship quality, and child temperament contribute to coparenting. Moreover, coparenting behaviors are hypothesized to have a direct effect on parenting and child adjustment. To this date, this model has not been tested with a low-income Mexican American sample. Because language proficiency (proxy for acculturation) has been linked to less negative parenting, we hypothesize that English proficiency would be associated with more verbal aspects of parenting (maternal interaction, for which our measure has a heavy verbal component, and father engagement in literacy activities) but not to caretaking and warmth. In sum, we hypothesize that (1) After controlling for family SES, parental English proficiency will be associated with coparenting, mother-infant interaction and father engagement; (3) Maternal depression and couple relationship quality will be associated with coparenting, parenting, and infant's social development; (4) English proficiency will be associated with mother-infant interaction and father engagement in literacy activities but not to caretaking and warmth; (5) Coparenting conflict will be associated with parenting and infants' social development; and (6) English proficiency will moderate the effect of interparental conflict on parenting and infants' social development.

METHOD

Participants

The current study used data from the Early Childhood Longitudinal Study-Birth Cohort (ECLS-B), the first study in the United States designed to track a nationally representative sample of children, including Latinos, from birth into school (NCES, 2005a). The children in the ECLS-B are being followed longitudinally at 9-months, two years, preschool, and kindergarten; the present study used the data from the 9-month data collection. The ECLS-B sample was

designed to represent the nearly four million children born in the United States in 2001. The sample was selected using a clustered list frame approach and the sampling frame included registered births in the National Center for Health Statistics' vital statistics system. Children were sampled by occurrence of birth within a set of primary sampling units defined by counties or county groups. The initial sample excluded children who had died or who had been adopted after the issuance of the birth certificate and infants whose birth mothers were younger than 15 years at the time of their child's birth (NCES, 2005a).

The base year (9-month) ECLS-B sample consists of 10,688 infants and includes 2,193 children whose mothers identified them as Latino. Two-thirds of these children (67%) were identified by their mothers as Mexican American. The other third (33%) were identified as members of different Latino groups, including Puerto Rican, Central American, and Dominican. Overall, about 74% of all ECLS-B children's mothers completed a parent computer-assisted interview, as did about 72% of Latino children's mothers. Child assessments were completed for 96% of the total sample of ECLS-B children with a completed mother interview and for 95% of the Latino children with a completed mother interview. Because nearly all children lived with their biological mothers at 9 months of age and most lived with their biological fathers (78%), we decided to limit the sample used in our analyses to infants living with both biological parents.

To understand the selective nature of our sample of Latino infants with resident biological parents (i.e., married and cohabiting; $n = 1,711$) compared to Latino infants residing in other family structures (i.e., single parent, and non-biological married or cohabiting parents; $n = 482$), we examined whether maternal sociodemographic, mental health, and contextual characteristics (e.g., acculturation, depressive symptoms, mother-infant interactions) and infant cognition differed by family structure. Married and cohabiting biological mothers had higher household incomes, $t(2,192) = 8.69, p < .01$, were older, $t(2,192) = 9.02, p < .001$, and were more educated, $\chi^2(2, N = 2,193) = 23.18, p < .01$, than were mothers from other family structures. They also reported less depressive symptoms, more family support, and more happiness in their relationships with their partner than did those mothers who did not reside with their child's biological father, $ts(2,192) \text{ range} = 4.63 \text{ to } 4.73, ps < .001$. However, the number of children in the household, the mothers' English proficiency, reports of the level of conflict with their spouse or partner, the quality of mother-infant interactions, and infants' scores in social development did not differ by family structure. Hence, these differences and similarities should be kept in mind when interpreting the findings. The findings in this paper pertain to the population of children who live with both biological parents at 9 months of age.

At 9 months, 76% of the full sample of ECLS-B infants' resident fathers and 65% of Latino infants' resident fathers completed a questionnaire that asked about their involvement with their children. A nonresponse bias analysis that compared the characteristics of children, their mothers, and fathers using data from the birth certificate frame and from the ECLS-B mother interview showed few differences between responding and nonresponding fathers for the full ECLS-B sample. Moreover, the few differences found between these groups were corrected by adjustments to the sampling weights (Bethel, Green, Kalton, & Nord, 2005).

To further determine the selectivity of our sample of Latino infants and their biological, resident mothers and fathers, we compared certain characteristics of infants with participating fathers ($n = 1,099$) to those of infants with nonparticipating fathers ($n = 605$). Participating infants' fathers were more likely to be married, $\chi^2(1, N = 1,704) = 5.17, p < .05$, and better educated, $\chi^2(2, N = 1,704) = 12.69 \text{ and } 29.87, ps < .05$, less likely to be working $\chi^2(1, N = 1,704) = -12.16, p < .001$, and to live in households with fewer number of children, $t(1,702) = -3.42, p < .05$, than nonparticipating fathers. Also, mothers of participating fathers engaged in more positive interactions with their infants and were less likely to report conflict with their partners, $ts(1,702) = 2.74 \text{ and } 2.13, ps < .05$ than nonparticipating mothers. Parents' age, mothers'

employment status, English proficiency, family support, and depressive symptoms as well as infants' scores on the BSF-R mental scale did not differ by father participation.

The final analytic sample for our study consisted of 1,099 Latino infants (735 Mexican American and 364 other Latino infants) who had at least one Latino parent (e.g., 88% of mothers and 89% of fathers identified themselves as Latino), who lived with both biological parents, whose mothers completed a parent interview, whose fathers completed a resident father questionnaire, and who completed a cognitive assessment at approximately 9-months of age.

Procedure

The ECLS-B collected data on mothers, fathers, and children. During home visits, trained field staff conducted a computer-assisted interview with mothers, assessed infants' mental development, and videotaped mother-infant interactions. Mother-infant interactions were videotaped for 45 seconds to five and a half minutes during a semi-structured teaching task. Following the Nursing Child Assessment Teaching Scale protocol (NCATS; Sumner & Spietz, 1994), mothers were asked to select and teach their infants a new activity from a list of age-appropriate activities (e.g., banging two blocks together, turning pages in a book).

