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Coparenting Conflict and Academic Readiness in Children of Teen Mothers: Effortful Control as a Mediator

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Abstract

Children's exposure to coparenting conflict has important implications for their developmental functioning, yet limited work has focused on such processes in families with diverse structures or ethnically and culturally diverse backgrounds. This longitudinal study examined the processes by which Mexican-origin adolescent mothers' coparenting conflict with their 3-year-old children's grandmothers and biological fathers ($N = 133$ families) were linked to children's academic and social skills at 5 years of age, and whether children's effortful control at 4 years of age mediated the link between coparenting conflict and indices of children's academic readiness. Findings revealed that adolescent mothers' coparenting conflict with their child's biological father was linked to indices of children's academic and social school readiness through children's effortful control among girls, but not boys, whereas conflict with grandmothers was directly linked to boys' and girls' social functioning two years later. Findings offer information about different mechanisms by which multiple coparenting units in families of adolescent mothers are related to their children's outcomes, and this work has important implications for practitioners working with families of adolescent mothers.

Keywords

Academic Readiness; Adolescent Mothers; Coparenting Conflict; Effortful Control; Self-Regulation

The coparenting relationship has important consequences for many dimensions of children's development, including their social and academic skills and psychological adjustment (e.g., Cabrera, Scott, Fagan, Steward-Streng, & Chien, 2012; Cabrera, Shannon, & La Taillade,

2009; Frosch, Mangelsdorf, & McHale, 2000; Teubert & Pinquart, 2010). Coparenting is defined as a shared enterprise among two or more caregivers who maintain joint responsibility for a child's care and upbringing (Feinberg, 2003; McHale & Irace, 2011). Most research on coparenting has focused on white, middle class, two-parent families, and less is known about coparenting in families with diverse parenting structures, or ethnically diverse families (Cabrera et al., 2012). Guided by a family systems framework (e.g., Cox & Paley, 2003), this study examined the link between coparenting conflict and the outcomes of children of Mexican-origin adolescent mothers, the ethnic group with the highest rates of teenage births in the U.S. (National Vital Statistics Report, 2013). Given the likelihood that both grandmothers and biological fathers serve as coparents in families of Latina adolescent mothers (Contreras, Mangelsdorf, Rhodes, Diener, & Brunson, 1999), we examined how *multiple* coparenting dyads (e.g., adolescent mother-grandmother and adolescent mother-biological father coparenting conflict) at 3 years of age, as well as their interactions, were linked to indices of children's academic readiness (i.e., early math, literacy, and social skills) at 5 years of age. Because exposure to conflict can undermine children's burgeoning regulatory ability (Pendry & Adam, 2007), which is an important capacity for children's academic and social competence (e.g., Valiente, Lemery-Chalfant, Swanson, & Reiser, 2008), we examined whether children's effortful control at 4 years of age mediated the link between coparenting conflict and children's academic readiness.

Coparenting Conflict in Families of Mexican-Origin Adolescent Mothers

Coparenting *conflict*, the focus of the present study, refers to the extent to which caregivers have disagreements and interactions marked by hostility or anger concerning parenting issues (Ahrns, 1981; Feinberg, 2003). Our study focuses on conflict because it represents a salient, observable, aspect of coparenting that young children are most likely to witness and notice (Teubert & Pinquart, 2010), including in Mexican American families (Cabrera et al., 2013; Caldera, Fitzpatrick, & Wampler, 2002).

Our aim to capture the structure of coparenting in families of Mexican-origin adolescent mothers is especially warranted, given the likelihood for grandmothers to serve as coparents in families of Latina adolescent mothers (Contreras, et al., 1999), and for such families to consist of multiple coparenting systems (Cabrera, et al., 2012; McHale, 1995). In line with Mexican cultural values emphasizing family cohesion and obligation (i.e., familism), grandmothers may play an especially important role by providing support for caregiving to their adolescent daughters. Consistent with a family systems framework (Cox & Paley, 2003), multiple coparenting dyads, as well as their interactions, could have different influences on individual family members. The limited findings on adolescent mothers' simultaneous coparenting conflict with multiple caregiving partners suggest that coparenting conflict with the biological father and grandmothers are associated over time (*Author citation*). Little is known, however, about whether different coparenting units have distinct relations to children's development (Pittman & Coley, 2011). Moreover, coparenting systems may interact in their link to children's development (Cox & Paley). No study, to our knowledge, has tested this notion, but work on other parenting dimensions (e.g., maternal depression in the context of paternal depression; Mezulis, Hyde, & Clark, 2004) offers support.