In 99% of the cases, the respondent to the parent interview was the child's biological mother. The remaining parent interviews were completed with other female guardians or with children's fathers. If the spouse or partner of the mother lived in the same household as the ECLS-B child, he was asked to complete a self-administered resident father questionnaire. In most cases (98%) the respondent to the father questionnaire was the child's biological father (NCES, 2005a). The remaining questionnaires were completed mostly by other male household members (e.g., child's grandfather), and in very few cases by another female living with the child.

Measures

Most of the measures used in the ECLS-B were adapted from other federal surveys of young children and their families or were developed specifically for use in the ECLS-B (NCES, 2005a, 2005b). Measures were selected and developed in consultation with leading experts in the areas of child development, maternal and child health, survey research methodology, and child assessment and psychometrics. Both extensive field-testing and rigorous training were conducted to ensure quality control and fidelity of administration of measures. All measures for parents and infants were available in English and Spanish. A multi-step procedure was used to translate the ECLS-B instruments into Spanish: (1) Instruments were translated from English to Spanish. Translator was given copies of any previously translated items that had been used in prior national studies as a point of reference; (2) Initial Spanish and English versions were given to a second translator for review. A second draft of the Spanish instrument was created by this second translator; and, (3) A third person compared the second draft Spanish to the English version.

Sociodemographic data—Infants' birth certificate, which provided information on infants' gender (0 = girl, 1 = boy) and date of birth, was used to calculate the infants' ages at the time of the home visit. During the 9 month mother interviews, researchers gathered information about each infant's race and ethnicity. If mothers identified their infants as Latino, they were also asked whether their infant was of Mexican American, Puerto Rican, Cuban, or other Latino ancestry. Country of origin was coded as Mexican American = 1 and other Latino = 0. Information was also gathered on family structure (e.g., married, cohabitation, single parent), parents' ages, educational attainment (i.e., 1 = less than high school, 2 = complete high school, 3 = more than high school), employment status (i.e., 1 = working vs. 0 = not working), as well as annual household income (i.e., 0 = \$14,999 or less, 1 = \$15,000 to \$29,999, 2 = \$30,000 to

\$49,999, 3 = \$50,000 to \$74,999, and 4 = \$75,000 or more) and the number of children living in the household.

English proficiency—Because the ECLS-B parent questionnaire at 9 months does not include an acculturation scale or information about the parents' generational status or their length of stay in the United States, we used language proficiency as a proxy measure of acculturation. To measure parents' proficiency in English, both parents were asked how well they speak, read, write, and understand English using a 4-point Likert scale (1 = not very well at all to 4 = very well) if English was not the primary language. Mothers and fathers reporting that English was the primary language in the home received a 4 on each of the 4 items (e.g., speak English). These four proficiency items were recoded (1 = very well; 0 = pretty well to not very well at all) and summed to create an index of proficiency for each parent (A score of 0 represented low proficiency and a score of 4 represented high proficiency). Since the majority of mothers and fathers obtained scores of 0 or 4 on this index (47% and 46% for mothers; 47% and 50% for fathers), this variable was dummy-coded as 0 (scores of 0 to 2; *less* English proficient) and 1 (scores of 3 or 4; *more* English proficient).

Depressive symptoms—Maternal and paternal depressive symptoms were measured using the Center for Epidemiological Studies Depression Scale–Short Form (CESD-SF; Ross, Mirowsky, & Huber, 1983), which comprises 12 of the 20 items from the Center for Epidemiological Studies Depression Scale (CES-D; Radloff, 1977). The CES-D is a self-report scale that measures the absence or presence of negative thoughts, feelings, and behaviors during the prior week. Sample items include, “How often in the past week did you ... feel depressed? feel lonely?, have crying spells?, have difficulty sleeping?” Items were rated on a 4-point Likert scale (0 = rarely or never to 3 = most or all days). Mean scores were computed for cases with responses to at least 11 of 12 items. Higher scores indicate more depressive symptoms. The scale demonstrated adequate internal consistency for this sample with a coefficient alpha of .85 for mothers and .80 for fathers.

Family support—Family support was measured as mothers' perceived level of support from relatives (Baca & Zinn, 1994), and was obtained by asking mothers the following four questions: “Who would you go to if you had a problem, and you were feeling depressed or confused about what to do?” “Who would you ask if you had to borrow some money for a few weeks because of an emergency?” “Who would you call if you had an emergency in the middle of the night and needed help?” “Who would you ask for help or advice about the care of your child?” Mothers were asked if they received support from the following relatives: mother/father, mother- and father-in-law; sister/brother, sister- and brother-in-law; grandparents, grandparents-in-law, or other relative. A composite score was created by summing mothers' responses to questions asking about the types of support (e.g., emotional, financial, emergency, advice about child) received from at least one relative. Scores ranged from 0 (a mother never asks for assistance or guidance from a relative) to 4 (a mother asks for assistance from one or more relatives for all four types of support). The distribution of family support scores were as follows: Seven percent never ask for any type of support, 9% ask for one type of support, 14% ask for two types of support, 27% ask for three types of support, 43% ask for all four types of support. This item was further collapsed into three categories (i.e., 0 to 1 type of support = 1; 2 to 3 types of support = 2; and all 4 types of support = 3).

Couple relationship quality—To rate the quality of parents' relationships with their partners, both mothers and fathers were asked one general question about their *overall happiness* in their relationship as well as 9 specific questions about their *level of conflict*. First, parents were asked to rate how happy they were in their marriage/relationship on a 3-point Likert scale (1 = not too happy to 3 = very happy). Since the majority of mothers and fathers

rated their relationship as very happy, (72% and 69% for mothers and fathers, respectively), this variable was dummy-coded as 0 (not happy or somewhat happy) and 1 (very happy).