Coparenting and Children's Outcomes

Scholars argue that coparenting is more salient to children's outcomes than other dimensions of their parents' relationship (e.g., marital discord that is not child-related; McHale, 1995) because it is more proximally tied to children's well-being (Feinberg, Kan, & Goslin, 2009; Margolin, Gordis, & John, 2001). Feinberg (2003) posits that coparenting conflict may be negatively related to children's development in several ways. The conflict could create an environment of confusion and hostility that elicits children's insecurity or negative emotional reactivity, thereby undermining development. Relatedly, the hostility that parents direct toward each other could spill over to, and become directed at, the child to negatively impact well-being. It also may be that conflicted coparents are emotionally unavailable to provide the sensitive and stimulating parenting necessary to promote their children's development. Finally, parents engaging in conflict may model maladaptive behaviors to their children. It is likely that many of the abovementioned theoretical pathways are simultaneously implicated in the link between coparenting conflict and child outcomes (Feinberg).

There is growing evidence of this link between coparenting conflict and children's development. Although such work has largely focused on children's attachment security (Caldera & Lindsey, 2006; Frosch, et al., 2000) and adjustment (see Teubert & Pinquart, 2010, for review), there is recent evidence linking the coparenting relationship with children's cognitive or academic development, literacy skills, and social competence with peers (Belsky & Fearon, 2006; Cabrera et al., 2012). Specifically, in a nationally representative sample of young children with both married and cohabitating parents, coparenting conflict when children were 2 years of age was negatively linked to children's early math, literacy, and social skills at 4 years of age, and the path between conflict and social skills was mediated by maternal depression at 3 years of age (Cabrera et al., 2012). In the present study, we extended this work by examining how adolescent mothers' coparenting conflict with grandmothers and biological fathers when their children were 3 years of age, was related to indices of children's academic readiness (i.e., math, literacy, and social skills) at age 5. A focus on indices of academic readiness is warranted, given studies revealing poorer school readiness skills among children of adolescent mothers (Terry-Humen, Manlove, & Moore, 2005) and significant disparities among Mexican-origin children in their early academic performance (Crosnoe, 2007; Guerrero, et al., 2013).

With respect to outcomes associated with adolescent mother-biological father and adolescent mother-grandmother coparenting conflict, most research has not focused on Latino or Mexican-origin families, and has focused on coparenting and *parents'* well-being, such as depressive symptoms, anxiety, and stress (Caldwell, Antonucci, & Jackson, 1998; Kalil, Spencer, Spieker, & Gilchrist, 1998). An exception is the limited work on the link between adolescent mother-father coparenting relationships and child outcomes, which suggests that coparenting conflict is related to poorer child behavioral and cognitive outcomes (Mollborn & Lovegrove, 2011), and with fathers' reduced engagement with their children (Fagan, 2013). These findings are largely consistent with those from work on Mexican American adult parents (Cabrera et al., 2009), which found that mother-father coparenting conflict in infancy was concurrently related to poorer quality mother-infant interactions and fewer displays of paternal warmth during physical contact activities.

The Role of Effortful Control as a Mediator

Because children are the central focus of the coparenting process (Feinberg, 2003; Cabrera et al., 2013), it is important to understand whether *children's developmental characteristics* mediate the path between coparenting conflict and children's outcomes. Our study focuses on children's effortful control as a potential mechanism. Effortful control, or temperamentally-based self-regulation, is broadly defined as children's ability to voluntarily control or modulate their attention, or modify their behavior as needed (e.g., to wait in line; Rothbart & Bates, 2006). Although considered to be largely biologically-based, effortful control develops with considerable input from the environment (Rothbart & Bates, 2006), particularly through children's early relationships with their parents (e.g., Lengua, Honorado, & Bush, 2007). A growing line of work has examined effortful control as a *mediator* of the link between contextual factors and child outcomes (e.g., Spinrad et al., 2007; Kochanska & Knaack, 2003). To extend this work, it is important to consider how coparenting conflict may be associated with children's effortful control and, subsequently, to children's academic outcomes.

Coparenting conflict is believed to have important relations with children's development of self-regulatory competence. First, children's exposure to a less conflictual and more supportive coparenting system is believed to foster healthier physiological capacities to regulate stress (Feinberg et al., 2009). Exposure to a more hostile environment, in contrast, could result in uncontrollable levels of negative emotional reactivity, which may undermine children's abilities to effectively self-regulate. Additionally, exposure to parents' conflict undermines children's formation of a secure attachment with their parents (Cummings & Wilson, 1999; Frosch, et al., 2000); because self-regulatory capacities are thought to develop within the context of healthy attachment relationships, coparenting conflict could undermine children's ability to adequately develop effortful control. Moreover, in line with the proposition that parents engaged in coparenting conflict may model maladaptive behaviors to their children (Feinberg, 2003), work on effortful control reveals that parents who are more hostile may model dysregulation, thereby compromising the child's capacity to self-regulate (Halberstadt, Crisp, & Eaton, 1999).

Furthermore, as there is some evidence of gender differences in effortful control (e.g., Kochanska and Knaack, 2003), it may be important to explore the role of gender as a potential moderator of the link between coparenting and children's effortful control. Previous research has reported mixed findings with respect to gender differences in the link between coparenting and child outcomes. Some studies have reported greater links between conflict and boys' adjustment (McConnell & Kerig, 2002; McHale, Johnson, & Sinclair, 1999), while other findings reveal stronger associations to girls' well-being (McConnell & Kerig, 2002).

Finally, effortful control has implications for early academic and social competence (e.g., Blair & Razza, 2007; Valiente et al., 2008) because it is thought to be associated with behaviors considered critical for effective learning and problem solving (e.g., sustained attention, focusing and maintaining effort on a task, and shifting attention from one task to another; Fabes, Martin, Hanish, Anders, Madden-Derdich, 2003). Moreover, Valiente and colleagues (2008) found similar links between effortful control and teacher-reported

academic competence among Mexican American children. Effortful control also influences social competence with peers (Rothbart & Bates, 2006), as it underlies such behaviors as managing emotions, controlling impulses, and complying with others, which are relevant to children's social competence (Blair & Razza, 2007; Coplan, Barber, Lagace-Seguin, 1999; Rothbart & Bates, 2006; Valiente et al., 2008).

The Current Study

The current study examined the link between adolescents' coparenting conflict with grandmothers and biological fathers, as well as the interaction between these coparenting units, and children's academic readiness in a sample of Mexican-origin adolescent mothers and their children. Consistent with the notion that coparenting conflict may undermine children's development of self-regulation (Feinberg et al., 2009), we also hypothesized that adolescent mother-grandmother and adolescent mother-biological father coparenting conflict would be linked to *decreases* in children's effortful control, and that reduced effortful control capacities would subsequently be linked to poorer academic readiness. We tested this proposed mediational model.

In addition, we considered several potentially relevant demographic covariates, including adolescents' nativity, age, and economic hardship, given previous work suggesting that children of immigrant-born and younger adolescent mothers, and those with greater socio-economic disadvantages, may be at greater risk for delays due to their parents' reduced resources to promote their development (Fagan & Lee, 2013). Furthermore, because co-residence and the frequency of adolescents' coparenting communication with biological fathers and grandmothers may have impacted the salience of each coparenting relationship (Pittman & Coley, 2011), we included these factors as covariates. Because children's self-regulatory capacities show marked growth between 3 and 5 years (Kopp, 1982), children's effortful control at age 3 was included as a covariate on effortful control at age 4, enabling us to model the link between coparenting conflict and *change* in effortful control. Finally, we explored the role of gender as a possible moderator of the link between coparenting and children's effortful control.

Method

Participants were 133 Mexican-origin adolescent mothers and their children from a larger six-wave longitudinal project focused on 204 Mexican-origin adolescent mothers and their mother figures (*Authors' citation*). Adolescent mothers and mother figures [majority biological mothers (88.0%)], herein called "grandmothers," were recruited at Wave 1 (W1) when adolescents were in their third trimester of pregnancy ($M_{weeks} = 30.56$, $SD = 4.26$). The current study utilized data from Wave 4 (W4), Wave 5 (W5), and Wave 6 (W6) of the larger study for those adolescents who reported contact with their child's biological father at W4 ($N = 133$). At W4, adolescent mothers averaged 20.06 years old ($SD = .95$), 50.4% co-resided with the grandmother, and 40.6% co-resided with their child's biological father. With respect to nativity, 65.4% of adolescent mothers, 33.1% of grandmothers, and 52.7% of biological fathers were born in the U.S. Adolescents born in Mexico had lived in the U.S. for an average of 8.33 years ($SD = 4.65$), and Mexico-born grandmothers lived in the U.S. for

15.34 years ($SD = 8.13$), on average. The mean family income at W4 was \$26,422 ($SD = \$20,193$), and remained relatively stable at subsequent waves: W5 = \$25,794 ($SD = \$18,277$) and W6 = \$29,512 ($SD = \$20,808$). Children (44.4% girls) were 3 years ($M_{age\ in\ months} = 36.26$, $SD = .46$), 4 years ($M_{age\ in\ months} = 48.31$, $SD = 63$), and 5 years ($M_{age\ in\ months} = 60.46$, $SD = .47$) old at W3, W4, and W5, respectively.