Next, parents were asked 9 questions about their level of conflict with their spouses/partners around various issues such as chores and responsibilities, money, and not showing love/affection. Items were rated on a 3-point Likert scale (1 = never/hardly ever to 3 = often). Mean scores were computed for cases with scores on at least 9 of the 10 items. Higher scores indicated more conflict with spouse/partner. The scales demonstrated adequate internal consistency for this sample with a coefficient alpha of .71 for mothers and .75 for fathers.

Mother-infant interactions—The quality of mother-infant interactions was assessed from videotape using the NCATS (Sumner & Spietz, 1994). The NCATS uses a binary scale (0 = not observed, 1 = observed) of 50 parent items to measure critical aspects of mother and child behavior that takes place during a semi-structured teaching task. It provides information on mother's sensitivity to the child's clues, responsiveness to the child's distress, cognitive growth fostering, and socioemotional growth fostering. These have been shown to be important to the development of social competence and cognitive skills in European American children (NCES, 2005a, 2005b).

Tapes were checked for quality and coded by a group of certified NCATS coders, using the following procedure (NCES, 2005a). First, coders were interviewed and administered a non-standardized test of their observational skills. Next, they were asked to study and answer questions about a set of still photos. To be employed as a coder, candidates had to achieve 90% accuracy on this quiz. Candidates who met the 90% criteria participated in a self-paced, self-instruction training module that included an additional set of quizzes and exercises. Only coders who scored 90% on the NCATS self-instruction were retained. These persons received an additional three days of formal classroom training before being certified to code the ECLS-B NCATS tapes. Over the coding period, samples of the tapes scored by each coder were also scored by a staff person at the University of Washington (which developed the NCATS). Coders whose scores fell below 85% agreement with the University of Washington NCATS staff members were not allowed to continue coding until they had completed coding additional reliability tapes and once again reached or exceeded the 85% criteria. Coders of caregiver-infant interactions were fluent in the language of the dyads. Coders were unaware of parents' scores on the mental health and contextual measures, fathers' engagement and infants' cognitive scores.

A *total parent score* was calculated by summing the 50 parent items. Possible scores range from a low score of 0 to a high score of 50. Higher scores indicated more positive and responsive maternal interactions. The *total parent score* demonstrated adequate internal consistency for this sample with a coefficient alpha of .70. The alpha level for the full ECLS-B sample was .68 (NCES, 2005a).

Father engagement—Given the scope of this study, we focus on father engagement (Lamb, Pleck, & Chernov's, 1987) because it has been linked to cognitive outcomes (Tamis-LeMonda et al., 2004). Specifically, fathers were asked to rate how frequently they engaged in three types of activities (i.e., *literacy*, *caregiving*, and *warmth*) with their infants. For the *literacy* subscale fathers were asked to rate how frequently (4-point Likert scale) they engaged with their infants in a typical week in the following literacy activities: reading books, telling stories, and singing songs (alpha = .66). For the *caregiving* subscale, fathers were asked to rate how frequently they engaged in the following caregiving activities in the past month: changing diapers, preparing meals or bottles, feeding their children, putting their children to sleep, washing or bathing their children, and dressing their children (alpha = .87). For the *warmth* subscale fathers were asked to rate, on a 6-point Likert scale, how often they engaged in the following physical

contact activities in the past month: tickling their children and blowing on their bellies, and holding their children ($r = .59$). Each subscale was transformed into z-scores using the weighted mean and standard deviation for the Latino sample.

Infants' social development—The quality of infant development was assessed during the videotaped mother-infant interaction using the NCATS (Sumner & Spietz, 1994). The NCATS uses a binary scale (0 = not observed, 1 = observed) of 23 child items to measure children's social behaviors during the semi-structured teaching task. It provides information on infant's clarity of cues (e.g., child vocalizes while looking at task materials) and responsiveness to parent (e.g., child attempts to engage parent in eye-to-eye contact).

An *infant social score* was calculated by summing the 23 child items. Possible scores range from a low score of 0 to a high score of 23. Higher scores indicated more emotionally regulated and responsive. The total infant score demonstrated adequate internal consistency for this sample with a coefficient alpha of .65. The alpha level for the full ECLS-B sample was .65 (NCES, 2005a).

Coparenting conflict—To rate the quality of the coparenting relationship between mothers and fathers, both parents were asked one general question about their level of conflict with their spouses/partners about issues regarding their children. This item was rated on a 3-point Likert scale (1 = never/hardly ever to 3 = often), with higher scores indicating more frequent conflict.

RESULTS

Data Analytic Strategy

We first describe couples' socio-demographic characteristics, parental mental health, family support, couple relationship quality (happiness and conflict), and coparental conflict, as well as mother-child interactions and father engagement in a national sample of Mexican American and other-Latino infants born in 2001 and their parents (See Tables 1 and 2). Next, the study hypotheses were tested using hierarchical multiple regression. To address the first research question regarding the predictors of parenting, we examine the unique and combined contributions of parents' depressive symptoms, partner conflict, and chaos in the home to mother and father coparenting conflict over and above control variables (i.e., children's age and gender, marital status, parents' education, employment and age, family income, number of children in the household and marital status) (Table 3). To address the research question on the predictors of mother-infant interactions and father engagement (literacy activities, caregiving, warmth), we followed the same process described for predicting coparenting, but added mother and father coparenting in the fourth step of regressions (Table 4). To address the research question on the predictors of infants' social development, we followed the same process described for predicting parenting but added mother-infant interaction and father engagement in the third step of regressions (Table 5).