A comparison of the current sample (those who had contact with biological father at W4) to the larger sample (those who did not have contact) revealed that those who were included in the current sample were slightly older ($M = 20.06$, $SD = .95$) than those excluded ($M = 19.72$, $SD = 1.03$), $t(202) = 2.34$, $p = .02$, and had marginally lower levels of coparental conflict with grandmothers ($M = 2.13$, $SD = .81$) than those who were excluded ($M = 2.45$, $SD = 1.02$), $t(166) = -1.95$, $p = .05$. There were no other significant differences observed between samples. We also examined participation rates at W5 and W6. For the current analytic sample of mothers who had contact with the child's biological father ($N = 133$), 4 families did not participate at W5, and 6 families did not participate at W6. There were no significant differences between participating and nonparticipating families on any study variables.

In addition, missing data analyses were conducted to determine how missing values should be estimated in the analyses. First, we conducted regression analyses in which study variables at W4 predicted missingness at W5 and W6. Analyses revealed no significant predictors suggesting that our independent variables were not related to missing data at W5 or W6. Next, we ran an analysis for our dependent variables (i.e., WJ applied problems score, WJ letter/word score, and social competence). To do this, we employed the Little's missing completely at random (MCAR) test, $\chi^2(95) = 97.06$, $p = .42$. A non-significant p -value means that we failed to reject the null hypothesis (null hypothesis states that data were missing completely at random). Taken together, our missing data analysis suggest that missingness in our sample of 133 families across W4, W5, and W6 can be characterized as MCAR; that is, missingness was unrelated to other measured variables and the dependent variable. Based on Enders' (2010) recommendations, full information maximum likelihood is appropriate for MCAR and does not require covariate or auxiliary variables to account for missingness.

Procedures

Adolescent mothers were recruited from high schools, social service agencies, and health and community centers. Eligibility criteria at the time of recruitment included participants who were pregnant adolescents of Mexican origin, between the ages of 15 and 18 years old, unmarried, and who had a mother figure willing to participate with them in the study. After obtaining informed consent, data were collected via face-to-face in-home interviews lasting about 2.5 hours by student and staff research assistants (age range 18 to 63; 66% Spanish-English bilingual). Two separate individuals translated and back-translated measures. Any discrepancies were discussed by the research team; also, all Spanish items were carefully reviewed by an individual of Mexican-origin to ensure that the Spanish wording was consistent with Mexican dialect. Throughout the translation process, a decentering approach was used to achieve conceptual equivalence across language versions (Knight, Roosa, &

Umaña-Taylor, 2009). At W1, 65.4% of adolescent mothers chose to be interviewed in English and 66.2% of grandmothers chose to be interviewed in Spanish. Children were tested in their predominant language, as reported by their mothers (75.7 % English; 24.3% Spanish).

Measures

Coparenting conflict and coparenting communication (W4)—Adolescent mothers reported on *coparenting conflict* (4 items) with their children's grandmother and with their child's biological fathers at W4 using an adapted version of the Co-Parental Communication Scale (Ahrns, 1981; Herzog, Umaña-Taylor, Madden-Derdich, & Leonard, 2007). A measure of *coparenting communication* (7 items) was also derived from this scale and used as a covariate. Adolescent mothers reported on the conflict and tension present when discussing parenting issues (e.g., “Since the baby was born, when you and [grandmother's name/biological father's name] discuss parenting issues, how often does it result in an argument?”) and on the frequency of coparenting discussions (e.g., “How often do you talk to your mother about medical issues or problems related to the baby?”). Responses ranged from 1 (*never*) to 5 (*always*), with higher scores indicating more conflict and communication, respectively. Reliabilities were adequate for adolescent mother-grandmother and adolescent mother-biological father coparenting conflict ($\alpha = .84$, $\alpha = .89$, respectively, in English; $\alpha = .86$, $\alpha = .89$, respectively, in Spanish) and communication ($\alpha = .92$, $\alpha = .95$, respectively, in English; $\alpha = .93$, $\alpha = .92$, respectively, in Spanish).

Children's effortful control (W4, W5)—Adolescent mothers reported on their children's effortful control using the Child Behavior Questionnaire Very Short Form (12 items; CBQ; Putnam & Rothbart, 2006). Adolescent mothers indicated whether each item was a “true” or “false” description of the child's typical behavior in the last 6 months (e.g., “is good at following directions”) using a 7-point Likert-type scale from 1 (*extremely false*) to 7 (*extremely true*). Reliabilities were adequate (English $\alpha_{w4} = .62$; $\alpha_{w5} = .81$, Spanish $\alpha_{w4} = .82$; $\alpha_{w5} = .70$).

Children's academic readiness (W6)—When children were 5 years old, we measured three indices of academic readiness. Using the Woodcock Johnson III Tests of Achievement (WJ-III; Woodcock, McGrew, & Mather, 2000) for those whose predominant language was English, and the Batería III Woodcock-Muñoz (Batería-III; Muñoz-Sandoval, Woodcock, McGrew, and Mather, 2005) for those whose predominant language was Spanish, children were administered two subtests: *Applied Problems* (Problemas aplicados) to assess early math, and *Letter-Word Identification* (Identificación de letras y palabras) to assess early literacy. Each test provides a standardized, normative score that allows one to compare the respondent's score against the national average for that respondent's age (i.e., age-equivalence). On each test, the child's raw score (i.e., sum of correct responses) was converted to a standardized score called a *W score* using the WJ-III Compuscore program provided by the test developers.

To assess social competence, the *Play Interaction* subscale of The Penn Interactive Peer Play Scale—Parent Preschool Version (PIPPS-P; Fantuzzo, Mendez, & Tighe, 1998) was used.

This subscale consists of 8 items and assesses play behaviors that include prosocial comforting and helping others (e.g., “helps other children”). Adolescent mothers reported on their child's interactive play at W6 using a response range from 1 (*never*) to 4 (*always*). A sum score was used; higher scores indicated more frequent prosocial play (English $\alpha = .81$; Spanish $\alpha = .72$).

Covariates (W4)—Adolescents' *co-residency with biological father* and *co-residency with grandmother* at W4 (0 = *Do Not Live Together*, 1 = *Live Together*), *nativity* (0 = Mexico born, 1 = U.S. born), and *age* were included as covariates. Adolescents' reports of *economic hardship* at W4 were assessed using the 17-item Economic Hardship measure (Barrera, Caples, & Tein, 2001), with the following subscales: Financial Strain (2 items), Inability to Make Ends Meet (2 items), Not Enough Money for Necessities (4 items), and Economic Adjustments or Cutbacks (9 items). A composite score was created by standardizing each subscale score, weighting them based on the number of items within each subscale, and creating a mean (Barrera et al. 2001). Higher scores reflected greater perceived economic hardship. Because scores are weighted and some are dichotomous response scales, a reliability alpha coefficient is not appropriate for this variable. Correlations between standardized subscale measures were all significant at the $p < .001$ level and ranged from .42 to .62.

Analytic Strategy

We specified a path model in *Mplus 7.2* (Muthén & Muthén, 1998 - 2012) to examine the relations between W4 coparenting conflict with biological fathers and W5 children's effortful control, and between W4 coparenting conflict with grandmothers and W5 children's effortful control, accounting for W4 children's effortful control. An interaction term between coparenting conflict with grandmothers and with biological fathers was also included as a predictor of W5 children's effortful control. Finally, to test for gender moderation, we included interaction terms between child gender (0 = male, 1 = female) and W4 coparenting conflict with biological fathers and grandmothers. We then estimated the associations between W5 effortful control and W6 children's outcomes. An interaction term between child gender and W5 effortful control was also included to predict W6 outcomes.

Demographic covariates included adolescents' W4 nativity, age, economic hardship, co-residency, and coparenting communication with biological fathers and grandmothers. Additionally, children's W3 effortful control was included as a covariate on W4 effortful control to capture *change* in effortful control. We first examined the potential moderating role of the covariates in the link between W4 conflict and W5 effortful control. No interactions emerged as significant. Next, to determine which covariates to include in the final model, we examined the bivariate correlations (see Table 1); those variables that were found to have significant bivariate associations with outcome variables were included as covariates in the final model.

Multiple fit indices (CFI, RMSEA, and SRMR) were used to evaluate fit; acceptable model fit is reflected by a CFI greater than .90, RMSEA less than .08, and SRMR less than .08 (Hu & Bentler, 1999; Kline, 2015). All variables except W6 outcomes were standardized.

Mediation was tested using the Rmediation package (Tofighi & MacKinnon, 2011), which is based on the distribution-of-the-product method (MacKinnon, Lockwood, & Williams, 2004). Rmediation uses estimates of the *a* and *b* paths in the mediation model, their corresponding standard errors, and the estimated correlation between the paths to compute the 95% confidence interval (CI) for the mediated effect. If the CI does *not* include zero, there is evidence of significant mediation. Moderated mediation by child gender was tested using the MODEL INDIRECT function in MPlus. To assess the indirect effect of *ab* for boys, child gender was coded 0 = male, 1 = female; and to assess that for girls, gender was coded 0 = female, 1 = male. In both models, the estimated indirect effect is for the child gender that is dummy coded to 0. Missing data were accounted for using full information maximum likelihood (Enders, 2010).