To test for moderation, we followed Baron and Kenny's (1986) steps. We first created interaction terms by multiplying each of the dichotomous independent variables (mother English proficiency, father English proficiency) by mother- and father-reported coparenting. Then, in the fifth step of each series of hierarchical regression models we alternatively entered four pairs of interaction terms, one pair for each independent variable (e.g., mother English proficiency $\times$ mother-reported coparenting, mother English proficiency $\times$ father-reported coparenting, father English proficiency $\times$ mother-reported coparenting, father English proficiency $\times$ father-reported coparenting). For any significant interaction term, we plotted mean scores on the dependent variable for each level of the independent and moderating variables.

Latino Infants in Two-parent Families

For comparison purposes we include information on non-Latino and Latino infants and their parents. Table 1 presents socio-economic variables for the ECLS-B Non-Latino and Latino infants and for the two Latino groups in two-parent families by country of origin. Table 2 presents mental health, contextual characteristics, parent-child interchanges, and infant cognition variables for the all Latinos and for the two groups of two-parent Latino families by country of origin (see Appendix for correlations on the total Latino sample). About 87% of all non-Latino infants' parents were married compared to 71% of infants with Latino parents. Only 8% of all non-Latino infants' parents had income below 15,000 dollars compared to 22% for all Latinos. And almost 50% of all Latino infants' parents had less than high school compared to 14% for all non-Latinos.

Comparisons within the Latino samples showed that about 70% of the infants' parents in both groups were married as opposed to cohabiting (the marriage rate is lower for Latino than for the non-Latino two-parent families). About half of infants' mothers and fathers had not completed high school, with the rate being twice as high in the Mexican-American as the other-Latino families (These rates were more than three times as high as that for the non-Latino families; Table 1). Almost one-quarter lived in very poor circumstances (less than 15,000 dollars of family income per year), with more Mexican-Americans being poor. The infants who were Mexican-American had parents who were younger, had more children, and were more likely to be unemployed than the infants who were from other-Latino country descent.

About one-half of the parents were English proficient. Fewer Mexican-American infants had English proficient parents than infants with other Latino country descent (mothers: 45% versus 67%; fathers: 41% versus 63%).

Levels of family support, couple relationship (happiness and conflict) and coparenting conflict were similar across the two country-of-origin groups. Fathers of Mexican-American infants reported fewer depressive symptoms than did fathers of other Latino background infants (although the two groups were the same with regard to maternal depressive symptoms). Mothers and fathers had similar levels of depressive symptoms, couple relationship (happiness and conflict) and coparenting conflict.

Bivariate correlations among Mexican American couples' depressive symptoms, family support, relationship quality (happiness and conflict), coparenting conflict, mother-infant interaction and father engagement are presented in the Appendix. Correlations revealed significant associations, although coefficients were small to moderate. Mother and father English proficiency were associated with more depressive symptoms (mother and father), family support, couple conflict (mother and father) and coparenting conflict (father). Parental depressive symptoms were associated with less couple happiness and more couple and coparenting conflict. Maternal depressive symptoms was associated with less family support, however, father depressive symptoms was associated with more family support. Couple happiness (mother and father) was associated with less couple and coparenting conflict. English proficiency and couple conflict (mother) were associated with more responsive maternal interactions. English proficiency, couple happiness (father), couple conflict (mother) associated with more father engagement, however, more coparenting conflict (father) was associated with less father engagement in literacy activities. Maternal interactions were related to infant social development.

Coparenting of Latino Infants in Two-parent Families

The unique and joint contributions of predictors to coparenting conflict are presented next for the final regression models that include the full set of predictor variables (see Table 3). The

predictors and control variables explained 47% and 46% of the variance of mothers' and fathers' coparenting conflict, respectively.

Coparenting conflict (mother)—The predictors and control variables explained 24% of the variance. Paternal English proficiency (but not maternal English Proficiency) was associated with less coparenting conflict (mother) ($\beta = -.13, p < .01$), over and above SES and other child and family characteristics (Table 3). Couple conflict (mother and father) was associated with more coparenting conflict (mother) (β s = .48 and .14, p s < .01). Depressive symptoms, family support, and couple happiness were not associated with coparenting conflict (mother).

Coparenting conflict (father)—Over and above SES and other child and family characteristics, father depressive symptoms and couple conflict (father) were associated with more coparenting conflict (father) (β s = .09 and .58, p s < .05). Maternal depressive symptoms, family support, and couple happiness were not associated with coparenting conflict (father).

Parenting

The unique and joint contributions of predictors to mother-infant interactions and father engagement (literacy activities, caregiving, and warmth) are presented next for the final regression models that include the full set of predictor variables (see Table 4).

Mother-infant interactions—The predictors and control variables explained 24% of the variance of mother-infant interactions. Maternal English proficiency was significantly associated with maternal interactions ($\beta = .18, p < .001$), but paternal English proficiency was not ($\beta = .04, p = .47$). Family support and couple happiness (mother) were negatively associated with maternal interactions ($\beta = -.10$ and $.09, p < .05$, respectively). Coparenting conflict (mother) was associated with lower mother-infant interaction scores, however, coparenting conflict (father) was associated higher mother-infant interaction scores ($\beta = -.16$ and $.22, p < .05$, respectively). Depressive symptoms, couple conflict, and couple happiness (father) were not associated with maternal interactions.

Father engagement in literacy activities—Maternal English proficiency ($\beta = .18, p < .01$), but not paternal English proficiency ($\beta = -.04, p > .04$), was positively associated with fathers' engagement in literacy activities with their infants over and above the other variables in the model (Table 4). Maternal depressive symptoms ($\beta = -.12, p < .05$) was associated fathers engaging less frequently in literacy activities with their infants. Couple conflict (father) and couple happiness (mother) were also associated fathers spending less time in literacy activities (β s = $-.15$ and $-.13, p < .05$). Couple happiness (father) was associated with father engagement in literacy activities with infants ($\beta = .14, p < .05$). Family support and father depressive symptoms were not associated with fathers' time spent in literacy activities.

Father engagement in caregiving activities—The predictors and control variables explained 22% of the variance. Paternal depressive symptoms was associated with less caregiving activities ($\beta = -.14, p < .05$), over and above SES, country of origin and other child and family characteristics. Couple happiness (mother) was marginally associated with less caregiving activities, while couple happiness (father) was related to more caregiving from fathers (β s = $-.10$ and $.14, p < .05$). English proficiency, family support, couple conflict (mother and father) and coparenting conflict (mother and father) were not related to father caregiving.

Father engagement in warmth—The predictors and control variables explained 12% of the variance. As with the other two father engagement activity scales, couple happiness (father)

was associated with father warmth ($\beta = .14, p < .05$). Also, coparenting conflict (father) was associated with less father warmth to infants ($\beta = -.14, p < .05$). English proficiency, mental health, family support, and couple conflict (mother and father) were not associated with father engagement in warmth activities.

Infant Social Development

Maternal English proficiency was negatively associated with infant social and emotional development ($\beta = -.16, p < .04$). Couple conflict (father) and happiness (father) were negatively associated with infant test scores ($\beta = -.25$ and $-.16, p < .05$, respectively). Also, mother interactions was positively associated with $\beta =$ infant social and emotional development scores (.23, $p < .05$).

Interaction Effects by English Proficiency and Coparenting Conflict on Mother-Child Interactions, Father Engagement, and Infant Social Development

Regression models testing the interaction terms revealed two significant moderation effects. First, father English proficiency significantly moderated the effect of *coparenting conflict* (mother) on paternal caregiving ($\beta = -.53, p < .01$). The plotted means for father caregiving shown in Figure 1 suggest that fathers high in English proficiency do more caregiving than fathers low in English proficiency. However, high English proficient fathers engage in even more caregiving when there are higher levels of coparenting conflict reported by the mother.

Second, father English proficiency significantly moderated the effect of *coparenting conflict* (father) on paternal caregiving ($\beta = .59, p < .01$). Figure 2 shows that regardless of fathers' level of English language proficiency, fathers engage in the same amount of caregiving when father reports no coparenting conflict. However, when there is increased conflict, fathers high in English proficiency begin to engage in slightly more caregiving. In contrast, fathers low in English proficiency engage in less caregiving.

DISCUSSION

To date, most researchers who are interested in the antecedents and consequences of coparenting for parents and children in minority families have had to assume that this process might operate similarly for minority as well as European American families. The primary goal of this study was to explore this assumption by testing Feinberg's (2003) ecological model of coparenting for Mexican American families.

Overall, the parents of the Mexican American babies in our study are poor, have low levels of education, and have low levels of acculturation relative to other Latinos. Mexican American and other Latino parents report relatively low levels of depressive symptoms and couple conflict and relatively high levels of family support and couple happiness. But, relative to mothers and fathers of other Latino heritage, Mexican American parents report lower levels of acculturation; Mexican American fathers report fewer depressive symptoms than their counterparts. In terms of coparenting and parenting behaviors, both groups of Latino parents report moderate levels of coparenting conflict, moderate levels of mother-infant sensitivity interaction, and relatively low levels of father engagement. The main difference is that Mexican-American mothers are less sensitive and responsive to their infants than other Latino mothers and Mexican American fathers show less warmth to their infants than other Latino fathers. Lastly, Mexican American infants had lower scores on measures of social development (NCATS – child codes) than other Latino infants. A previous study found similar significant differences between these groups for cognitive outcomes (Cabrera et al., 2006).

Predicting to Interparental conflict

In this study we tested three levels of predictors to coparenting conflict, namely levels of acculturation and parents' mental health, family support, and couple relationship quality. Feinberg's (2003) model stipulates that parents who are depressed, have difficult relationships with their partners, and have little family support are likely to experience difficulty in coparenting as well. This model has not been tested with minority families; we were thus interested in examining whether these hypothesized associations were similar in Mexican American families. Given that parenting processes vary by levels of acculturation, we also included in our model both mothers' and fathers' English proficiency scores (proxy indicators of acculturation). There was a small but significant association between father's level of acculturation and coparenting conflict (mother report). Mothers whose partners were more acculturated reported more interparental conflict than mothers with less acculturated partners. Our findings partially support Feinberg's hypothesis that parents' depressive symptoms are associated with interparental conflict. There was a small association between father depressive symptoms and father report of coparenting conflict. No such effect was found for mothers. This might be explained by our measure, which only assesses symptoms. However, this finding is consistent with other findings in the literature suggesting that fathers' behaviors are more vulnerable to personal and contextual factors than are mother behaviors.

Couple conflict (mother and father report) was strongly and significantly associated with coparenting conflict (mother and father report). When parents reported high couple conflict, they also reported high coparenting conflict. This finding supports Feinberg's model that *conflict in the couple relationship* is the strongest predictor of conflict in the parenting relationship. Hence, couple conflict does not only affect parent-child interactions, as other studies have found (e.g., Margolin et al., 2001), but it also affects the ability for shared parenting and hence it's likely to compromise child development.

We were also interested in examining the association between depressive symptoms, family support, relationship quality and coparenting conflict with parenting. Parents' depressive symptoms did not influence mothers' interactions with their infants, but they influenced some types of fathers' engagement. When mothers reported high depressive symptoms, fathers were less engaged in literacy activities and when fathers reported high depressive symptoms they were less engaged in caregiving. Fathers who reported more couple conflict engaged in fewer literacy activities with their infants than those who reported less conflict. Couple happiness had the opposite effect on parenting, depending on the parent. When mothers said they were happy in the relationship, fathers were less engaged with their infants. When fathers said they were happy with their partners, they were more engaged with their children. These findings are difficult to explain but might reflect cultural differences regarding the meaning of happiness, the expectations of parents (mothers vs. fathers) and the different ways in which mothers and fathers perceive conflict or happiness in their relationships.