Results

Table 1 presents means, standard deviations, and correlations among study variables by child gender. Model fit was adequate (see Figure 1). W4 coparenting conflict with biological fathers and coparenting conflict with grandmothers was not linked to W5 effortful control; however, a significant interaction emerged between conflict with biological fathers and child gender, accounting for W4 effortful control and covariates. Simple slopes analyses indicated that, for *girls*, coparenting conflict with fathers was negatively associated with effortful control ($b = -.32$, $SE = .11$, $p = .004$); whereas for boys, the association was not significant ($b = -.04$, $SE = .10$, $p = .66$). No other interactions were significant¹. W5 effortful control was positively linked to children's W6 WJ letter/word scores and W6 socially competent play interactions, but not to children's W6 WJ applied problems score. Tests for mediation revealed significant mediation between W4 coparenting conflict with biological fathers and girls' W6 socially competent play interaction via W5 effortful control, $ab = -.12$ ($SE = .05$); 95% CI = $-.22, -.03$. This mediation was not significant among boys. Significant mediation also emerged between W4 coparenting conflict with biological fathers and girls' W6 WJ letter/word score via W5 effortful control, $ab = -.08$ ($SE = .04$); 95% CI = $-.171, -.009$. Once again, this mediation was not significant among boys. Finally, W4 coparenting conflict with grandmothers and coparenting communication with grandmothers were both negatively linked to children's W6 socially competent play interactions, but this relation was not mediated by W5 effortful control.

Discussion

Guided by a family systems framework (Cox & Paley, 2003), the present study examined the link between Mexican-origin adolescent mothers' conflict with multiple coparenting partners and their children's school readiness via children's effortful control. Findings revealed different mechanisms for the association between conflict with biological fathers and grandmothers on children's outcomes, and evidence of moderation by gender. Specifically, adolescents' coparenting conflict with their child's biological father was linked to indices of their daughters' school readiness at five years of age (i.e., letter/word identification and

¹Given the exploratory nature of moderation by gender, all non-significant interactions that included gender were taken out of the model and not reported in Figure 1.

social interaction with peers) *through* their effortful control, whereas this mediation was not significant for sons. Conflict with grandmothers was *directly* linked to boys' and girls' social functioning two years later. Findings offer insights about different mechanisms by which multiple coparenting units in families of Mexican-origin adolescent mothers are linked to their children's outcomes and have important implications for practitioners working with families of adolescent mothers.

First, our study found that adolescent mothers' reports of coparenting conflict with grandmothers and the frequency of their coparenting communications were both directly related to their ratings of children's prosocial behaviors with peers two years later. In line with Feinberg (2003), this finding could reflect the notion that mothers and grandmothers who were engaged in more conflicted disagreements may model maladaptive interpersonal styles that children subsequently display in their peer interactions. It is also possible that this finding reflects a negative association between adolescent mothers' perceptions of coparenting conflict and their children's social development. Indeed, research suggests that the adolescent mother-grandmother coparenting relationship has implications for mothers' psychological well-being (see Pittman & Coley, 2011). Moreover, Cabrera et al. (2012) found that adult mothers' depressive symptoms mediated the link between coparenting conflict and parents' reports of children's social skills. In future work, it will be important to consider whether adolescent mothers' well-being and psychopathology mediate the link between coparental conflict with grandmothers and adolescents' ratings of their child's social competence.

The fact that grandmothers did not exert influence on children's effortful control may reflect differences in the roles that grandmothers versus biological fathers play in childrearing. In line with family systems theory, McHale and Irace (2011) argue that members of a coparenting unit accommodate children's changing developmental needs by taking on differential responsibilities with respect to roles such as childcare and discipline. Our findings may support a family systems perspective (Cox & Paley, 2003); given the multiple parenting subsystems involved, it may be that the families of adolescent mothers engage in an even more complex process of balancing multiple parenting roles with children's changing needs. Differences between biological fathers and grandmothers in the roles they negotiated within the larger family system may have influenced the different paths that emerged between their respective coparenting relationships with adolescent mothers and their children.

Why might adolescent mothers' coparenting conflict with biological fathers have been particularly relevant to *girls'* effortful control? Previous research has revealed that, as adolescent mothers report greater coparenting conflict with their children's biological fathers, those fathers tend to be less engaged and involved with their children (Fagan & Lee, 2011). Thus, for adolescent fathers, whose overall involvement with their children may already be at risk, it may be that coparenting conflict with their children's mothers serves as an additional barrier promoting less engagement and greater withdrawal, overall, from their parenting role (Fagan & Lee, 2011). Furthermore, there is evidence that fathers of girls, compared to fathers of boys, are more likely to withdraw from their parenting role in the context of marital distress (Elliston, McHale, Talbot, Parmley, & Kuerston-Hogan, 2008).