As hypothesized by Feinberg's model (2003), coparenting conflict was significantly related to parenting, but the patterns of association varied with parent gender and type of father engagement. Whereas coparenting conflict (mother report) was associated with *less* sensitive mother-infant interactions, coparenting conflict (father report) was associated with *less* father warmth towards their infants (measured by holding infant and blowing bubbles on their tummies). These findings support Feinberg's model that conflict affects parenting. However, we also found that coparenting conflict (father report) was associated with *more* sensitive mother-infant interactions. How do we explain these findings? As Feinberg and others note, cultural norms, values and expectations might play a significant role in how parents relate to each other and the meaning of these interactions in ways not captured by our current measures and methodology. Clearly, there is a pressing need to explore these findings with in-depth, qualitative research. Our findings offer an exploratory window into these processes by

suggesting that when fathers in Latino families (in our sample, most families had low levels of acculturation, although these effects persisted after controlling for levels of acculturation) reported conflict with their partner over child issues, mothers are more likely to interact *more* sensitively with their children, but when mothers report high coparenting conflict, they interact less sensitively. Our study cannot shed light onto what the interparental conflict was about, which might explain mothers' increased sensitivity as a sign of protection. This is a fruitful area for future research.

It is also possible that coparenting conflict's effect on parenting behaviors depended on the level of acculturation of the parents. Research on parenting suggests that when acculturated mothers use harsh parenting their children display more negative effects than when less acculturated mothers use harsh parenting (Ispa et al., 2004). We explored this possibility by testing whether levels of acculturation moderated the effect of coparenting conflict on parenting behaviors. We found that when fathers report high coparenting conflict, more acculturated fathers engaged in more caregiving than less acculturated fathers. One interpretation of these findings is that more acculturated fathers take a more hands on approach to parenting, which can result in conflict with their partners, especially when they do not agree on child rearing issues, than acculturated fathers who may disengage more from caregiving activities and let their partners take the lead on the care of their child.

Lastly, we were interested in the direct effects of coparenting and parenting on infant's social and emotional development. Our findings do not support Feinberg's model that coparenting conflict directly influences children's adjustment. A possible explanation is that if these effects exist, they might emerge later on in children's lives rather than at infancy; coparenting conflict may not have a concurrent effect on social development but if it persists in frequency and intensity it may undermine children's development as they get older. It is also possible that our measure of coparenting conflict (one item) was not robust enough to capture effects at this point in time.

Our finding that couple relationship quality directly influences child outcomes partially supports Feinberg's model. Our finding suggests that conflict has negative effects, but that it matters who reports it. We found that only father report of couple happiness and conflict had a negative influence on infants' social development. Mother report of couple conflict and happiness did not.

There are several limitations to the present study. First, a single item measure was used to assess the quality of both the couple and coparenting relationship. The coparenting item focused on conflict regarding the target child, rather than on other positive aspects of coparenting noted in Feinberg's model (e.g., providing emotional and/or instrumental support with parental tasks). Additionally, as this item focused on conflict regarding coparenting, it was highly correlated with our measure of general couple conflict. These measurement issues may account for the lack of significant direct findings between coparenting and infant outcomes, as well as the unexpected associations regarding fathers' reports of coparenting conflict. Future research on the quality of coparenting relationships should include self-report measures with demonstrated reliability in the couple and family relationship literature that assess both positive and negative demonstrations of coparenting behaviors, as well as parents' respective perceptions of the other's degree of coparenting.

Second, because the majority of the parents in our sample described their relationship as very happy and with few conflicts, we may not have had sufficient variability within our sample to adequately detect the role of coparenting conflict in family processes and infant development. It is possible that some of the conflicting findings regarding fathers' reports of coparenting conflict may be due not only to measurement issues but also to variability in levels of

acculturation. To date there have been few cross cultural studies examining the subjective meaning of relationship satisfaction, couple and parental conflict in other cultures. Although the interviews were administered in Spanish, it is possible that the meanings of the questions may have been lost in translation, contributing perhaps to our findings on the role of coparenting in parental engagement.

Third, parallel measures of parent engagement measures for mothers and fathers were not used. As noted in Cabrera et al. (2006), it was not financially feasible to observe fathers with their infants when collecting data for the ECLS-B. As such, it may be possible that the conflicting findings regarding fathers' reports of coparenting conflict and parenting behaviors may be due to differences in both type and depth of measuring maternal and paternal engagement respectively.

Finally, as verbal competencies reflective of social and emotional development emerge in the second and third years of life (Klebanov, Brooks-Gunn, McCarton, & McCormick, 1998), it may not be surprising that coparenting was not predictive of socioemotional development among the infants included in this study (Cabrera et al., 2006), but may show up later as the child gets older. The coparenting, parental engagement, partner relationship and mental health variables might become more predictive of child outcomes as children transition through early childhood and into preschool.

Nevertheless, this study is an important step towards understanding the role of coparenting, couple and family processes on parenting and infant development in Latinos. It also provides new information about the links between parenting and couple processes, which is an important consideration for programs and interventions targeted at parents. These findings suggest that couple interventions focused on improving the quality of the relationship must also target aspects of the coparenting relationship.

Acknowledgments

This research was partly supported by NIH grant (R03 HD049670-01) to the first author.

Appendix

Correlations between English Proficiency, Mental Health, Family Support, Couple Relationship, Coparenting Conflict, Parenting and Infant Social Development

Variable	2	3	4	5	6	7	8	9	10	11	12	13
1. Mother English Proficiency	.64***	.06	.10***	.01	-.06*	.19***	.16***	.06	.04	.32***	.06*	.13***
2. Father English Proficiency	-	.09**	.11***	.06	-.02	.19***	.17***	.10**	.06	.29***	.03	.12**
3. Mother Depressive Symptoms		-	.10**	-.15***	-.05	.17***	.04	.10**	.02	-.03	-.06	.03
4. Father Depressive Symptoms			-	-.09**	-.12***	.17***	.20***	.05	.14***	.07	.02	-.06
5. Couple Happiness (Mother)				-	.42***	-.30***	-.22***	-.21***	-.09**	-.03	.02	.02
6. Couple Happiness (Father)					-	-.19***	-.28***	-.13***	-.09**	-.04	.12**	.12**
7. Couple Conflict (Mother)						-	.40***	.55***	.27***	.09*	-.02	.10**
8. Couple Conflict (Father)							-	.31***	.60***	.04	-.09*	-.01

Variable	2	3	4	5	6	7	8	9	10	11	12	13
9. Coparenting Conflict (Mother)								-	.36***	-.00	-.01	.05
10. Coparenting Conflict (Father)									-	.05	-.08*	-.02
11. NCATS Total Parent Score										-	.13***	.05
12. Father Literacy											-	.32***
13. Father Caregiving												-
14. Father Warmth												
15. Family Support												

Note.

* $p < .05$

** $p < .01$

*** $p < .001$.

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Figure 1.
Moderation Effect of Father English Proficiency on the Association between Coparenting Conflict (Mother) and Father Engagement in Caregiving

Figure 2.
Moderation Effect of Father English Proficiency on the Association between Coparenting Conflict (Father) and Father Engagement in Caregiving

Table 1
Sociodemographic Characteristics: Latino Infants in Two-Parent Families by Country of Origin

Variables	All Non-Latinos N = 6,682	All Latinos ^a N = 1,099	F/ χ^2	Mexican Americans n = 735	Other Latinos n = 364	F/ χ^2
	M(SD)/%	M(SD)/%		M(SD)/%	M(SD)/%	
<i>Household Characteristics</i>						
Married	87%	71%	123.42***	71%	71%	0.00
Number of Children (including own children, nieces, nephews, etc.)	1.91(.79)	1.99(.82)	2.56**	2.07(.82)	1.79(.79)	3.85***
Annual Income (%)			362.53***			46.67***
<\$15K	8%	22%		26%	12%	
\$15K – 30K	18%	36%		37%	34%	
\$30K – 50K	23%	24%		25%	20%	
\$50K – 75K	21%	9%		7%	15%	
>\$75K	30%	9%		5%	19%	
<i>Mother Demographic Characteristics</i>						
Education Level (%)			476.32***			40.76***
Less Than High School	14%	49%		57%	28%	
Completed High School	21%	20%		17%	28%	
More Than High School	65%	31%		26%	44%	
Age at Interview (M)	29.66(5.86)	27.54(5.70)	9.18***	27.07(5.71)	28.73(6.67)	-3.31**
Employed (%)	55%	43%	38.97***	39%	54%	12.79***
<i>Father Demographic Characteristics</i>						
Education Level (%)			517.01***			57.32***
Less Than High School	12%	48%		58%	25%	
Completed High School	23%	21%		19%	26%	
More than High School	65%	31%		23%	49%	
Age at Interview (M)	32.09(6.42)	30.10(6.56)	7.80***	29.63(6.24)	31.30(7.19)	-2.41*

Variables	All Non-Latinos N = 6,682	All Latinos ^a N = 1,099	F/ χ^2	Mexican Americans n = 735	Other Latinos n = 364	F/ χ^2
	M(SD)/%	M(SD)/%		M(SD)/%	M(SD)/%	
Employed (%)	93%	82%	88.97***	80%	88%	6.28***
<i>Infant Demographic Characteristics</i>						
Age (M)	10.18(1.34)	10.21(1.41)	.56	10.15(1.36)	10.36(1.51)	-1.70
Male (%)	51%	53%	.90	55%	47%	3.51**

Note:

*
 $p < .05$

**
 $p < .01$

 $p < .001$.

^aLatino sample only includes two-parent families with participating biological fathers.

Table 2

English Proficiency, Mental Health, Family Support, Couple Relationship, Coparenting Conflict, Parenting, and Infant Social and Emotional Development: Non-Latino and Latino Infants in Two-Parent Families by Country of Origin

Variables	All Latinos N = 1,099	Mexican Americans n = 735	Other Latinos n = 364	F/ χ^2
	M(SD)/%	M(SD)/%	M(SD)/%	
<i>Mother Characteristics</i>				
English Proficiency	.51(.50)	.45(.50)	.67(.47)	-6.87***
Depressive Symptoms	.28(.41)	.27(.40)	.31(.43)	-1.52
Family Support	2.26(.72)	2.27(.74)	2.25(.70)	0.24
Maternal Ratings of Couple Relationship				
Level of Conflict	1.63(.45)	1.62(.46)	1.66(.43)	1.74
Level of Happiness	.72(.45)	.72(.45)	.70(.46)	1.06
Level of Coparenting Conflict	1.96(.83)	1.95(.83)	1.99(.84)	0.51
<i>Father Characteristics</i>				
English Proficiency	.47(.50)	.41(.49)	.63(.48)	4.86***
Depressive Symptoms	.24(.36)	.22(.35)	.28(.39)	-2.47*
Paternal Ratings of Couple Relationship				
Level of Conflict	1.67(.48)	1.66(.49)	1.72(.47)	3.30
Level of Happiness	.69(.46)	.69(.46)	.70(.46)	-0.10
Level of Coparenting Conflict	1.95(.82)	1.93(.82)	1.98(.83)	0.75
<i>Mother-Infant Interactions</i>				
NCATS Total Parent Score	33.43(4.43)	32.92(4.39)	34.77(4.26)	-5.71***
<i>Father Engagement</i>				
Literacy (z score)	.00(1.00)	.00(1.01)	.00(.97)	0.01
Caregiving (z score)	.00(1.00)	.03(.99)	-.07(1.03)	1.35
Physical Contact (z score)	.00(1.00)	-.04(1.04)	.10(.88)	-2.17*
<i>Child Outcomes</i>				
Infant Social Development	15.57(2.75)	15.38(2.70)	16.06(2.84)	32.61***

*
p < .05

**
p < .01

p < .001.