Growth in self-regulatory skills is perhaps one of the most significant developmental tasks of the period of child development on which the present study focuses (i.e., 3 to 5 years; Kopp, 1982). Thus, if coparenting conflict was associated with less engagement with fathers, this may have considerably undermined girls' development of effortful control. Our findings point to the need for more work on the mechanisms leading to fathers' involvement, and on fathers' impact on both boys' and girls' development. For example, as children's interactions with fathers tend to be physical and stimulating, the destabilizing and unpredictable nature of such interactions is thought to provide an ideal context in which children may practice and develop their self-regulatory skills, especially when coupled with sensitive and warm paternal behaviors (e.g., Paquette, 2004; Stevenson & Crnic, 2013). Our finding, that the link between fathers' coparenting conflict and children's academic and social skills was through changes in girls' effortful control, may lend support to this idea and is in line with work on other high-risk fathering contexts (e.g., alcoholic fathers; Eiden, Edwards, & Leonard, 2004). It may also be fruitful for future research to explore the link between different coparenting processes and children's subsequent psychopathology.

With respect to effortful control and children's developmental functioning, our finding that effortful control was related to two indices of children's subsequent academic (i.e., letter-word identification) and social (i.e., peer interaction) school readiness supports the growing body of work linking children's self-regulation to their school readiness (e.g., Blair & Razza, 2007; Valiente, et al., 2008). It may be that children's effortful control supports the types of learning and problem solving capacities that are fundamental to early academic skills, and that children with greater effortful control are more socially competent with peers because they are better skilled at controlling their behaviors and helping others (Blair & Razza, 2007; Coplan, et al., 1999; Valiente, et al., 2008). However, the fact that effortful control was not significantly linked to children's applied problems scores was contrary to our expectation. Given that parents, in general, engage in literacy activities more frequently than numeracy activities with their young children (Blevins-Knabe, Berghout, Musun-Miller, Eddy, & Jones, 2000), one might expect more 5-year old children in our study to have had the expected knowledge of their letters. It may be the case, then, that the letter/word difficulties driving the variability in scores at age 5 reflect true self-regulatory difficulties, such that those children who had not yet attained this knowledge may have had particular difficulties with effortful control (Blair & Razza, 2007).

Finally, our findings support research linking coparenting to children's academic readiness (Caldera & Lindsey, 2006; Teubert & Pinquart, 2010). Consistent with findings from two-parent households (Belsky & Fearon, 2006; Cabrera et al., 2012), our study of adolescent mothers identified their children's pre-reading skills and prosocial behaviors to be related to coparenting conflict. Given children of adolescent mothers are at risk to be underprepared for school (Terry-Humen et al., 2005), our findings are noteworthy and suggest that adolescent mothers' coparenting conflict could undermine children's development. It is possible, as noted above, that arguments over childrearing issues interfere with parents' abilities to provide sensitive and stimulating behaviors that promote children's outcomes (e.g., Feinberg, 2003).

Limitations and Future Directions

The present study is not without limitations. Our findings can only be generalized to a specific population of adolescent mothers (i.e., Mexican-origin, 15 to 18 year olds, living in a southwest metropolitan area) and future work should extend these findings to other populations. Moreover, as families of adolescent mothers may be comprised of more than two coparenting systems, future work should examine mothers' relationships with all individuals who share childrearing responsibilities. Also, given the salience of adolescent mothers' coparenting conflict with biological fathers, in particular, future work should examine aspects of fathers' functioning that may be implicated in these processes. Future work should also capture fathers' own reports of coparenting conflict, grandmothers' coparenting conflict with fathers, and the potential three-way conflict that may occur among coparents. Finally, another limitation is that the measures, except academic readiness, were reported by adolescent mothers. The shared method and informant variance may have overestimated the magnitude of the observed effects. Thus, an important direction for future work will be to replicate these findings using a multi-informant design.

Conclusion and Practical Implications

This study contributes to our knowledge of how coparenting may be linked to children's outcomes in families with diverse structures, namely those of Mexican-origin adolescent mothers in multiple coparenting relationships. We found that adolescent mothers' coparenting conflict with biological fathers was related to girls' subsequent school readiness through effortful control, which points to the importance of future intervention efforts emphasizing the promotion of healthy interactions among parents, and strengthening parents' ability to cope with the negativity that arises from coparenting disagreements. Interventions that simultaneously target the coparenting relationship *and* parents' support of child self-regulation, such as *Family Foundations* (Feinberg et al., 2009), may be particularly effective if adapted for the families of Latina adolescent mothers. Such adaptations may involve a greater emphasis on the shared versus differentiated roles of multiple coparenting units, ways in which each dyad can support and strengthen the other, and ways in which children's gender may influence such processes. By emphasizing parents' awareness and support of children's burgeoning self-regulatory coping skills, such programs may have far-reaching benefits for children and their families.

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Figure 1.