Table 3

Socio-economic Characteristics, English Proficiency, Mental Health, Family Support, Couple Relationship and Parenting as Predictors of Coparenting Conflict

Variables	Coparenting Conflict (mother)		Coparenting Conflict (father)	
	β	ΔR^2	β	ΔR^2
Step 1		(.16***)		(.15***)
Infant Gender	-.03		.09	
Infant Age	-.01		.02	
HH Income (log)	.02		.04	
Mother Education (HS)	-.09		-.04	
Mother Education (HS ⁺)	-.09		-.06	
Father Education (HS)	.02		.05	
Father Education (HS ⁺)	.05		-.01	
Mother Employed	.08		.09	
Father Employed	-.06		-.10	
Married	-.04		.04	
Mother Age	-.15		.13	
Father Age	.05		.08	
# of Children in HH	.23***		.15	
Step 2		(.03**)		(.00)
Mother English Proficiency	-.02		-.01	
Father English Proficiency	-.13**		.02	
Step 3		(.29***)		(.31***)
Mother Depressive Symptoms	.00		.02	
Father Depressive Symptoms	.02		.09*	
Family Support	-.01		.01	
Couple Conflict (mother)	.48***		.00	
Couple Conflict (father)	.14**		.58***	
Couple Happiness (mother)	-.03		-.03	

Variables	Coparenting Conflict (mother)		Coparenting Conflict (father)	
	β	ΔR^2 (.47)	β	ΔR^2 (.46)
Couple Happiness (father)	.00		.07	

Total R²

Note: Standardized beta weights presented are from the final multiple linear regression equations.

- + $p \leq .06$
- * $p \leq .05$
- ** $p \leq .01$
- *** $p \leq .001$.

Socio-economic Characteristics, English Proficiency, Mental Health, Family Support, Couple Relationship and Coparenting Conflict as Predictors of Mother-Infant Interaction and Father Engagement

Mother-Infant Interaction				Father Engagement			
Variables	Literacy		Caregiving		Warmth		
	β	ΔR^2	β	ΔR^2	B	ΔR^2	
Step 1		(.17***)		(.03)		(.17***)	
Infant Gender	.00		.07		-.02	.10+	
Infant Age	.22***		-.01		-.03	.05	
HH Income	.10		-.09		-.11+	.06	
Mother Education (HS)	.00		-.08		.09	.07	
Mother Education (HS+)	.01		.00		.03	.11+	
Father Education (HS)	-.02		-.01		.02	-.10+	
Father Education (HS+)	.07		-.07		.07	.02	
Mother Employed	.17**		.04		.38***	.09	
Father Employed	-.10		.07		.04	.01	
Married	.00		.02		-.11*	-.07*	
Mother Age	.11		.00		.01	.02	
Father Age	-.03		.03		-.09	-.13+	
# Children HH	-.03		.00		.01	-.03	
Step 2		(.03**)		(.02*)		(.01)	
Mother English Proficiency	.18**		.18**		-.02	-.02	
Father English Proficiency	.04		-.04		.10	.10	
Step 3		(.02)		(.05**)		(.04**)	
Mother Depressive Symptoms	.03		-.12*		.03	.06	
Father Depressive Symptoms	.08		.00		-.14**	-.01	
Family Support	-.10+		-.02		.04	.01	
Couple Conflict (mother)	.05		.02		-.03	.04	

Variables	Mother-Infant Interaction			Father Engagement		
	Literacy			Warmth		
	β	ΔR^2		B	ΔR^2	
Couple Conflict (father)	-.09			-.08		.08
Couple Happiness (mother)	-.09*			-.10+		-.07
Couple Happiness (father)	.01			.14**		.14*
Step 4		(.03**)			(.00)	(.01)
Coparenting Conflict (mother)	-.16*			.08		.08
Coparenting Conflict (father)	.22***			.01		-.14*
Total R^2		(.24)			(.22)	(.12)

Note: Standardized beta weights presented are from the final multiple linear regression equations.

*
 $p \leq .05$

**
 $p \leq .01$

 $p \leq .001$.

Table 5

Socio-economic Characteristics, English Proficiency, Mental Health, Family Support, Couple Relationship, Coparenting Conflict and Parenting as Predictors of Infant Social and Emotional Development

Variables	Infant Social and Emotional Development	
	β	ΔR^2
Step 1		(.06)
Infant Gender	.00	
Infant Age	.11 ⁺	
HH Income (log)	-.03	
Mother Education (HS)	-.01	
Mother Education (HS ⁺)	-.06	
Father Education (HS)	-.06	
Father Education (HS ⁺)	.01	
Mother Employed	.11	
Father Employed	.03	
Married	.03	
Mother Age	-.06	
Father Age	.03	
# of Children in HH	.00	
Step 2		(.01)
Mother English Proficiency	-.16 [*]	
Father English Proficiency	.11	
Step 3		(.12 ^{***})
Mother Depressive Symptoms	-.08	
Father Depressive Symptoms	-.13	
Family Support	.02	
Couple Conflict (mother)	.13	
Couple Conflict (father)	-.25 ^{**}	
Couple Happiness (mother)	.00	
Couple Happiness (father)	-.16 [*]	
Mother Infant Interaction	.23 ^{***}	
Father Literacy	-.08	
Father Caregiving	.07	
Father Warmth	-.03	
Step 4		(.00)
Coparenting Conflict (mother)	.05	
Coparenting Conflict (father)	-.01	
Total R ²		(.19)

Note: Standardized beta weights presented are from the final multiple linear regression equations.

⁺ $p = .06$

*
 $p \leq .05$

**
 $p \leq .01$

 $p \leq .001$.