Path model linking W4 coparenting conflict, W5 children's effortful control, and W6 child outcomes with child gender as a moderator ($N = 133$). WJ = Woodcock Johnson. BF = biological father. GM = grandmother. Standardized path coefficients presented. Dashed lines represent non-significant paths. The following covariates are estimated in the model but not depicted in the figure for ease of presentation. Child gender was included as covariate on all W6 outcomes and W4 effortful control; W4 economic hardship was included on W6 WJ applied problems and W5 effortful control; adolescent nativity was included on W6 WJ letter/word; adolescent age and W4 co-residency with grandmother were included on W6 WJ letter word. Model fit: $\chi^2(21) = 28.74, p = .12, CFI = .95, RMSEA = .05, SRMR = .05$. * $p < .05$, ** $p < .01$, *** $p < .001$.

Table 1
Means, Standard Deviations, and Correlations among Study Variables by Child Gender (N = 133)

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	N	Mean	SD
1. CP conflict w/ BF W4	--	.24 [*]	.02	-.09	.18	.14	.14	.04	.03	.05	-.36 ^{***}	.14	-.36 ^{***}	.07	74	2.57	1.06
2. CP conflict w/ GM W4	.38 ^{***}	--	-.19	-.21	.06	-.02	-.15	-.05	-.08	.29 [*]	-.25 [*]	.21	-.05	-.11	74	2.12	.87
3. Effortful control W4	.03	.17	--	.54 ^{***}	.35 ^{***}	.17	.44 ^{***}	.15	.00	-.21	.10	.04	-.02	-.08	72	4.94	.75
4. Effortful control W5	-.29 [*]	.16	.56 ^{***}	--	.13	.15	.45 ^{***}	.21	.20	-.27 [*]	.02	-.01	.24 [*]	-.02	69	5.16	.73
5. WJ AP score W6	.12	.00	-.08	.03	--	.62 ^{***}	.22	.05	.22	-.01	-.26	.21	-.23	.06	59	393.49	30.07
6. WJ LW score W6	.01	-.03	.29 [*]	.18	.63 ^{***}	--	.13	.04	.28 [*]	.00	-.26 [*]	.15	-.27 [*]	.10	59	323.25	26.00
7. SC interactions W6	-.20	-.16	.23	.31 [*]	-.03	.12	--	.27 [*]	-.06	-.20	-.06	-.01	.03	.15	67	1.93	.51
8. Adolescent nativity	.25	.22	.37 ^{***}	.08	.02	.09	.12	--	.01	-.15	-.06	.02	-.06	.17	74	.68	.47
9. Adolescent age W4	.03	-.02	.11	-.02	.09	.21	.11	.06	--	.07	.02	-.14	-.14	-.10	74	19.97	.94
10. Economic hardship W4	-.04	.07	-.24	-.15	.30 [*]	-.32 [*]	-.22	.30 [*]	-.13	--	-.02	.15	.08	.02	74	-.73	2.07
11. Co-residency w/ BF W4	.44 ^{***}	-.23	.04	.04	-.18	-.06	.05	.38 ^{***}	-.07	.00	--	.37 ^{***}	.41 ^{***}	-.28 [*]	74	.38	.49
12. Co-residency w/ GM W4	.09	.32 [*]	.11	-.07	-.22	-.04	.21	.26 [*]	.14	.12	-.31 [*]	--	-.14	.45 ^{***}	74	.55	.50
13. CP communic. w/ BF W4	.33 [*]	.11	.44 ^{***}	.42 ^{***}	-.20	.01	.23	.28 [*]	.13	-.36 ^{***}	.32 [*]	.07	--	-.08		4.06	1.04
14. CP communic. w/ GM W4	-.23	.14	.21	.38 ^{***}	-.01	-.08	.41 ^{***}	.26	-.03	-.06	-.04	.19	.52 ^{***}	--		3.60	1.01
N	59	57	58	56	52	52	55	59	59	59	59	59	59	57			
Mean	2.53	2.15	5.04	5.35	394.08	323.17	1.97	.63	20.17	.39	.44	.44	3.81	3.91			
SD	1.02	.74	.82	.77	22.55	23.44	.53	.49	.97	2.38	.50	.50	1.20	.98			

Note. Correlations for girls are presented below the diagonal, and those for boys are presented above the diagonal. W4 = Wave 4; W5 = Wave 5; W6 = Wave 6; SD = Standard Deviation; CP = Coparenting; BF = Biological father; GM = Grandmother; WJ = Woodcock Johnson; AP = Applied problems; LW = Letter/word; SC = Social competence. Adolescent nativity coded 0 = Mexico-born, 1 = U.S.-born; Co-residency w/ BF (w/GM) coded 0 = Adolescent mother does not live with BF (GM); 1 = Adolescent mother lives with BF (GM).

* $p < .05$,
** $p < .01$,
*** $p < .001$.